

**THE WATER SYSTEM AND WATER CHAIN IN DUTCH  
WATER AND ENVIRONMENTAL LEGISLATION**

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Paper prepared for the workshop entitled 'Legal Aspects of Water Sector Reforms'  
to be organised in Geneva from 20 to 21 April 2007 by the International  
Environmental Law Research Centre (IELRC) in the context of the  
Research partnership 2006-2009 on water law sponsored by the  
Swiss National Science Foundation (SNF)

## **ABSTRACT**

This paper deals with Dutch legislation about water system en water chain. In brief, the water system is the totality of surface water and ground water, which belong together to the natural environment; while the water chain lies in the sphere of public utilities, comprising the pathway from drinking-water supply to waste-water treatment. The water system is regulated in legislation for which the ministry of Transport, Public Works and Water Management is responsible. The water chain is regulated in legislation for which the ministry of Housing, Spatial Planning and the Environment is responsible. The present paper considers, with reference to some recent Parliamentary bills, how the water system and the water chain will be regulated in the coming years. Especially the Water Act is important; this Act implies a huge modernization of traditional Dutch water law. Particular attention is paid in this connection to the role of the municipality in relation to water system and water chain. In the terms used in the above-mentioned bills, the municipality cannot be regarded as a water manager, though it does have certain tasks that are of importance for water management.

### **Key words:**

Groundwater

Rainwater

Sewage system

Stormwater

Water agreement

Water chain

Water management

Water system

Water test

Waste water

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## 1. INTRODUCTION

A distinction is made in Dutch government policy and legislation between the water system and the water chain. In brief, the water system is the totality of surface water and groundwater, which belong together to the natural environment. The water chain lies in the sphere of public utilities, comprising the pathway from drinking water supply to wastewater treatment. These terms will be defined in greater detail in sections 3 and 4 of this paper. The water system is regulated under legislation for which the ministry of Transport, Public Works and Water Management (generally abbreviated to VenW in Dutch) is responsible. The water chain is regulated under legislation for which the ministry of Housing, Spatial Planning and the Environment (generally abbreviated to VROM in Dutch) is responsible, in particular under the Environmental Management Act, which amongst other things deals with sewage and drinking water.<sup>1</sup>

The present paper considers with reference to some recent Parliamentary bills how the water system and the water chain will be regulated in coming years.<sup>2</sup> The Water Act is particularly important, since it implies a huge modernisation of traditional Dutch water law.<sup>3</sup> Specific attention is paid in this connection to the role of the municipality in relation to the water system and the water chain. In accordance with the above-mentioned bills, the municipality cannot be regarded as a water manager, although it does have certain tasks that are of importance for water management, but it does manage an important part of the water chain, namely the sewage system. The water management agency (water board) manages regional water systems. In the Netherlands, the water management agency is a public body in the third layer of government, below the state and the province and at the same level as the municipality. One of the questions that may be raised in this connection is whether there are sufficient legal guarantees for adequate cooperation between municipality and water board.

The first topic dealt with in this paper is the relationship between the water system, the water chain and the environment (section 2). This is followed by a discussion of some of the main features of the Water Act relating to the management of water systems (section 3). Section 4 is devoted to municipal tasks that are not water management in the sense of the Water Act, but are of importance for water management. Section 5 deals with the three components of the water chain, namely drinking water supply, sewage and wastewater treatment. The provisions of the Water Act relating to water agreements are reviewed in section 6, since such agreements can be important instruments for regulating the relationship between the water system, the water chain and the environment. Finally, some concluding remarks are made in section 7.

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<sup>1</sup> See, e.g., the explanatory statement on the wetsvoorstel voor een Wet algemene bepalingen omgevingsrecht (General Provisions of Environmental Law Bill; Dutch abbreviation: Wabo): Dutch House of Representatives 2006-2007, 30 844, No. 3, p. 89.

<sup>2</sup> The research undertaken for this paper has been updated to December 2006.

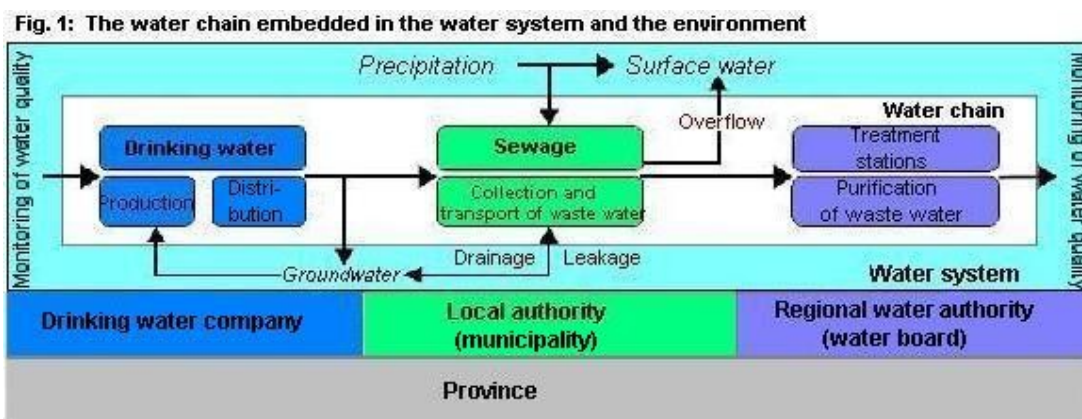
<sup>3</sup> Dutch House of Representatives 2006-2007, 30 818, No. 1-2: Regulations concerning the management and use of water systems [Water Act].

## 2. THE WATER SYSTEM, THE WATER CHAIN AND THE ENVIRONMENT

As indicated in the introduction, ‘water system’ and ‘water chain’ are key concepts in relation to water management in the Netherlands. The future management and use of water systems will be regulated in detail in the Water Act, which is at the time of writing going through Parliament.<sup>4</sup> In particular, this Act contains a legal definition of the concept of water system which is addressed in more detail in section 3.2 below.

