WATER GOVERNANCE

THE DUTCH WATER AUTHORITY MODEL

DUTCH WATER AUTHORITIES

COLOPHON

EDITION
© Dutch Water Authorities, 2017
PO Box 93218
2509 AE The Hague The Netherlands
Internet: www.uvw.nl
E-mail: info@uvw.nl

AUTHORS
Herman Havekes
Martin Koster
Wijnand Dekking
Rob Uijterlinde
Willem Wensink
Ron Walkier (NWB Bank)

PRINTING
Opmeer BV, Den Haag

EDITION
1,000 copies

PREFACE

Dear reader,

The global water reality poses serious and increasing challenges. Today 40% of the world's population is living in water-stressed river basins. As water professionals we experience every day that water is a limited and highly variable resource, involving constraints and risks of too much, too little or too polluted water. The OECD perspectives for water up to 2050 are sobering, according to its Environmental Outlook. In 2050, around 240 million people are expected to remain without access to pure water, and 1.4 billion without access to basic sanitation. Imagine! But also outside the water sector, the risks of water crises are being noted. The 2015 World Economic Forum's Global Risks report, for instance, identifies water crises as the greatest impact risk facing the world in the coming 10 years. The challenge is huge and fascinating, both for the water sector itself and for related areas. In a country like the Netherlands, both water governance and operational management are issues of 'to be or not to be'. The 21 decentralised and autonomous regional water authorities play a key role. We go under the name of: Dutch Water Authorities (www.dutchwaterauthorities.com).

We have written this booklet for everybody who is interested in water governance, with focus on the regional and basin scale. It gives you an insight into who the Dutch water authorities are and what they do, but especially into how they work as a public organisation, in the Dutch multilevel governance context. Special attention is paid to our legislative and organisational structure, administration and financing. These aspects are frequently discussed in our many contacts with foreign relations.

The Dutch water authority model, which has its origins in the 13th century, is alive and kicking. The OECD reviewed our water governance in 2014, in view of future challenges. The qualification "a global reference" was rewarding. At the same time, we are happy to have reflections and incentives for improvements in our water agenda for the coming years.

The way we have organised water governance in the Netherlands attracts international attention. In international co-operation, Dutch Water Authorities share their experiences with partner organisations all over the world, both in terms of governance, operational expertise, management and financial tools and techniques. DWA have long standing partnerships with counterparts in several countries to foster decentralized water management in all its aspects. Every day I experience the need to share expertise to prevent disasters, to provide sufficient water services to communities and economic sectors and to address present and future water challenges of society all across the globe. The time for action is now!

With this booklet I wish you inspiration in addressing the water governance challenges in your situation.

mr. J.H. Oosters
President of Dutch Water Authorities

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1 INTRODUCTION

1.1 DECENTRALISED WATER MANAGEMENT, A GLOBAL THEME

Water management is facing enormous challenges both nationally and internationally. Climate change, a rapidly increasing population and economic developments are putting immense pressure on water systems. This particularly applies to the flat, low-lying areas of the world such as deltas and coastal and river plains where the population growth is concentrated. Governments have a clear responsibility for the safety of inhabitants from flooding and the management of water resources. These tasks, which in the Netherlands are largely allocated to *waterschappen* (regional water authorities), not only require adequate funds, physical infrastructure and knowledge, but also a good institutional structure to be efficient and effective to engage stakeholders and to build trust. That is good water governance.

The 21 regional water authorities in the Netherlands in 2017 are an autonomous, fully-fledged authority alongside the State and provincial and local governments.

The Dutch regional water authority model is not unique. Similar water governance structures exist elsewhere in Europe and further afield. Internationally, the governance structures and financing of decentralised water institutions are recurrent themes. The sophisticated regional water authority system in the Netherlands attracts particular attention as regards these aspects. More than fifty percent of the Netherlands would be under water if the water management was not up to standard, so pure water and dry feet are great achievements in this country. And, indeed, if the regional water authorities would fail to do their work for even a single day, the lower-lying areas of the Netherlands would immediately be in trouble.

At international meetings, such as the World Water Forums, the Netherlands actively brings in its governance experiences with the management of its regional water system, not as a blueprint, but as food for thought. Components of this model can also be used in other constellations. And every little helps in improving governance of the global water

system. After all, the second UN World Water Development Report (2006) describes the global water crisis in this century primarily as a water governance crisis.

Developments are ongoing in the Netherlands as well as elsewhere. In terms of content, the focus is on anticipating climate change and on properly implementing European policy, such as the Water Framework Directive and the Directive on the Assessment and Management of Flood Risks. In the autumn of 2014, the Netherlands established the Delta Decisions, which are aimed at more effectively protecting the country against flooding and freshwater supply in the years to come. And at the end of 2016 new safety standards for our primary dikes have been laid down in the Water Act. In the years leading up to 2050, 200 dyke sections – covering a total length of 1,500 kilometres – will be strengthened. Regional water authorities have a crucial role in this, along with their duties in the fields of safety from flooding, the management of water quantity and quality, and the treatment of urban wastewater. They do not do this in close co-operation with the State and provincial and local governments. That intergovernmental co-operation is also the main theme of the Administrative Agreement on Water that was signed by these parties (and the association of water companies, VEWIN) in May 2011.

Because innovative solutions can help to achieve objectives faster and at a lower cost today the Dutch water authorities examine solutions that fall outside the traditional approach. For example, they took a fresh look at the traditional wastewater treatment process, and this has resulted in two new concepts: the Energy Factory and the Raw Material Factory (see www.efgf.nl). Smart technologies make it possible to produce extra energy and extract valuable raw materials, such as phosphate, from wastewater. The water authorities are working hard to further increase the efficiency of their processes and investing millions in measures that quickly pay back. By treating wastewater in a sustainable way, the regional water authorities are saving energy and money.

On 17 March 2014, the OECD published a report on Dutch water governance that was commissioned by the Ministry of Infrastructure and the Environment and Dutch Water Authorities. In the report, the OECD expresses its respect for water governance in the Netherlands, which it typifies as a "global reference". According to the OECD, water governance in the Netherlands is organised efficiently, and this also applies to the role played in this by the regional water authorities. In his presentation, Deputy Secretary-General Yves Leterme of the OECD characterised the regional water authorities as the "backbone" of Dutch water governance.

This booklet tells the reader all about the Dutch water authority model. It gives insight into the organisation, management and funding of the regional water authorities.

After a concise outline of decentralised water management in the Netherlands in section 1.2, the legal basis of the regional water authority is discussed in detail in Chapter 2. Chapter 3 is devoted to their democratic legitimacy: the relationship with of society, such as residents and interest groups, which deviates from general democracy. 'Interest-pay-say' continues to be the creed of the regional water authority governing bodies. The financing system is described in Chapter 4. In this context there is a special phenomenon: the NWB Bank (Nederlandse Waterschapsbank N.V.), a bank set up by the water authorities that provides them with access to the capital market (although it is not the only possible option). This NWB Bank, which celebrated its 60th anniversary in 2014, is described in Chapter 5. Chapter 6 throws light on the Association of Regional Water Authorities *(Unie van Waterschappen)*, as the national and international representative of Dutch regional water authorities. Lastly, Chapter 7 contains some final conclusions.