On the other hand, there is no single piece of Dutch legislation that regulates the water chain as such.<sup>5</sup> It should be noted that the discussion of VROM’s budget for 2007 revealed a great deal of administrative activity relating to the water chain. No fewer than five government departments are involved with, and have some degree of responsibility for, this issue. The two ministries most closely involved are VROM and VenW. VROM is responsible for sewage and drinking water policy, while VenW is the department with overall responsibility for water management policy, including the management of water treatment (which forms part of the water chain).<sup>6</sup>

The White Paper on the water chain presented to Parliament in the summer of 2003 includes a diagram that clearly shows the relationship between the water chain, the water system and the environment.<sup>7</sup>



This diagram shows among other things the multiple links between the water chain, the water system and the environment (including its other, non-wet aspects). The water chain makes contact with the water system both at its inflow and outflow ends. The ‘raw material’ for drinking water is surface water or groundwater. After consumption by private households and

<sup>4</sup> See n. 3 above.

<sup>5</sup> The first part of the water chain is regulated by the Water Supply Act (Bulletin of Acts and Decrees 1957, 150); the second and third part of the water chain are regulated by the Environmental Management Act (Bulletin of Acts and Decrees 1992, 551).

<sup>6</sup> See answer to question 57, Dutch House of Representatives (in Dutch: Tweede Kamer) 2006-2007, 30 800 XI, No. 16, p. 27. This source, referred to frequently in this paper, is the official record of the proceedings of the Dutch *Tweede Kamer* or Second Chamber of Parliament.

<sup>7</sup> Dutch House of Representatives 2002-2003, 28 966, No. 1 (*Rijksvisie Waterketen*), p. 2

industry, drinking water is generally discharged into the sewage system. After purification of wastewater in treatment stations, the effluent is discharged into the surface water.

Rainwater is part of the water system, even though it is clear that the possibilities of controlling it are limited. Rainwater can enter the water system or the water chain in various ways. It can fall on surface water or enter groundwater via the soil (these are both components of the water system). If it falls on a paved or metalled surface, it can end up in the sewer (part of the water chain) unless the region in question has its own storm drainage system separate from the general sewage system. The White Paper on the water chain provides that clean rainwater is ‘an element of the water system’ that does not really belong to the water chain.<sup>8</sup> Main purpose of the sewage system is to transport dirty wastewater; it is not rational and efficient when the sewage system is also used to transport originally clean rainwater.

One of the Dutch government’s targets for the period up to 2020 is to achieve maximum uncoupling of the water system from the water chain, so that there is as little as possible contact between relatively clean rainwater and groundwater, and wastewater. One important principle of government policy is that the water chain is ‘driven’ by the water system and the environment (including the soil and the air). The water system and the environment thus impose certain requirements on the water chain.<sup>9</sup> The quality of the water system is for example protected by the Surface Water Pollution Act (...). The outcome of wastewater treatment stations – the so called “effluent” – has to meet the requirements of the license based on this Act.

One of the points of action laid down in the White Paper on the water chain is the promotion of local and municipal water plans. The importance of such plans is underlined for instance in the following passage:

The problems associated with the points of contact between the water chain, the water system and the environment (in particular those related to the handling of rainwater) demand an integral approach at municipal level. [...] The water plan is a policy vision of an integral nature, aimed at the relationship between water chain, water system and physical environment.<sup>10</sup>

It may be noted in this connection that it was not the intention here to introduce a new kind of plan, but rather to follow the example given in the water plans that have already been adopted or are being adopted by a number of municipalities.

### **3. WATER SYSTEMS: MAIN FEATURES OF THE WATER ACT**

The Water Act was brought before the Dutch House of Representatives on 28 September 2006,<sup>11</sup> and will be dealt with by Parliament in the course of 2007. The Ministry of Transport, Public Works and Water Management expects the Act to come into force in 2008. The following exposé of the main features of the legislation is not intended to be exhaustive, but

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<sup>8</sup> See *ibid.*, p. 4.

<sup>9</sup> See *ibid.*, p. 7.

<sup>10</sup> Dutch House of Representatives 2002-2003, 28 966, No. 1, p. 9.

<sup>11</sup> See *ibid.*, 2006-2007, 30 818, No. 1-2: Regulations concerning the management and use of water systems [hereafter the Water Act].

concentrates mainly on the management of water systems and on the various bodies involved therein.<sup>12</sup>

### 3.1. SCOPE

The Water Act, which is entitled Rules on Management and Use of Water Systems (Water Act), regulates the management and use of water systems. In so doing, it aims to combine the following eight existing laws into a single Water Act:<sup>13</sup> the Water Management Act<sup>14</sup>, the Flood Protection Act<sup>15</sup>, the Groundwater Act<sup>16</sup>, the Surface Water Pollution Act<sup>17</sup>, the Seawater Pollution Act<sup>18</sup>, the Polders and Land Reclamation Act of 14 July 1904<sup>19</sup>, the State Managed Infrastructure Act<sup>20</sup> and the Water Administration Act<sup>21</sup>.

The objectives of the Act consist in (a) preventing and where necessary limiting flooding, water nuisance and water shortages, while at the same time (b) protecting and improving the chemical and ecological status of water systems, and (c) allowing water systems to meet society's needs.<sup>22</sup> The Act can have objectives other than those explicitly mentioned insofar as specified elsewhere in the Act.<sup>23</sup> The supply of drinking water and sewage systems, which as can be seen from Figure 1 above belong to the water chain, are not covered by the Water Act. The Act nevertheless regulates another part of the water chain, wastewater treatment, 'because of the close relationship with water management'.<sup>24</sup> The treatment of wastewater is crucial for the protection of the environmental quality of the water systems in a densely populated country like the Netherlands; one of the requirements in this connection is compliance with European Union (EU) directives on urban wastewater<sup>25</sup> and with the EU Water Framework Directive.<sup>26</sup>

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<sup>12</sup> For a more extensive description of the Water Bill and its background, see H.J.M. Havekes, *Het voorontwerp Waterwet* (The Water Bill), *Milieu & Recht*, 2005, No. 10, p. 628-632; J.M. Verschuuren, *Naar integratie van de waterwetgeving: het voorontwerp Waterwet* (Towards integration of Dutch water legislation: the Water Bill), *TO* December 2005, No. 4, p. 124-132. [TO = *Tijdschrift voor Omgevingsrecht* = Journal of Environmental Law].

<sup>13</sup> Dutch House of Representatives 2006-2007, 30818, No. 3, p. 5-6. See for a short description of these acts: Pieter Huisman, *Water in the Netherlands, Managing checks and balances*, Delft University of Technology, 2004, p. 92-95.

<sup>14</sup> Bulletin of Acts and Decrees 1989, 285.

<sup>15</sup> Bulletin of Acts and Decrees 1996, 8.

<sup>16</sup> Bulletin of Acts and Decrees 1981, 393

<sup>17</sup> Bulletin of Acts and Decrees 1969, 536.

<sup>18</sup> Bulletin of Acts and Decrees 1975, 352

<sup>19</sup> Bulletin of Acts and Decrees 1904, 147.

<sup>20</sup> Bulletin of Acts and Decrees 1996, 645.

<sup>21</sup> Bulletin of Acts and Decrees 1900, 176.

<sup>22</sup> Article 2.1, subsection 1.

<sup>23</sup> article 2.1, subsection 2

<sup>24</sup> Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 28, p. 9.

<sup>25</sup> Especially the Urban Waste-water Treatment Directive (91/271/EC), OJ 1991 L135.

<sup>26</sup> Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy, OJ 2000 L 327/1. See also: Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 28, p. 96-97.

### 3.2. MANAGEMENT OF WATER SYSTEMS

The most important concepts in the Water Act consist in those of ‘management’ and ‘water system’. ‘Management’ is defined in article 1.1 as the ‘activities of the public authorities relating to one or more separate water systems or parts thereof directed towards achieving the objectives stated in article 2.1.’ Article 1.1 of the Water Act defines ‘water management’ as ‘activities performed by public bodies in pursuit of the objectives referred to in article 2.1.’ Since ‘management’ is also aimed at attaining these objectives, and since management in the sense intended in the Water Act is by definition water management, a separate definition of ‘water management’ might seem to unnecessary.<sup>27</sup> Government bodies or agencies are authorised to perform management activities in the sense of the Act.<sup>28</sup>

The water system to be managed under the Act is defined as ‘a coherent set of one or more bodies of surface water and groundwater, with the associated water retention areas, dams and dikes and auxiliary works.’<sup>29</sup> Water systems can be designated by an order in council (generally abbreviated to AMvB in Dutch) or by provincial ordinance. An order in council is used to designate water systems managed, completely or with the exception of sections designated therein, by the state.<sup>30</sup>

Orders of the provincial administration are used to appoint managers for the water systems or parts of water systems that do not fall directly under the authority of the state, pursuant to the provisions of article 2, subsection 2, of the Water Boards Act.<sup>31</sup> In view of the regional nature of such designations, all water systems or parts of water systems that do not fall under the direct authority of the state are managed by the water board, with the exception of the cases dealt with in article 3.2, subsection 2, of the Water Act. According to this provision, the Province can appoint bodies other than the water board to manage water systems or parts of water systems, without prejudice to the provisions of Chapters 4, 6, 7 and 8 of the Act.<sup>32</sup> According to the explanatory notes attached to the provision, this applies only to exceptional cases that are often related to existing tasks of the Province or the municipality in the technical maintenance of waterways, harbours, pools, ditches and the like.

The government considers it ‘desirable that the standardization of the Water Act should also have consequences for the execution of these water management activities, without creating new planning obligations or complications in the system of permits and general regulations.’<sup>33</sup> The main goal of the management tasks covered by article 3.2, subsection 2, is to keep the parts of the water systems concerned in good condition as infrastructure for the purposes of inland navigation, but measures directed at other (for instance ecological) functions may also be included. Ecological aspects of technical maintenance may also be regarded as quality management.<sup>34</sup> So far, technical maintenance has been governed by the State Managed Infrastructure Act<sup>35</sup> or by the terms of reference of the regional water

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<sup>27</sup> But see however the last paragraph of of section 4

<sup>28</sup> Chapter 3, para. 1.

<sup>29</sup> See art. 1.1. The concepts of ‘surface body water’, ‘groundwater body’ and ‘water retention area’ are also defined in art. 1.1.

<sup>30</sup> See art. 3.1, subsection 1.

<sup>31</sup> See art. 3.2 subsection 1.

<sup>32</sup> These chapters deal with the following subjects: Plans (ch. 4), Restrictions on activities in water systems (ch. 6), Financial Provisions (ch. 7) and Enforcement (ch. 8).

<sup>33</sup> Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 95-96.

<sup>34</sup> See *ibid.*, pp. 16 and 22-23.

<sup>35</sup> Bulletin of Acts and Decrees 1996, 645.



management agencies; in the future, as we have just seen, it will be governed by the Water Act.

### **3.3. OPERATIONAL WATER MANAGEMENT AND TASKS NOT STRICTLY RELATED TO A PARTICULAR WATER SYSTEM**

In the framework of water management, a distinction is generally made between safety measures (building and maintaining dams and dikes); measures ensuring the quantity of water available; and measures ensuring water quality and technical maintenance for the purposes of inland navigation.<sup>36</sup> Perusal of the explanatory statement appended to the Water Act shows however that there are also other tasks not strictly linked to particular water systems but still of importance for water management.<sup>37</sup> The municipal tasks that do not fall under water management, but are still important for water management are discussed in section 4 below.

Where the Act speaks of management, the explanatory statement makes it clear that what is meant is strictly speaking *operational* management.<sup>38</sup> According to the explanatory statement, water management consists ‘grosso modo of policy and operational management. Policy is formed mainly by standardization, planning, coordination, generally binding regulations and maintenance of the arsenal of legal management instruments.’<sup>39</sup> We would prefer to call what is referred to as ‘policy’ here the legal and policy-related boundary conditions for operational management. In the first place, it appears incorrect, or in any case unclear, to classify generally binding regulations under the heading of policy. Secondly, we submit that it is incorrect to suggest that there is absolutely no room for policy changes in operational management. The water management plan set up by a regional water management agency (water board) definitely leaves room for choice.