1.2 THE DUTCH WATER AUTHORITY MODEL

A large part of our country is kept dry (or wet) by artificial means. In the past, areas that were originally peat and marsh were brought under cultivation. The land was adapted to suit habitation, agriculture, industry and recreation. This involved extensive infrastructure. Not just roads and railways, but also – and especially – investments in water management. The Dutch seem to take for granted the efforts required to keep the land dry, to produce water of a high quality and to harmonise water management with social functions in their densely-populated country. The Dutch feel safe, protected as they are by dykes, dunes and dams. However, without this continuous care and maintenance of the many flood defences, locks, pumping stations, flood barriers, canals and ditches, the safety of ten million Dutch citizens would be in immediate danger. And this is precisely what the regional water authorities do.

Table 1: Key figures of the Dutch regional water authorities 2017.

Number of water authorities	21
Number of employees	11,250
Length of primary flood defences being managed	3,600 kilometres
Length of other flood defences	14,100 kilometres
Length of managed watercourses	230,000 kilometres
Number of pumping-stations	3,550
Length of managed roads	7,500 kilometres
Number of treatment plants	335
Volume of wastewater treated	2 billion m^3

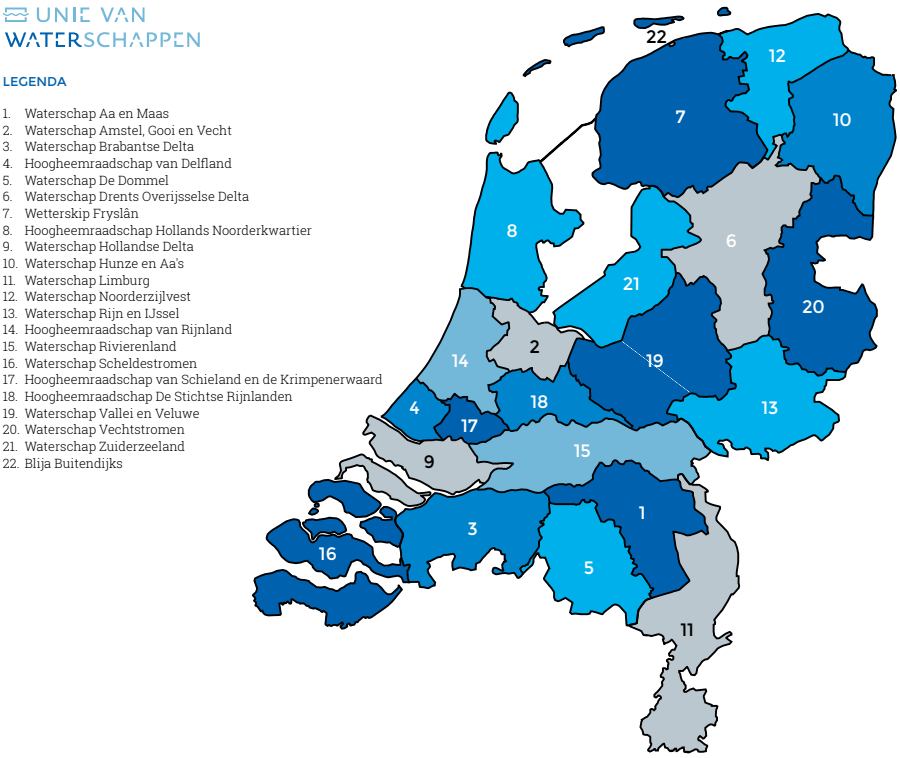
Regional water authorities are functional, decentralised government institutions, with tasks exclusively in the field of water management: managing water defences, quantity and quality, and navigable waterways. All of the existing Dutch water authorities are shown on the accompanying map.

The boundaries of the regional water authorities are not just random lines on the map. These boundaries are primarily determined by factors relating to water management: catchment and sub-catchment basins, dyke rings, pumping and storage areas, etc.

As a consequence they do not usually correspond with municipal or provincial borders. More than half of the regional water authorities have an interprovincial character. The area managed by the Rivierenland water authority, for example, covers parts of no less than four provinces.

The total government expenditure on water-related tasks, including those of the water companies, was 7.1 billion euro in 2016. Of this amount, 2.9 billion euro was allocated to the water authorities. In that year, a household that owned its own home paid an average of €805 in rates and taxes for water. This amount is made up of regional water authority taxes (€321) and payments for sewerage charges (€190) and drinking water (€165). In addition, households contribute to the costs taken on by the State and the provinces by means of their State and provincial taxes (€129).

Figure 1.1: Map showing the regional water authorities in the Netherlands



(Source: Water in Beeld 2017).

2 REGIONAL WATER AUTHORITIES AND THEIR LEGAL BASIS

2.1 WATER GOVERNANCE

This chapter will further explore the constitutional position of regional water authorities and their tasks on the basis of the relevant legal regulations. This is the first building block of the regional water authority model.

The regional water authorities are the oldest form of democratic government in the Netherlands. The first water authorities date from the 13th century. This has everything to do with the geographical location of the Netherlands. More than half the country would be flooded but for the dunes and dams that protect human beings, livestock and properties against storm floods coming from the sea and torrential rivers. Extreme rain, too, can cause great inconvenience. The many dykes, locks, pumping stations, weirs, canals and ditches keep the Netherlands habitable. Without the regional water authorities, over a half of our country, home to ten million people, would simply not exist.

Regional water authorities are responsible for water management on a regional and local level. The term 'water management' can be described as that part of public welfare that relates to flood protection, water management (surface water and groundwater in terms of both quantity and quality) and the waterways, and that focuses as such on the habitability and usability of the soil and on the protection and improvement of the living environment. From this description it is also apparent that, in the execution of their tasks, the regional water authorities fulfil the provisions of Article 21 of the Dutch Constitution: 'Government care is aimed at the habitability of the country and the protection and improvement of the environment.' The importance of good water management is growing as a result of the rising sea level, climate change, land subsidence and urbanisation. Five water authorities are also charged with road management.

Water management is exercised by means of infrastructural structures: water-related structures such as rivers, lakes, canals, ditches, dykes, pumping stations, locks, weirs, culverts, bridges and wastewater treatment plants. These works are crucial for keeping the Netherlands habitable. The regional water authorities draw up bye-laws *(Keur)* to safeguard the correct maintenance and functioning of these structures. For example, it is generally prohibited to carry out activities such as building, excavating or planting greenery, on, in, over or under water-related structures without the permission of the regional water authority. The crucial importance of these infrastructural works is also clear from the Dutch Criminal Code, which makes deliberately damaging such works punishable. Since 2012, the water authorities have also had the instrument of administrative punishment at their disposal. They can use this criminal law instrument to inflict light punishment in response to relatively slight violations of the Water Authority bye-laws.

As specified below, the care of water management is subject to several Orders in Council and local government bye-laws in addition to the Regional Water Authorities Act *(Waterschapswet)* and particularly the Water Act *(Waterwet)*. Together they form the major source of water management legislation and can be designated as the totality of legal rules relating to water management. The legislation and policy originating from the European Union has increasing influence on the way in which regional water authorities perform their core tasks. Familiar examples include the European Water Framework Directive and the Directive on the Assessment and Management of Flood Risks. These also include the European Directives on drinking water, bathing water, groundwater and urban wastewater.[1] Since these directives have to be transposed by the national legislator, they have a great influence on the legal practice within water management.