The state and the province are responsible for the national policy framework (strategic objectives for water management at the national level) and the regional policy framework (strategic objectives for water management at the regional level), respectively. Within this context, the water manager – the state for the main water system and the relevant *waterschap* (water board) for each regional water system – is responsible for operational water management. Or, as the explanatory statement puts it, ‘[t]he water manager defines the conditions under which the strategic objectives of water management can be realized, determines the concrete measures needed and carries them out.’<sup>40</sup>

### **3.4. IMPLEMENTATION**

It is beyond the scope of the present paper to give a full description of the set of instruments used to implement the Water Act. The following key instruments may however be mentioned.

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<sup>36</sup> See *ibid.*, p. 16.

<sup>37</sup> See *ibid.*, p. 96.

<sup>38</sup> See *ibid.*, pp. 17-19.

<sup>39</sup> See *ibid.*, p. 17.

<sup>40</sup> See *ibid.*, p. 17.

- Pursuant to Chapter 2 of the Water Act, standards are laid down governing the various components or aspects of water systems (such as dams and dikes).
- Chapter 4 of the Act provides for the adoption of plans.
- Actions relating to the water system are regulated by a water permit or general regulations under Chapter 6 of the Act.
- The Minister and the provincial administration can give instructions towards implementation pursuant to articles 3.9 and 3.10 of the Act.

The plans and instructions will now be discussed in more detail since they are also of importance for the interactions between the different levels of administration in the field of water management.

### 3.5.PLANS

The Water Act covers three sorts of plans: the national water plan, regional water plans and the management plan set up by the water manager.<sup>41</sup> The Ministers of the Crown lay down the main elements of the national water policy and the related aspects of the national spatial planning policy in a national water plan.<sup>42</sup> These main elements shall include in any case: (a) an indication, in the light of the statutory objectives and standards, of the desired development, operation and protection of the water systems and of the associated timetable; (b) a description of the measures and equipment needed to realise this development, operation and protection, including the measures referred to in article 11 of the Water Framework Directive in so far as these apply to each of the four Dutch sections of the river basin districts; and (c) an indication of the likely financial and economic consequences of the proposed policy.<sup>43</sup> As regards the spatial planning aspects, the national water plan also serves as a structural vision as referred to in article 2.3, subsection 2, of the Spatial Planning Act.<sup>44</sup> According to article 1.1 of the Water Act, the ministers referred to here are the minister of Transport, Public Works and Water Management together with the ministers of Housing, Spatial Planning and Environmental Management and of Agriculture, Nature and Food Quality, depending on whether the matters involved fall under their responsibility.

The provincial administration lays down the main elements of the provincial water policy and the related aspects of the provincial spatial planning policy in one or more regional water plans.<sup>45</sup> These main elements shall include in any case: (a) a statement of the functions of the regional waters; (b) an indication, in the light of the statutory objectives and standards and in conjunction with the functions referred to under a, of the desired development, operation and protection of the regional waters and of the associated timetable; and (c) a description of the measures and equipment needed to realise the development, operation and protection referred to at (b).<sup>46</sup> As regards spatial planning aspects, these regional water plans also serve as structural visions accordingly with article 2.2 of the Spatial Planning Act.

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<sup>41</sup> Paragraph 1 of Chapter 4 of the Water Act deals with the national water plan (4.1 – 4.3); par. 2 deals with the regional water plan (4.4 – 4.6); and par. 3 deals with management plans (4.7 – 4.8).

<sup>42</sup> See Water Act, art. 4.1, subsection 1.

<sup>43</sup> See Water Act, art. 4.1, subsection 2.

<sup>44</sup> Bulletin of Acts and Decrees 2006, 566.

<sup>45</sup> See Water Act, art. 4.4, subsection 1.

<sup>46</sup> See Water Act, art. 4.4, subsection 2.

Pursuant to article 4.7, subsection 1, of the Water Act, the manager draws up a water management plan for the water systems under his authority. The management plan shall include: (a) the programme of measures and facilities which supplement and further develop any measures included in the national or regional plan which are needed for the development, operation and protection of national or regional waters respectively including the associated timetables; (b) the further assignment of functions to national or regional waters in so far as the national or regional plan provides for this possibility; (c) the intended manner in which the management will be conducted in normal circumstances and in the event of a disaster; (d) a summary of the financial resources needed to implement the programme and conduct the management.<sup>47</sup> Where regional waters are involved, the regional water plan relating to these waters must be taken into account, and compatibility with the management plans of other managers must be guaranteed (if the various water systems involved are or could be related). Rules shall be laid down by, or pursuant to, order in council for national waters or by provincial ordinance for regional waters regarding the preparation, structure, organisation and approval of management plans.<sup>48</sup> These rules relate, among other things, to the approval of a management plan for regional waters by the provincial administration.<sup>49</sup>

In practice, we may also add municipal water plans to this list.<sup>50</sup> According to the explanatory statement:

While the Act does not call for major streamlining of plans, measures are in any case taken to ensure that the number of legally recognized types of plans does not increase further. [...] The increasing municipal involvement with water has also led to agreements about the drawing up of municipal water plans, but the Act does not lay down any special models for such plans. The municipal plans may take the form of sewage plans (already regulated in the Environmental management Act) and, where spatial planning aspects are concerned, of municipal structural visions and land-use plans.<sup>51</sup>

### **3.6. INSTRUCTIONS BY THE MINISTER AND PROVINCIAL ADMINISTRATION**

The Minister or provincial administration can use an ‘instruction’ to demand a decision from the regional water board or from the provincial administration, respectively. The provincial administration can employ an instruction if this is required in the interests of coherent, effective regional water management.; such an instruction regards the performance of tasks or powers by virtue of this Act.<sup>52</sup> The Minister can make use of an instruction if called for by international obligations or supraregional interests.<sup>53</sup> If the water manager to whom the instruction is directed does not take the decision requested, or does not do so properly, the provincial administration or Minister is authorised to take the decision on behalf of the management and on the account of the statutory legal entity in question.<sup>54</sup>

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<sup>47</sup> See Water Act, art. 4.7, subsection 2.