Although water management is a separate field of responsibility of the national government, it has much in common with other fields of government policy such as spatial planning, environmental protection and nature conservation. It is therefore vital to gear the decisions in these policy fields to one another. The concept of 'integrated water management' is often used in this respect; this not only takes into account the relationships within water management itself (the quantity and quality of surface water and groundwater) but also those within the other policy fields mentioned. This is exemplified by the water assessment laid down by law.[2] The act in question stipulates that provincial and municipal plans in the field of spatial planning must indicate the consequences they have for water management. The objective of this water assessment is to prevent the building of new urban or industrial areas on locations that are unsuitable from the point of view of water

1 For a detailed overview, see: H.F.M.W. van Rijswick (editor), *EEG-recht en de praktijk van het waterbeheer*, STOWA series, issue 18, Utrecht 2008.

2 See the amendment to the Physical Planning Decree, Bulletin of Acts and Decrees 2003, 294 and 327, which came into effect on 1 November 2003.

management. The fact that, as far as structural aspects are concerned, the Water Act treats the National Water Plan and the regional water plans of the provincial governments as a structural vision in the sense of the Spatial Planning Act must also be viewed within this framework. It forms tangible evidence of the desire to strengthen the link between water management and structural planning.

2.2 THE POSITION OF THE REGIONAL WATER AUTHORITIES

The position of the water authorities is founded in the Dutch Constitution, of which article 133 reads as follows:

1. The establishment and dissolution of water authorities, the regulation of their tasks and structure and the composition of their governing bodies take place in accordance with the provincial bye-laws prescribed by law, if not otherwise provided for by or pursuant to the law.
2. The regulatory and other powers of regional water authorities' governing bodies and the public nature of their meetings are laid down by law.
3. The provincial and other supervision of these governing bodies is laid down by law. Decisions made by these governing bodies can only be annulled if they are in conflict with the law or the public interest.

Based on this article the position of the water authorities is elaborated in the Regional Water Authorities Act. The RWA Act went into force on 1 January 1992

Since then, the RWA Act has been amended a number of times. In this context, one far-reaching amendment should also be mentioned.

In mid-2006, the legislative proposal for the modernisation of the regional water authority system was submitted to the Dutch House of Representatives. This legislative proposal provided for a major change in the composition of the water authority governing bodies, the way they are elected and how their tasks are financed. This legislative proposal was adopted by Parliament in 2007.[3] Chapters 3 and 4 include an explanation of the main elements of this amendment, which are largely based on proposals put forward by the water authorities themselves. Chapter 3 also deals in detail with the amendment to the RWA Act in 2014, which makes the Water Authority elections subject to the Elections Act.[4]

With the appointment of the Rutte II Cabinet in 2012, the autonomous position of the regional water authority again became a subject for debate. In the coalition agreement, the Government mapped out a long-term perspective of five regions that would replace the existing twelve provinces. The water authorities would have to be merged with these regions. For the short(er) term, the Government indicated that it wanted to support the upscaling of water authorities to ten or twelve water authorities and to drop the

3 Act of 21 May 2007, Bulletin of Acts and Decrees 2007, 208.

4 Act of 29 January 2014, Bulletin of Acts and Decrees. 2014, 63.

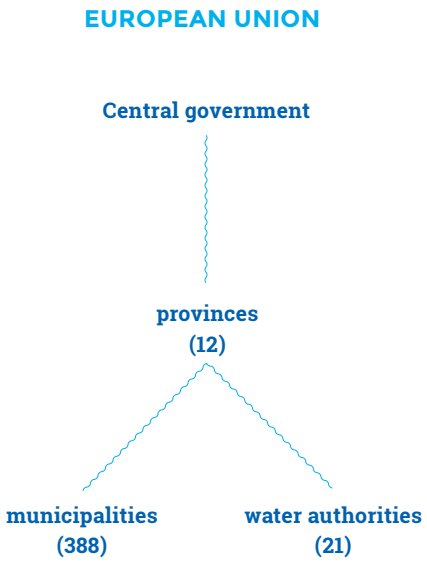
water authorities from the Dutch Constitution.[5] For the water authorities, these Government plans came as a huge surprise, all the more so because they were not mentioned in the election manifestos of the VVD or PvdA political parties.

The report 'Water Governance in the Netherlands: Fit for the Future?" was published on 17 March 2014[1] This report has been drawn up by the Organisation for Economic Cooperation and Development (OECD). The OECD examined the Dutch water governance system from a fresh, independent and international perspective. The OECD has expressed a positive opinion about the way water governance is organised in the Netherlands, which it states may even be regarded as a "global reference". On the other hand, the OECD believes that water policy in the Netherlands should be tightened up in a number of areas. In concrete terms, this relates to issues such as increasing water awareness among Dutch citizens, even better harmonisation between water governance and spatial planning, better use of the principle "the polluter/user pays", greater ambition in the area of water quality and stronger (independent) regulation. The findings of the OECD prompted the Minister of Infrastructure and the Environment to reassure the House of Representatives that there is no need to advocate administrative or organisational changes in water governance. In her letter[6] to the House of Representatives, the Minister also states that the water authorities themselves can see where further upscaling is necessary in the framework of effective middle management. Finally, the Minister remarked in her letter that the OECD's policy recommendations will be tackled with the partners to the Administrative Agreement on Water. In June 2014, the Dutch House of Representatives endorsed these conclusions. That seems to signal the end of the debate about the regional water authorities.

The constitutional position of the regional water authority emerges clearly from the above. The regional water authority is a government body of functional decentralised administration with its own governing body and financing structure, and it is solely concerned with the execution of tasks in the field of water governance. From a hierarchical point of view, the regional water authority has the same status as the municipality. As is apparent from the aforementioned article in the Dutch Constitution, the provinces play an important role with regard to the organisation of the regional water authority. After all, it is their responsibility to set up, discontinue, lay down rules for and supervise the regional water authorities. In the following diagram, the regional water authority occupies the following position:

5 Coalition agreement 'Building Bridges', 29 October 2012, p. 40.

6 Letter of 17 March 2014, Parliamentary Papers II, 2013-14, 28966, no. 27.



In this framework, it is also worth mentioning the enormous scale increases that regional water authorities have undergone over the past 50 years. Of the approximately 2,650 water authorities that existed in 1950, there are now just 21 remaining. There are three main reasons for this merging process. Firstly, the flood of 1 February 1953, during which 1,836 people lost their lives and which caused enormous financial damage. This disaster marked the end of many small regional water authorities. In 1950, there were more than 300 water authorities in just the province of Zeeland alone. Now the regional water authority of Scheldestromen is the only regional water authority left in Zeeland. Secondly, from 1970 onward the task of water quality management, including wastewater treatment, was allocated to the water authorities. After all, the task of building and managing costly sewage treatment plants and pressure pipelines calls for a firm administrative and financial basis of support. Thirdly, the government policy aimed at achieving integrated water management, where the various task components such as surface water and groundwater in both a quantitative and a qualitative sense, should be regarded in conjunction with each other and therefore preferably as a single organisation (the 'all-in regional water authorities'). This was realised in 2005. There are currently 21 all-in water authorities with around 11,250 employees on a regional and local level which are responsible for all flood protection and water management activities, including wastewater treatment. This signified the end of the old situation in which various regional water authorities were responsible for different tasks within the same area. This has without doubt increased the professionalism and transparency of the water authority system.