<sup>48</sup> See Water Act, art. 4.8, subsection 1.

<sup>49</sup> See Water Act, art. 4.8, subsection 1, introduction and item c.

<sup>50</sup> See, e.g., the water plan of the municipality of Emmen (Dutch only), which may be found on the website [www.overheid.nl/wet-en-regelgeving/regelingen-gemeenten-etc](http://www.overheid.nl/wet-en-regelgeving/regelingen-gemeenten-etc).

<sup>51</sup> Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 32.

<sup>52</sup> Water Act, art. 3.9 subsection 1.

<sup>53</sup> Water Act, art. 3.10 subsection 1.

<sup>54</sup> Water Act, arts. 3.9 subsection 4 and 3.10 subsection 3.

## **4. MUNICIPAL TASKS OF IMPORTANCE FOR WATER MANAGEMENT**

Significant municipal tasks that do not fall under the heading of water management but are still important for water management exist in the field of spatial planning. This is the case, for instance, with respect to the ‘water test’, an analysis of the risks and costs of drought or flooding that the municipality is obliged to carry out before choosing the location of, or changing the land use in, a given urban area, as well as with respect to management of the sewage system and public space (where, for instance, the use of herbicides to eliminate weeds is an important issue).<sup>55</sup> Management of the sewage system will be discussed in greater detail in section 5, since this falls under the heading of the water chain.

The management of navigational waterways, insofar as implementation of the Shipping Traffic Act<sup>56</sup> is concerned, interfaces with water management though it is not part of water management as such.<sup>57</sup> On the other hand, the technical maintenance of waterways is part of water management, as we have seen above.

Another recent act, the Municipal Water Tasks Act<sup>58</sup>, gives the municipality a number of specific tasks in the fields of groundwater and stormwater runoff and amends the duties of the municipality in connection with the treatment of wastewater.<sup>59</sup> It had initially been the intention to include these tasks in the Water Act, but comments made during the Parliamentary debate on these proposals led to their being moved to a separate act.

The Municipal Water Tasks Act is largely intended to regulate three statutory duties of care of the municipality, related to stormwater runoff, groundwater and the treatment of urban wastewater. The first two duties are new, while the duty to care relating to the collection and transport of wastewater is an existing one. The choice of the legal framework within which the regulation of these tasks can be anchored was, as mentioned in the explanatory statement, partly dictated by the separation between the water chain and the water system.<sup>60</sup> The two new duties concern the water system, while the existing duty to look after wastewater disposal concerns the water chain. The content of these three duties can only be touched upon briefly here. The proposed changes in the law concerning the duty of the municipality to address the issue of wastewater disposal are discussed in section 5 below.

The new division found in the Act (Division 4A) on the care for stormwater runoff and groundwater contains two articles (articles 9a and 9b) to be inserted in the Water

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<sup>55</sup> See *ibid.*, p. 23.

<sup>56</sup> Bulletin of Acts and Decrees 1988, 352.

<sup>57</sup> See *ibid.*, p. 20.

<sup>58</sup> The full official name of this Bill is very long. In English translation, it runs: “Amendment of the Municipality Act, the Water Management Act (Wwh) and the Environmental Management Act (Wm) in connection with the introduction of duties of care for municipalities relating to stormwater runoff and groundwater, together with clarification of the duty of care relating to waste water, and amendment of the associated budgetary instrument (anchoring and budgeting of municipal water tasks)”. In the interests of brevity, it is referred to here as the “Municipal Water Tasks Bill”.

<sup>59</sup> Dutch House of Representatives 2005-2006, 30 578, No. 1-4. For further details of this bill and the duties of care referred to in it, see: P. Jong, Gemeentelijke watertaken en zorgplichten (Municipal water tasks and duties of care; in Dutch), in: T. Drupsteen, H. Havekes, H. van Rijswijk (ed.), *Weids water* (Van Hall-bundel), SDU, 2007. See also: H.J.M. Havekes, *Het wetsvoorstel verankering en bekostiging van gemeentelijke watertaken* (The Parliamentary bill on the anchoring and budgeting of municipal water tasks; in Dutch), *M en R [Tijdschrift voor Milieu en Recht = Journal for Environment and Law]* 2006, No. 9, p. 534-538.

<sup>60</sup> Dutch House of Representatives 2005-2006, 30 578, No. 3, p. 7-8.

Management Act (Dutch abbreviation: Wwh). The duty of care for stormwater runoff is derived from the new rainwater policy about which the Secretary of State for VROM informed Parliament on 21 June 2004.<sup>61</sup> The rainwater policy has four main pillars: (1) attacking the problem at the source by preventing the pollution of rainwater; (2) the collection and storage of rainwater; (3) keeping the stormwater drains separate from those for wastewater ('decoupling' the two flows); and (4) balancing all considerations in this field at a local level.<sup>62</sup> The proposed new article 9a of Wwh regulates the duty of the municipality to deal effectively with 'stormwater runoff'. This duty on the part of the municipality only exists 'to the extent that the parties disposing of, intending to dispose of or forced to dispose of the stormwater runoff cannot reasonably be expected to bring the stormwater runoff into the ground or into surface water.'

The proposed new article 9b of Wwh regulates the duty to care for groundwater. Subsection 1 of this article reads as follows:

The municipal council or the mayor and aldermen are responsible for taking measures within the public space of the municipality to prevent or limit structurally adverse consequences of the groundwater level on the use to which municipal land is to be put, insofar as such measures are feasible and do not fall under the responsibility of the water board or the Province.

The reference to 'the use to which municipal land is to be put' concerns the land-use plans dealt with in article 10, subsection 1, of the Spatial Planning Act. The provisions of article 9b appear to represent an inverse form of the 'water test' discussed above. The 'water test' is used when drafting the municipality's land-use plan, to take account of the effect of the plan on the water balance, that is, both on the level and quality of groundwater.<sup>63</sup> The municipality's duty of care with respect to groundwater works just in reverse: the objective here is to prevent, or at least to limit, adverse effects of the groundwater level on the uses to which municipal land can be put.

The explanatory statement to the Water Act repeatedly stresses that municipalities are not water managers in the sense of the water legislation, but do perform certain tasks that are of importance for water management.<sup>64</sup> Some authors have argued that municipalities should be regarded as water managers. In his reaction to the Water Act, J.M. Verschuuren claims that the municipality should be considered to be a water manager, since it is to be given the tasks of managing urban groundwater and stormwater runoff.<sup>65</sup> H.J.M. Havekes shares this view. He writes: 'There are many water managers in the Netherlands. In urban areas, the municipalities play a particularly important role here.'<sup>66</sup> In our opinion, these authors are right when it comes to certain situations which – seen from the perspective of the Water Act – must be considered to be exceptional. When we concentrate on the operational management of water systems, we see that there are as a rule two water managers: the state (water managers of national waters) and the water boards (water managers of regional waters). It

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<sup>61</sup> See *ibid.*, 2003-2004, 28 966, No. 2. See also P. de Putter and J. Robbe, 'Alle regen komt van boven, maar wat kan de gemeente ermee?' (All rain comes from above, but what can the municipality do about it? In Dutch), in: TO June 2005, No. 2, p. 45-53.

<sup>62</sup> See *ibid.*, 2003-2004, 28 966, No. 2, p. 3.

<sup>63</sup> Order dated 3 July 2003, Stb. [Statute Book] 2003, 294. See in particular the explanatory note.

<sup>64</sup> Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 23 and 79. The sentence on page 79 of the explanatory statement is somewhat confusing in our opinion: 'Municipalities have tasks *in water management*, but are not water managers on the basis of this Bill' [emphasis added]. It is also stated on page 79 that the Province is not a water manager on the basis of this Bill.

<sup>65</sup> J.M. Verschuuren, in: TO December 2005, No. 4 (see note 8), p. 129.

<sup>66</sup> H.J.M. Havekes, loc. cit., see in particular p. 534.

follows from the provisions of the above-mentioned article 3.2, subsection 2, however, that other bodies (such as municipalities) may assume the role of water manager. In brief, within the framework of the Water Act the municipality is not as a rule a water-system manager; in certain concrete cases, regarded as exceptional from this viewpoint, it may however manage part of a water system.

It was remarked above that the definition of ‘water management’ in article 1.1 of the Water Act might seem superfluous. The above-mentioned existence of tasks associated with water, which cannot nevertheless be characterized as operational water management tasks, does however make it meaningful to distinguish between water management and other forms of management. It would then be appropriate, in our view, to exchange the much more general definition currently given of ‘water management’ in article 1.1 for the more detailed definition of ‘management’ as it stands in article 1.1 at present.

## **5. THE WATER CHAIN**

### **5.1 THREE COMPONENTS**

As mentioned above, Dutch government policy makes a distinction between the water chain and the water system.<sup>67</sup> The definition of the water system given in the Water Act was cited in section 3 above.<sup>68</sup> So far, however, the legislation does not contain anywhere a definition of ‘water chain’, though the term is widely used in government policy statements. As Figure 1 above shows, the water chain consists of three components: drinking water supply (production and distribution); the sewage system (collection and transport of wastewater); and wastewater treatment. These three components will now be discussed in turn.

### **5.2 DRINKING WATER SUPPLY**

The explanatory statement to the Parliamentary bill embodying new provisions relating to the production and distribution of drinking water and the organisation of the public drinking water supply (Drinking Water Act) makes a number of references to the water chain.<sup>69</sup> An important consideration in this connection is the wish to remove impediments to cooperation between companies or agencies working in the water chain. According to the White Paper on the Water Chain, the government considers it desirable to create a number of ‘water-chain companies’ in which water-supply services, sewage services and wastewater treatment services are combined.<sup>70</sup> The first Dutch company of this kind, Waternet, was set up in 2005 in the Amsterdam region. This company has the legal form of a foundation in which both the municipality of Amsterdam and the water board participate. Waternet is responsible for the entire water cycle in its service area. The water cycle comprises the following primary

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<sup>67</sup> See, e.g., the explanatory statement on the wetsvoorstel voor een Wet algemene bepalingen omgevingsrecht (General Provisions of Environmental Law Bill; Dutch abbreviation: Wabo): Dutch House of Representatives 2006-2007, 30 844, No. 3, p. 89.

<sup>68</sup> See par. 3.2.

<sup>69</sup> Dutch House of Representatives 2006-2007, 30 895, No. 1-3, see in particular pp. 3, 24 and 28.

<sup>70</sup> See *ibid.*, 2006-2007, 30 895, No. 1-3, p. 24.

processes: production and distribution of drinking water; sewerage; waste water treatment; ground water management and quality and quantity management of surface water.<sup>71</sup>

### 5.3 SEWAGE SYSTEM

The municipality manages one part of the water chain, the sewage system. The management of the sewage system is regulated by the Environmental Management Act (abbreviated to Wm in Dutch).<sup>72</sup> Pursuant to article 10.33 of the Wm, municipalities are charged with the duty of care for the effective collection and effective transport of the wastewater discharged by the various lots within its boundaries. This duty comprises two main elements: the duty to build a system of sewers and the duty to manage this system adequately. The history of the legislation shows that this duty of care must be directed towards the prevention of soil pollution, groundwater pollution, changes in groundwater level and surface water pollution.<sup>73</sup>