2.3 THE REGIONAL WATER AUTHORITIES ACT (RWA ACT)

There is a lot to be said about the RWA Act which has such a big influence on the structure and duties of the regional water authorities.

One of the core stipulations of the RWA Act is Article 1, which characterises the water authorities as public bodies entrusted with the task of implementing water management in a particular area. This definition contains three elements.

Firstly, Article 1 makes clear that regional water authorities are bodies of public administration and, as such, are part of the Dutch government organisation. As a result, regional water authorities can make decisions that are binding for citizens and, for example, draw up regional water authority bye-laws with mandatory and prohibitory provisions, grant or refuse permits and levy taxes. If necessary, the regional water authority can enforce compliance with these regulations by applying administrative coercion, imposing administrative penalties, imposing administrative punishment or drawing up an official criminal report.

The second element entails the territorial boundaries of regional water authorities. In other words, regional water authorities have a particular district within which they execute their tasks. This means that the regional water authority – just like the provinces and municipalities – is part of what is known as the territorially decentralised administration. The boundaries of regional water authority districts are not drawn arbitrarily, but are determined for reasons relating to water management (sub-catchment basins, drainage areas, dyke rings). As a result, they deviate from the provincial and municipal boundaries almost by definition.

Thirdly, the definition mentioned above implies that regional water authorities' tasks lie solely in the field of water management (or the slightly broader term 'public works and water management'). That is different, for example, to the tasks of a municipality. The tasks of a municipality are only restricted because certain tasks or powers have been taken over by a higher authority. Because of this, a municipality focuses on a broad range of tasks (education, culture, health care, public order, etc.). So the task of the regional water authority is pre-determined.

Article 1 also deals with the tasks entrusted to the regional water authorities. Following the above-mentioned amendment of 2007, this Article now refers to care of the water system and care for the treatment of wastewater. All previously-mentioned subtasks are included in these tasks. They include responsibility for flood protection and water management, including wastewater treatment management and – where relevant – responsibility for other water-related matters, such as responsibility for the waterways. Following the amendment of 2011[7], pest control of the muskrat and the coypu has been added to this list of subtasks. Due to an amendment in the Water Act and the Water Boards Act, this task has been transferred from the provincial governments to the water authorities. The regional water authorities are charged by the provincial governments with the tasks stipulated in the water authority regulations. The fact that this brief is not free of obligation is significant. Article 2, paragraph 2, of the RWA Act stipulates that regional water authorities should be put in charge of the aforementioned tasks unless this is incompatible with the interests of good water governance. This powerfully phrased principle of decentralisation thus prevents provinces from, for example, taking the care

7 Act passed on 23 May 2011, Bulletin of Acts and Decrees 2011, 270.

of flood protection into their own hands, or from passing it on to the municipalities. The Minister of Infrastructure and the Environment would without doubt withhold the necessary approval (see Article 5 of the RWA Act) for any such regional water authority regulations.

Other important provisions of the RWA Act concern the composition and election of the regional water authorities' governing bodies and the powers of regional water authorities to levy taxes to finance the execution of their tasks. The next few chapters will be dealing with this in greater detail. Suffice to say here that these very provisions express the triad interest-pay-say which was mentioned earlier; that is, that those who have an interest in the tasks carried out by regional water authorities are liable to pay tax and are represented in the governing bodies of regional water authorities. At the same time, this indicates another major difference between regional water authorities on the one hand and provinces and municipalities on the other. Unlike provincial and local governments, whose income is largely dependent on government revenues distributed through the Provincial and Municipal Funds, regional water authorities are virtually fully self-supporting in the execution of their tasks. For example, the tax revenue of the water authorities in 2017 amounts to a total of 2.7 billion euro.

2.4 THE WATER ACT AND (FORTHCOMING) ENVIRONMENTEL PLANNING ACT

Water Act

Up until the end of 2009, Dutch water legislation was extremely fragmented. Over the years a separate law had been drawn up for every part of water management. All these laws had their own weighing framework, legal instruments, procedures and systems of appeal. This fragmentation can be explained from a historic point of view: a new law was usually drafted as a result of a 'disaster' (for example, prolonged drought, imminent flooding) but it impeded practical manageability and feasibility, and, moreover, ignored the intrinsic cohesion within water management. The Government realised this and, partly at the insistence of the Dutch House of Representatives, successfully integrated the various water governance laws. The European Water Framework Directive, which to a certain extent integrates the many water directives at a European level, partly inspired this initiative.

It resulted in the Water Act, which came into effect on 22 December 2009 and which combines eight previous laws.[8]

8 Bulletin of Acts and Decrees, 2009, 490. For a practical explanation of this Act, see the Guide to the 2014 Water Act, edited by H.J.M. Havekes and P.J. de Putter, Kluwer, Alphen aan den Rijn 2013.

The Water Act has been further elaborated upon in the Water Decree, the Water Regulation and the provincial and regional water authority bye-laws.

The most important objective of the Water Act is to facilitate integrated water management. The idea is that this is more likely to succeed with a single law rather than eight different ones. It was also clearly aimed at reducing the administrative burden for citizens and the business sector. To this end, six different water permits have been merged into a comprehensive water permit and the obligation to have a permit has, where possible, been replaced by general regulations.

Furthermore, the Water Act is aimed at simplifying the implementation of European water rights (particularly the Water Framework Directive and the Directive on the Assessment and Management of Flood Risks). The Water Act has undeniably made Dutch water law more transparent. The Water Act contains almost all the laws relating to water. The institute of the regional water authority is, however, still regulated in the RWA Act, the (municipal) sewerage management in the Environmental Management Act and the drinking water supplies in the Drinking Water Act.

Forthcoming Environmental Planning Act

The legislative proposal for the Environmental Planning Act has already been accepted by the Dutch parliament[9]. This act is aimed at combining the multitude of regulations in the area of the physical living environment. The Water Act will be integrated into the Environmental Planning Act along with the Spatial Planning Act, the Environmental Permit (General Provisions) Act and the Crisis and Recovery Act. When the Environmental Planning Act comes into force, the Water Act will disappear as an independent act. Anyhow, the great majority of the water law in the Water Act will be incorporated into the Environmental Planning Act.

2.5 THE ADMINISTRATIVE ORGANISATION OF WATER MANAGEMENT

The above might lead one to think that regional water authorities are the only water management authorities in the Netherlands. However, this is not the case. Water governance is carried out by all levels of government in the Netherlands; that is by the national government, provinces, municipalities and regional water authorities, although the Water Act only designates the national government and the regional water authorities as 'manager'. The Dutch administrative organisation and the relevant regulations are tailor-made to suit the various elements of water management, as is shown below:

9 Bulletin of Acts and Decrees, 2016

- **Flood protection:** this task consists of the protection of the Netherlands from flooding by flood defences. Quite rightly – witness the experiences over the past few years – this task is considered to be a 'core task' in the Dutch lowlands, which are under threat from both the sea and the major rivers. This task is literally and metaphorically a matter of life and death. It also involves major economic interests: the dykes protect homes and business premises worth 2,000 billion euro as well as 80% of the country's Gross Domestic Product that is generated in this area. Flood protection is the responsibility of the central government and regional water authorities. The State is entrusted with the care of the Dutch coast (maintaining the coastline) and with the management of the dams that protect the estuaries in the west of the country. The other infrastructural works (dykes, dunes and storage basin embankments) are managed by the regional water authorities. This involves a total of over 3,600 kilometres of primary flood defences and 14,100 kilometres of other dykes. Flood protection is primarily regulated in Chapter 2 of the Water Act, which has been further elaborated in the Water Decree, the Water Regulation and in provincial and regional water authority bye-laws;

In 2010, a Delta Programme was drawn up in which the said parties, under the management of a Government Commissioner for the Delta Programme (the 'Delta Commissioner'), co-operate in making 'delta decisions'. These delta decisions[10] – presented on Budget Day in 2014 *(Prinsjesdag)* – include the main choices for tackling water safety and supplies of fresh water in the Netherlands. Together, they are part of the framework for the implementation of measures up to 2050. These measures must ensure that the to ensure that the Dutch keep their feet dry and that resilient water resources are available, now and in the future.