The Municipal Water Tasks Act discussed in section 4 above intends to restrict the duty of care for the collection and transport of wastewater as mentioned in article 10.33 of the Environmental Management Act to ‘urban wastewater’. In its present form, article 10.33 still speaks simply of wastewater, suggesting that this duty of care applies to all forms of wastewater including the relatively clean wastewater flows. However, this suggestion is not in line with the points of departure of the new policy on the handling of both stormwater runoff and groundwater. The municipal duty of care relating to wastewater comprises collection of urban wastewater by means of a public combined sewer system and the transport of this wastewater to a treatment plant for purification. Instead of installing and managing a public combined sewer system, the municipality can also use separate stormwater and sanitary sewer systems or other suitable systems such as so-called Individual Treatment Installations for Waste Water (IBA’s) if the same level of environmental protection is achieved in this way. The new rules for the duty of care relating to wastewater disposal, like the previous ones, include a provision that the Province can exempt the municipality from this duty of care if the collection and transport of urban wastewater is not economically feasible in certain more thinly populated parts of the municipality.<sup>74</sup>

Article 4.22, subsection 1, of the Wm stipulates that the municipal council shall periodically draw up a municipal sewage plan (abbreviated to GRP in Dutch), covering a period to be determined in this connection. The GRP must include an overview of the facilities for the collection and transport of wastewater present in the municipality. The new Municipal Water Tasks Act will lead to an enlargement of the scope of this plan in the future. The new Act proposes an amendment of article 4.22 of the Wm that will cause the GRP to be expanded to include not only urban wastewater but also ‘the collection and further processing of stormwater runoff’ and ‘measures aimed at preventing or limiting as much as possible the structurally adverse consequences of the groundwater level on the use to which municipal land is to be put.’<sup>75</sup> In our opinion, a municipal sewage plan that is extended to include groundwater and stormwater runoff alongside urban wastewater deserves the name of

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<sup>71</sup> See also the website of this water chain company: [www.waternet.nl](http://www.waternet.nl).

<sup>72</sup> See Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 23, where it is stated that sewer management has an influence on water management.

<sup>73</sup> Dutch House of Representatives 2005-2006, 30 578, No. 3, p. 4. See also: TK 1991-1992, 21 246, No. 6, p. 30.

<sup>74</sup> See *ibid.*, 2005–2006, 30 578, No. 3, pp. 8-9.

<sup>75</sup> Dutch House of Representatives 2005-2006, 30 578, No. 3, p. 3 and p. 19-20.



‘municipal water plan’ since it impinges both on the water system (groundwater and stormwater) and on the water chain (sewage system).

The GRP is drawn up by the mayor and councillors of the municipality in question. They have a duty to consult at least the provincial administration, the managers of the treatment plant to which the collected wastewater is transported and the managers of the surface waters in which the collected wastewater is discharged.<sup>76</sup> The provincial administration may give the municipal council instructions concerning the content of the GRP, bearing in mind the provisions of the currently valid provincial environmental policy and water management plans.<sup>77</sup>

Pursuant to the Environmental Management Act and the Soil Protection Act the municipality is often the authorized authority for the issue of permits, exemptions and general regulations concerning the discharge of wastewater into a public sewage or into the soil. The discharge of wastewater into a public sewer is designated as indirect discharge (since the wastewater only reaches surface water after passage through the treatment plant). One of the changes brought about by the Water Act is that from now on, indirect discharges will fall completely under the authority of the municipality.

## 5.4 WASTEWATER TREATMENT

The only part of the water chain to be regulated under the Water Act is the treatment of wastewater ‘because of the close relationship with water management’.<sup>78</sup> Pursuant to article 3.4, subsection 1 of the Act, the treatment of urban wastewater transported by a public sanitary sewer must take place in an installation designated for this purpose, under the care of a water board. An exception to this rule is formulated in subsection 2. The water board in question and the council of one of the municipalities involved may decide, in response to a proposal by one of the two parties, that the treatment of designated urban wastewater from the municipality in question shall from a date to be determined by the two parties be performed in a designated installation under the care of the municipality. This decision may only be taken on the grounds that transfer of the authority for the treatment from the water board to the municipality is demonstrably more effective for the treatment of urban wastewater. To the best of our knowledge, such a transfer of authority has never been made so far in the Netherlands. It is apparently regarded as most effective in practice for the water board to retain the authority for this task.

Article 1.1 of the Water Act also contains a number of definitions concerning sewage that are relevant to the treatment of wastewater. The term ‘public dirty-water sewer’ is defined as ‘a facility for the collection and transport of urban waste water, under the authority of a municipality or a legal entity charged by a municipality with its management’, while ‘urban wastewater’ is defined as ‘domestic waste water or a mixture of this with industrial waste water, stormwater runoff, excess groundwater or other wastewater’.

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<sup>76</sup> Wm, art. 4.23 subsection 1.

<sup>77</sup> Wm, art. 4.24.

<sup>78</sup> See *ibid.*, 2006-2007, 30 818, No. 3, pp. 28 and 9.



## **6. WATER AGREEMENTS**

Water boards are water-system managers for regional waters. Municipalities manage (part of) the water chain. In view of the different roles of water board and municipality in dealing with the water system and the water chain, an effective outcome is only possible if these two parties work well together. Lack of cooperation or poor cooperation between municipalities and water boards will by definition cost more than is necessary and efficient.<sup>79</sup> It may be asked in this connection what guarantees the legislation offers towards effective cooperation, and whether these guarantees are adequate. The present section focuses on the possibility of using water agreement as a guarantee of good cooperation between municipalities and water managers.

Section 2 of Chapter 3 of the Water Act regulates water agreements by means of a single provision, namely article 3.5. The first subsection of this article stipulates that in circumstances to be specified in this connection, managers of water systems situated in the same catchment area are obliged to draw up a water agreement. In the White Paper on the Water Act, the municipality is still mentioned as a possible party to a water agreement. This document speaks explicitly of ‘water agreements to be made by regional water managers (or water boards) and municipalities in cases or areas to be specified by or pursuant to order in council and in other cases by provincial ordinance’.<sup>80</sup> However, the Water Act only mentions the possibility that managers may invite ‘another public authority’ that performs a water task not performed by the water manager itself to participate in the water agreement.<sup>81</sup> While the explanatory statement unfortunately says nothing about the nature of the ‘other public authority’, it seems quite plausible that this could be a municipality. A water agreement contains provisions about the way in which the managers regulate the inflow and outflow of water or other aspects of management with respect to one another.<sup>82</sup> The cases in which a water agreement is compulsory are specified by, or pursuant to, an order in council when the water systems fall under the authority of the state or by a provincial ordinance when other water systems are concerned.<sup>83</sup>

A striking difference between the regulation of water agreement in the Water Act and as discussed in the White Paper on the Water Act is that the latter still mentioned the criteria according to which an order in council or provincial ordinance could specify the cases in which a water agreement could be regarded as compulsory. When the water system was under state management, the criterion was that ‘international legal obligations or the need for coherent, effect water management on a national scale or per catchment area make this necessary.’<sup>84</sup> When the water system was under regional management, the criterion was that ‘this is required in the interests of coherent, effective regional water management’.<sup>85</sup> It is unclear why these criteria have been dropped in the Act.