- **Water quantity:** this task deals with the management of the amount of surface water in a particular area. Water quantity management is aimed at reaching one or more water levels and maintaining them, as efficiently as possible. These Water levels are geared to the function(s) of the respective bodies of water (dry feet, agriculture, shipping traffic, the environment, and so on). The objective of a proper supply and discharge of surface water is to prevent surpluses and shortages. The State manages the main system in terms of water management (the major rivers, the IJsselmeer lake, the North Sea, Wadden Sea and a number of canals). The management of the quantity of water in the bodies of water that are of regional and local interest is the responsibility of the regional water authorities. Approximately 3,550 pumping-stations play an extremely important role in this. The exact management boundaries between the central government and the regional water authorities are indicated in an

10 Policy letter Delta Programme 2015, IENM/BSK-2014/131357.

appendix to the Water Regulation. Water quantity management is regulated in the Water Act, which includes a number of legal instruments (standards for flooding, the basis for the 'water distribution priority sequence' for periods of water shortage, water agreements, water-level decisions, and a system of permits for discharging, withdrawing, supplying and draining away water. Here, too, further elaboration has taken place in the Water Decree, the Water Regulation and provincial and regional water authority bye-laws;

- **Water quality:** this task could be described as the protection of surface water from pollution. Water quality management aims at achieving specific water quality targets that are geared to the various functions of the respective bodies of water (recreation, nature, the extraction of drinking water, agriculture). Central government and the regional water authorities play a primary role in the management of water quality. The government's task is to manage the aforementioned main water management system, whereas the regional water authorities manage the regional and local waters. The management of water quality has been laid down primarily in Chapters 6 and 7 of the Water Act, which has several instruments, such as a system of permits and levies, and general rules for certain kinds of discharges of wastewater.

One special aspect of this task relates to bathing water. The Netherlands has approximately 690 official bathing water locations in open water, of which approximately 475 are in bodies of water managed by the water authorities.[11] The provincial governments designate the locations. The water authorities are responsible for bathing water quality and for advising the provincial governments about issuing any warnings or swimming bans if that quality is sub-standard. It is up to the provincial governments to take such measures.

Wastewater treatment management: the construction and operation of treatment plants at which the wastewater from households and businesses is treated also make an important contribution to the quality of the surface water. To this end, the regional water authorities operate approximately 335 wastewater treatment plants with related pressure pipelines. This task is the statutory duty of the water authorities (see Article 1 of the RWA Act and Article 3.4 of the Water Act).

- **Groundwater:** Unlike surface water, the responsibility for groundwater has been allocated to various government organisations in accordance with the Water Act. This law does mean that operational groundwater management is now largely the task of the water authorities. In pursuance of Article 6.4 of the Water Act, the issuing of permits for three large withdrawals, namely industrial withdrawals of more than 150,000m³ per annum, the drinking

11 The other locations are managed by Rijkswaterstaat.

water supply, and 'soil energy systems', is still the responsibility of the provincial governments. And in pursuance of Article 7.7 of the Water Act, the provincial government is authorised to introduce a groundwater tax. Furthermore, care for urban groundwater (and rainwater run-off) has been entrusted to the municipalities (see Articles 3.5 and 3.6 of the Water Act). Care for the groundwater quality is closely related to the many activities that take place in or on the ground. This is why this aspect is part of the soil protection policy and is primarily provided for by the Soil Protection Act, the implementation of which lies with provinces and municipalities;

- **Control of muskrats and coypus:** this task consists of preventing damage to waterworks structures by muskrats and coypus. In mid-2011 an amendment was passed in which this task was transferred from the provincial government to the regional water authorities. With this amendment to the Water Act and the RWA Act, the law regulating this provincial task was repealed.

- **Waterways:** this task consists of maintaining the sheet piling and the depth of waterways, and the operation of locks and bridges. The management of waterways is carried out by central government and the provinces, who, in turn, sometimes delegate this task to regional water authorities. The nautical aspects of waterways management (setting 'traffic rules') are laid down in the Shipping Traffic Act;

- **Roads:** this task deals with the maintenance and serviceability of roads, including the promotion of road safety. Care for the roads is the task of the State, provincial governments, municipalities and five water authorities in the western part of the country. These five water authorities manage 7,500 km of roads. Care of the roads is laid down in the Roads Act;

- **Sewerage:** strictly speaking this task does not fall under water management, but it is closely connected with water (quality) management and wastewater treatment. The task of sewerage lies with municipalities and is regulated in the Environmental Protection Act, by which the municipalities are charged with the construction, management and maintenance of sewerage systems. This Act also obliges municipalities to draw up sewerage plans. With the sewerage system, the municipalities collect rainwater and wastewater and transport it to the regional water authority's wastewater treatment plants. The municipalities can fund this task as well as their duty of care for rainwater run-off and urban groundwater (see Articles 3.5 and 3.6 Water Act) by means of a sewerage charge. The municipal council will have to introduce a bye-law for this in pursuance of the Municipalities Act.

- **Drinking water supply:** strictly speaking, this task is not a part of water management, but it is related to it because groundwater and surface water are the raw materials for our drinking water. The drinking water supply is managed by ten

water companies and is regulated in the Drinking Water Act. With the exception of the Amsterdam Waternet, which is a non-profit foundation, water companies are private businesses, but because the Drinking Water Act prescribes that the shares of these businesses must be in public ownership, they can be treated as semi-public organisations.

First and foremost, this overview shows that water management in the Netherlands is a public service. Its implementation is mainly the task of the Government, which often contracts the business sector for the construction of dykes, treatment plants etc, and for maintenance activities. It also shows that, unlike the situation in other countries, the water chain (drinking water supply, sewerage and wastewater treatment) in the Netherlands is represented by not one (government) organisation but by three parties. These are the water companies, the municipalities and the regional water authorities. This organisational structure is rooted in history and has grown up over the centuries. The parties coordinate the various elements of the water chain through mutual co-operation. Article 3.8 of the Water Act obliges water authorities and municipalities – also explicitly – to co-ordinate their tasks and powers in water management with one another, particularly with regard to the relationship between sewerage and the treatment of wastewater (the wastewater chain). Finally, the said overview also shows that – as mentioned above – the regional water authority has a number of concrete legal powers at its disposal for the performance of its duties. These particularly include the licensing system for certain tasks enshrined in the Water Act and the water authority bye-laws, and the tolerance obligation and powers in situations involving (imminent) danger in Chapter 5 of the Water Act, a form of emergency power specific to public works and water management.

2.6 INTERGOVERNMENTAL CO-OPERATION

As mentioned above, all national and local authorities in the Netherlands are involved in water management. There are a number of legal instruments available for achieving the necessary harmonisation. Apart from these legal stipulations, there must also, of course, be good mutual consultation between the various water managers. At a national level, this consultation takes place in the Water Steering Group, in which the State, the provincial governments, municipalities, regional water authorities and water companies regularly discuss the water policy to be pursued under the chairmanship of the Minister of Infrastructure and the Environment. Furthermore, within the framework of good intergovernmental relationships, together with the provincial governments and the municipalities, the regional water authorities hold regular consultations with the Minister of the Interior and Kingdom Relations.

Intergovernmental co-operation also takes place within the framework of administrative agreements. For example, a large number of agreements were recorded in

the Administrative Agreement on Water (*Bestuursakkoord Water*) in 2011 to further increase the efficiency of water management in the Netherlands. The aim is to realise efficiency gains that gradually increase to 750 million euro annually in 2020.[12]

The main background to this is that there had been substantial cost increases for a number of years in water management due to the fact that ever stricter requirements had to be met. To ensure that water management nevertheless remains affordable for citizens and businesses, the State, provincial governments, municipalities, regional water authorities and water companies have signed an administrative agreement to work collectively towards achieving efficiency gains that will gradually increase to €750M annually in 2020 compared to 2010. In addition to greater efficiency, the Administrative Agreement on Water also aims to increase transparency and effectiveness and to reduce the administrative burden and vulnerability. To achieve this, a large number of agreements have been made about:

- tasks/responsibilities, defining frameworks, planning and supervision
- a manageable programme for testing, programming, financing and implementing strengthening measures for primary flood defence systems
- more effective management of the water chain (drinking water, sewerage and wastewater treatment)
- the governance of and taxation by tasks and support processes
- the management and taxation of the regional water authorities.

Furthermore, administrative agreements have been made in sub-areas of water management. Examples include the 2030 Wastewater Chain Roadmap[13], the Green Deal[14] and the Climate Agreement.[15]

The legal alignment instruments are specified in Chapter 3 of the Water Act. Article 3.7 deals with the water agreement. This instrument is primarily intended for the water managers and enables them to make coherent and effective water governance agreements, where necessary, in which the management aspects in their management domain can be regulated in relation to each other. Other government organisations (provinces and municipalities) can also affiliate themselves to these types of water agreements.

12 These efficiency gains are made up of €450M in the water chain – that is, €380M for the water authorities and municipalities and €70M for the water companies, and €300M for management of the water system by the State, the provincial governments, water authorities and municipalities. This will reduce the burden on the National Budget by €200M per annum.

13 For more information, see: http://www.uvw.nl/beleidsveld-water chain.html.

14 For more information, see: http://www.uvw.nl/index.php?laatste-nieuws&newsdetail=20111004-918_waterschappen-sluiten-green-deal-en-fosfaat-akkoord&highlight=green%20dceal.

15 For more information, see: http://www.uvw.nl/beleidsveld-klimaatakkoord.html.

Furthermore, Article 3.8 of the Water Act stipulates that water authorities and municipalities must harmonise their tasks and powers with each other in order to achieve effective and coherent water management. Here, co-operation in the wastewater chain has been identified as a particular subject of harmonisation. Other areas in which co-operation and harmonisation are vitally important include drawing up structural plans, when the regional water authority advises the municipalities about the consequences for water management (the water assessment), and advising municipalities about issuing of permits and enforcing discharges into the sewerage system.

2.7 REGULATION

The RWA Act and the Water Act include stipulations for the regulation of the water authorities. Regulation defines the limits of the autonomy of decentralised government organisations. The Netherlands is a decentralised unitary state, within which it is possible to 'correct' the decisions of a decentralised government organisation because of overriding interests. Here, a distinction can be made between different types of regulation: preventative, repressive and positive regulation.

The first category particularly relates to the fact that project plans from the water authorities must be approved by the provincial government in pursuance of the Water Act. Also in this context, it is important to refer to the agreement in the Administrative Agreement on Water, which stipulates that provincial approval of the management plan and cost allocation regulation is no longer valid.[16] Repressive regulation mainly relates to the authority of the provincial government to revoke resolutions made by the regional water authorities (Article 156 of the RWA Act).

Positive regulation is stipulated in Chapter 3, section 3, of the Water Act. This stipulation provides the provincial government and the State with relatively far-reaching regulatory powers. For example, the provincial government can lay down regulations aimed at achieving coherent and effective regional water governance for the information to be supplied by the regional water authorities concerning the preparation, definition, modification and contents of plans, resolutions or water agreements. The same regulation exists for the Minister of Infrastructure and the Environment with regard to the provincial executive and the water authority governing board. If coherent and effective regional water governance requires this, the provincial government – and this goes a step further – can provide the regional water authority with instructions about exercising its tasks and powers. A corresponding power exists for the Minister. If necessitated by international obligations or supra-regional interests, the Minister can also instruct the provincial executive or the water authority governing body.

16 Abolition of the approval of the management plan is regulated in the Act of 18 December 2013, Bulletin of Acts and Decrees. 2014, 21, which came into effect on 1 July 2014. The abolition of provincial approval of the cost allocation regulation has been stipulated end 2016.

2.8 PARTICIPATION AND LEGAL PROTECTION

Finally, we discuss the level of legal protection against decisions made by the regional water authority. This chapter shows that the regional water authority is a government body and can therefore adopt regulations and make decisions that are binding for citizens (bye-laws – for example, in the area of taxes). These decisions do not generally come about without a participation procedure having taken place with respect to them. The water authorities have recorded this in a participation procedure bye-law (Article 79 of the RWA Act).

Objections followed by appeals can be made to the Administrative Court about the decisions based on these bye-laws – for example, a tax assessment. In principle, the general regime of the General Administrative Law Act applies. One exception is the project plan, which must be approved by the Provincial Executive after being drawn up by the regional water authority (Article 5.7 of the Water Act). A direct appeal against the approval decision can be made to the Administrative Jurisdiction Division of the Council of State.

National Ombudsman

A complaint can be submitted to the National Ombudsman about the conduct of the governing bodies of the regional water authority. This type of additional legal protection was introduced twenty years ago at the insistence of the Dutch Water Authorities. It meant that the water authorities were the first decentralised government organisation to come under the competence of the National Ombudsman. Every year, the ombudsman receives approximately 100 complaints about the water authorities; these complaints often relate to the remission of regional water authority taxes.

Court of Auditors

Many water authorities have a court of auditors. This body examines the efficiency, effectiveness and lawfulness of the policy pursued by the administration. The RWA Act does not include any stipulations on this point. The situation is different for the provinces and municipalities, which must appoint a court of auditors in pursuance of the Provinces and Municipalities Act. This is related to the fact that provinces and municipalities have a dual administrative model, while the water authorities have a monistic model. In the water authorities, the members of the executive committee are also part of the general governing board.

External audit of the annual account

By law a certified external accountant has to audit the annual financial account of a water authority before the final discussion in the governing board. In this way the accountant serves as a consultant for this board. The accountant audits the correctness and lawfulness of the financial facts that are in the financial account.