According to the explanatory statement on the Water Act, various parties have pointed out that the municipal duty of care for stormwater runoff and groundwater is still insufficiently

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<sup>79</sup> See e.g. ‘Meer besparingen mogelijk door samenwerking in de waterketen’ (More savings possible through cooperation in the water chain; in Dutch), in: H2O/22-2006, p. 6.

<sup>80</sup> Arts. 4.3, subsection 1 (introduction and sub. B) and 4.4 subsection 1 (introduction and sub. B).

<sup>81</sup> Art. 3.5 subsection 1.

<sup>82</sup> Subsection 2.

<sup>83</sup> Subsection 3.

<sup>84</sup> Art. 4.3 subsection 1.

<sup>85</sup> Art. 4.4 subsection 1.

clearly defined. It was therefore decided to include these duties in a separate act regulating 'municipal water tasks'. The explanatory statement goes on to say:<sup>86</sup>

The consequence of this for the is also that the initial idea of widening the water agreement by adding municipalities as a party has been dropped for the moment. Provisions concerning cooperation between water boards and municipalities will not yet be included either. Details of this cooperation will in the first instance also be laid down in the Municipal Water Tasks Act. On the other hand, the water agreement has been given a clear place in the Act. The provisions originally proposed were felt by many parties to be too sketchy.

The above quotation prompts the following comments. In our opinion, the claim that the water agreement has been given a clear place in the Act would seem exaggerated. Only one provision is devoted to it, and this closely resembles that already included in the Water Management Act – with the difference that the agreements can now cover also non-quantitative aspects of water management. In addition, we fail to see the logic of the link between regulating the municipal duties of care in a separate act and the decision not to name the municipality explicitly as a party to the water agreement. After all, the link between the sewage system and wastewater treatment in the water chain is completely evident, is it not? Moreover, this extremely sketchy regulation of the water agreement conflicts with the positions previously taken by some authoritative advisory bodies. In its opinion of November 2005 concerning the Water Act, the Advisory Committee on Water Management Legislation (Dutch abbreviation: CAW) made a plea for more extensive regulation of the water agreement than that given in the Act. The Committee argued that the water agreement deserved more attention in view of, amongst other things, the importance of wide involvement and participation in water policy,<sup>87</sup> and the desirability of making this policy both effective and goal-oriented. It also saw the water agreement as an important instrument for reaching the necessary harmonization between water chain and water system, and allowing municipalities and water management agencies to lay down agreements giving concrete form to the duties of care formulated in the Water Act.<sup>88</sup> The Advisory Committee on Water (with the Prince of Orange as its chairman) also made a plea for further elaboration and widening of the position of the water agreement, to strengthen cooperation between the regional authorities.<sup>89</sup>

## **7. CONCLUDING REMARKS**

One of the objectives of this outline of the proposed legislative regulation of the water system and the water chain has been to attempt to gain greater insight into the reasons for the lawmakers' decision to regulate certain matters under the water legislation (Water Act) and others under the environmental legislation (Environmental Management Act).

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<sup>86</sup> Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 83.

<sup>87</sup> See also article 14 of the EU Water Framework Directive (Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy, OJ 2000 L 327/1).

<sup>88</sup> See the opinion of the CAW on the Water Bill, under the title 'Voorontwerp Waterwet: voldoende waarborgen voor een duurzaam en samenhangend watersysteembeheer?' (Water Bill: adequate guarantees of sustainable, coherent water system management? In Dutch), November 2005, pp. 8 and 30.

<sup>89</sup> Dutch House of Representatives 2006-2007, 30 818, No. 3, p. 85. As the explanatory note on page 24 indicates, both committees have already made a plea for strengthening of the water agreement (the CAW in its opinion entitled 'Zicht op grondwater, Een juridisch perspectief op grondwaterheheer in bebouwd gebied' (Groundwater in sight: A legal perspective on groundwater management in built-up areas; in Dutch), August 2004.

An examination of these issues at the present time begs the questions of whether the existing legislation and the above-mentioned bills currently under discussion in Parliament do give sufficient guarantees for a proper link between water chain and water system, and whether the bills contain sufficient guarantees for the necessary cooperation between municipality and water board. This paper concludes that there are still insufficient legal guarantees for a proper link between water chain and water system, in particular because the legal guarantees of cooperation between water manager and municipality remain inadequate. In reaction to questions in the Dutch House of Representatives from members of the ChristenUnie (Christian Union) party concerning the municipal duties of care, the government stated that the need to expand the arsenal of instruments for administrative cooperation within the framework of the Water Act was currently under review, and that it was 'conceivable' that a provision concerning administrative agreements between water managers and municipalities might be added to the Water Act.<sup>90</sup> We find the government's answer surprising, since in our opinion such a provision is not simply conceivable, but indispensable. There is little hope of a coherent water policy that pays due attention to the various interfaces between the water system, the water chain and other environmental aspects unless steps are taken to make cooperation between municipalities and water managers compulsory and to give it a firm basis in law.

The diagram of Figure 1 above showing the relationship between the water chain, the water system and the environment will remain a source of inspiration for further study of the interfaces between water legislation and environmental legislation in the future. We hope and trust that it will continue to inspire policy makers, legislators, practitioners and researchers working in the field of water.

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<sup>90</sup> Dutch House of Representatives 2006-2007, 30 578, No. 6, p. 21.