3 DEMOCRATIC LEGITIMACY

3.1 THE DUTCH POLDER MODEL

The Netherlands has been fighting water for centuries. This water problem could not be solved individually. As a result, the building of dykes was carried out jointly. To a large extent, this is where the origins of the Dutch polder model, characterised by consultation, consensus and compromise, lie. Regional water authorities can be classed as one of the first forms of public administration, where decisions are based on consensus. Nowadays the regional water authority organisation still holds an independent position in the democratic system in the Netherlands. Because water-related tasks are allocated to regional water authorities, they are not subject to a general political balance of interests. The importance of staying dry and of having enough (pure) water is of existential importance for the Netherlands, so it is kept separate from the political context. The budget for water governance in the Netherlands is, therefore, not balanced against that of education, the health care system, defence and so on.

In the past few years, the role and position of the regional water authorities has changed considerably. The existence of water authorities is, as shown in Chapter 2, enshrined in the Constitution. The functional character of the water authorities requires absolute democratic legitimacy.

This chapter examines the next building block: the democratic legitimacy of the regional water authority. Democratic legitimacy manifests itself in the way different categories of stakeholders are represented on the regional water authority boards. The composition and election of the regional water authority board changed radically in 2008 after the Water Authorities (Modernisation) Act *(Wet modernisering waterschapsbestel)* was passed in mid-2007. The main changes related to the disappearance of the categories 'buildings' and 'lessees' and the introduction of the category of 'nature area managers' on regional water authority boards, the fact that the category of 'residents' always makes up the majority on regional water authority boards and the

replacement of the individual candidate system by the list system in the regional water authority board elections. These changes, which are briefly explained below, were largely based on earlier proposals made by the Dutch Water Authorities themselves. The coalition agreement of the Rutte II Cabinet has brought an important new change. In 2015, the Water Authority elections have been held in combination with those for the Provincial Councils.

3.2 THE COMPOSITION OF BOARDS

The board of a regional water authority consists of a governing board, an executive committee and a chairperson. These governing bodies are comparable with those of municipalities (Municipal Council, Municipal Executive and Mayor) and provinces (Provincial Council, Provincial Executive and King's Commissioner). The governing bodies of regional water authorities sometimes have interesting

historical names. For example, the executive committee in some water authorities is known as the '*college van dijkgraaf en heemraden*' and the chairman as a *'dijkgraaf'* or *'watergraaf'*.

The governing board

The governing board consists of representatives of categories of stakeholders who have an interest in the tasks executed by the regional water authorities. The idea behind this is that those considered to be stakeholders in relation to the tasks executed by the regional water authorities proportionally bear the costs and can participate in the regional water authorities' assemblies (the familiar interest-pay-say triad). A distinction can be made between the general task interests and the specific task interests of the regional water authority. General task interests reflect the representation of the interests of everyone living or residing (living, working and recreating) in the regional water authority district. These general task interests are represented by residents. Specific task interests indicate the specific interests of certain stakeholder categories in relation to the tasks executed by regional water authorities. Farmers, businesses and managers of nature areas represent these specific task interests.

Article 12 of the Regional Water Authorities Act includes an exhaustive list of categories of stakeholders that must be represented on the regional water authority board, namely:

- residents;
- owners of open land (especially farmers);
- owners of nature areas;
- businesses.

The various interests have to be safeguarded in the regional water authorities' board. In the regulations for each regional water authority, the province specifies the number of seats by which the various categories are represented in the governing board. This takes into account the nature and size of the interest of a particular category in the tasks of the regional water authority. If a regional water authority is located in a densely populated urban area with a lot of industrial activity, the 'residents' and 'businesses' categories have a larger share in the governing board than in a regional water authority in a sparsely populated area with a lot of agricultural activity. The regional water authority board has a minimum of 18 and a maximum of 30 members. The majority of the seats are always reserved for residents, since this category also pays the majority of the costs incurred by the regional water authority. The total number of seats for the specific interest categories is at least seven and at most nine seats.

The composition of the governing bodies of the water authorities in the Netherlands looked like this in 2017:

Table 2: Number of B-seats for each regional water authority

Regional Water Authority	Residents	Undeveloped	Businesses	Nature areas	Total
Aa en Maas	21	4	4	1	30
Amstel, Gooi en Vecht	23	3	3	1	30
Brabantse Delta	21	4	4	1	30
Delfland	21	4	4	1	30
De Dommel	22	3	3	2	30
Fryslân	18	3	2	2	25
Hollands Noorderkwartier	23	3	3	1	30
Hollandse Delta	21	4	4	1	30
Hunze en Aa's	16	4*	2	1	23
Noorderzijlvest	16	4*	2	1	23
Drents Overijsselse Delta	21	4	3	2	30
Rijn en IJssel	22	3	3	2	30
Rijnland	21	4	4	1	30
Rivierenland	22	4	3	1	30
Limburg	21	4	3	2	30
Scheldestromen	21	4	4	1	30
Schieland	21	3	5	1	30
Stichtse Rijnlanden	23	3	2	2	30
Vallei en Veluwe	22	3	3	2	30
Vechtstromen	20	3	3	1	27
Zuiderzeeland	18	3	3	1	25
Total	**434**	**74**	**67**	**28**	**603**

** One of these seats is appointed in conjunction with an organisation for agrarian natural management.*

Tasks of the governing board

The governing bodies of the regional water authorities have the authority to regulate and manage in order to promote those tasks entrusted to the regional water authorities in the water authority regulations (Article 56 of the RWA Act). In principle, the regional water authority is free to implement its tasks as it sees fit. The regional water authority can also be promoted to regulation and management by law, order in council or by provincial bye-law. This task primarily rests with the governing board, who can delegate it to the executive committee if and when desired. Article 83 of the RWA Act refers to a number of subjects that in any case must be arranged by the governing board, such as adopting the budget, annual accounts, water-level decisions, registers and other bye-laws, and levying taxes.

The executive committee

The executive committee of a regional water authority consists of the chairperson and a number of other members to be appointed by the governing board. The executive committee is charged with executing the day-to-day business of the regional water authority. The number of members on the executive committee varies for each regional water authority. Usually, the executive committee consists of four or five members. In principle the composition of the assembly is free, although Article 40 of the RWA Act stipulates that at least one member must come from the specific interests categories. The members of the executive committee are generally drawn from the governing board. If the regulations allow it, persons from outside the governing board may also be appointed. Unlike the provinces and municipalities, governance of the regional water authority is monistic and not dualistic.

The governing board appoints the members of the executive committee, with the exception of the chairperson. The members of the executive committee are appointed by all members of the governing board and not just by the board members of the category that they represent. Each member of the executive committee should have the support of the entire governing board (Article 41 of the RWA Act).

Responsibilities of the executive committee

Policy preparation is a major responsibility of the executive committee. All proposals put forward for decision-making by the governing board are prepared by the executive committee. As a result, the executive committee is responsible for a significant part of the policy-making. The executive committee is also charged with pursuing the policy that has been drawn up, such as the implementation and enforcement of laws and bye-laws. A major part of this consists of granting permits and/or exemptions and applying administrative coercion. The executive committee uses a joint decision-making process. That means that the executive committee as a whole is responsible for the decisions that are taken.

The chairperson

The chairperson of a regional water authority is not a member of the governing board and

therefore does not have voting rights there. The chairperson is a member of the executive committee, however, and does have voting rights there. The chairperson is appointed by the Crown for a period of six years. The governing board makes a recommendation that is sent to the Minister of Infrastructure and the Environment through the Provincial Council (Article 46 of the RWA Act).

Tasks of the chairperson

The chairperson is responsible for the proper representation of the regional water authority's tasks and chairs the meetings of the governing board and the executive committee. The chairperson also represents the regional water authority by law and otherwise (Article 95 of the RWA Act). In addition, the chairperson signs the documents issued by the governing board or executive committee, along with the highest official of the regional water authority. If, in the case of urgent or imminent risk, circumstances prevent the governing board or executive committee from being convened, the chairperson has the authority to take all the measures which these two assemblies are authorised to take. The chairperson is accountable to the governing board.

3.3 ELECTIONS

Regional water authorities have elections for the governing boards just like municipalities and provinces. However, one difference is that elections are not held for all seats of the regional water authority board. This only occurs for the seats of the residents. The seats of the three specific interest categories are filled by means of appointments made by the respective class organisations.

Since the individual candidate system has been replaced by the list system, in which registered interest groups may nominate candidates, political parties also participate in the regional water authority elections. In addition, interest groups such as *Water Natuurlijk, Landelijke Waterschapspartij* and a large number of local groups took part in the elections.

Therefore, the election of the members of the governing body of a regional water authority is not a question of how many seats in the governing board will be assigned to a particular category of stakeholders, but of which lists will assume the predetermined number of seats for the various categories.

The election of the members of the governing boards

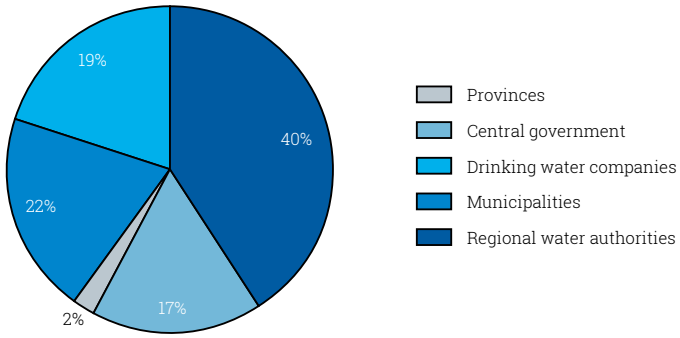
Governing board members are elected or appointed for a period of four years. The election of the members of the governing board is preceded by candidate nominations. The parties eligible to be nominated as candidates (and therefore as members of the governing board) are interest groups whose names must be registered with the electoral committee. The chairman of the regional water authority is chairman of this electoral committee. The interest groups have to be foundations or associations with full legal capacity. To be elected as member of the regional water authority board, a candidate must be a resident, eighteen or older and entitled to vote. These requirements also apply to those who wish to vote in the regional water authority elections. In 2015, these elections have been held on the same day as the elections for the Provincial Council. The reason for this is to ensure a larger turnout for the Water Authority elections. In fact this was the case. The turnout in 2015 was 43,5%, almost twice as much as in 2008 (24%). Lastly, membership of a regional water authority board is incompatible with certain other posts. These 'incompatibilities' are specified in Article 31 of the RWA Act. Ministers, state secretaries, King's Commissioners, members of the Provincial Executive and Provincial Council, mayors and aldermen may therefore not become members of a regional water authority board.

4 FINANCIAL INDEPENDENCE AS A RESULT OF THEIR OWN TAX SYSTEM

4.1 FINANCING DUTCH WATER MANAGEMENT

Water management in the Netherlands is almost entirely in the hands of the government. All kinds of water-related tasks come under public law and are executed by the central government, provinces, municipalities and regional water authorities (see Chapter 2). They are financed by the State's general funds or from the revenues generated by various decentralised taxes. Drinking water supplies are the only exception to this. Drinking water supplies are taken care of by the water companies and the costs are recovered from the citizens by means of invoices under private law. In practice, however, drinking water supplies are largely controlled by the national government. This regulatory positioning is laid down explicitly in the Drinking Water Act. The total government expenditure for water-related activities, including those of the water companies, was 7.1 billion euro in 2016. Figure 4.1 shows how the expenditure is distributed over the various government organisations.

Figure 4.1: Total Government costs for water activities



Unlike provinces and municipalities, who are largely financially dependent on support from the central government (via grants from the Provinces fund and the Municipalities fund), regional water authorities are, to a large extent, financially independent. This independence is a result of the fact that they have their own broad tax area. Their tasks can be financed independently thanks to the revenues from the regional water authority taxes. In fact, the State only provides financial contributions to strengthen the primary flood defences by means of subsidies (see Article 7.23 Water Act). Since 2011, the water authorities have also been paying their share. Since 2014 they contribute half of the costs by means of annual payments to the Minister of Infrastructure and the Environment totalling 186 million euro in 2016 (see Article 7.24 et seq of the Water Act).

Along with their institutional and constitutional basis (Chapter 2) and their democratic legitimacy (Chapter 3), the financially independent position of the regional water authorities that results from their own tax system forms an important building block in the Dutch regional water authority model.

To a certain extent the organisational and financial structure of Dutch water management has been determined historically, but it has also been based on the notion that water management must be counted as belonging to the public domain.

This is also due to the geographic position of this country and the special interest of its inhabitants in a good and sustainable water management organisation. In a sense, water management in the Netherlands has the characteristics of a semi-collective commodity. It is therefore difficult to conceive of it as some form of commercial service. It is quite common for the actual execution of activities to be outsourced to the "market" under the management and responsibility of the regional water authorities.

In 2009, the Regional Water Authorities (Modernisation) Act [17] prompted a number of changes in the financing system of the water authorities. Since that year, for example, the 'nature areas' category is no longer part of the 'undeveloped' category in the cost allocation but is a separate category, and the wastewater treatment levy only relates to the costs of the purification of waste water. The costs that the regional water authority incurs to protect and improve the water quality of the surface water are financed by means of the water system levy and the water pollution levy.

If we choose the financing as input, in water governance in the Netherlands we can make a distinction between the following tasks, organisations and financial instruments:

17 Act of 21 May 2007, Bulletin of Acts and Decrees. 208.

Table 3: Water governance tasks, responsible organisations and financing

Task	Organisation	Financing
Flood protection, water quantity and water quality (main system)	State (public)	General resources, pollution levy national waters
Groundwater	Province (public)	Regional tax
Flood protection, water quantity and water quality (regional)	Water authority (public)	Regional tax
Wastewater treatment	Water authority (public)	Regional tax
Drinking water supply	Water companies (semi-public)	Price
Sewerage	Municipalities (public)	Local tax

In response to the OECD report, the Dutch government has decided to conduct a study into the possibilities of preserving the financing system of the water governance in the long term. Here, further application of the principle 'the polluter/user pays' is an important starting point. A final report is expected end 2017.

4.2 FINANCING OF REGIONAL WATER MANAGEMENT BY THE WATER AUTHORITIES

Income and expenditure of the water authorities

The water authorities finance their activities on an individual basis and therefore almost solely with the revenue raised through their own taxes. Care of the water system (water defences, quantity and quality) is financed with the revenues from the water system levies and – to a relatively modest degree – the surface water pollution levy. The revenues from the wastewater treatment levy are used by the regional water authorities to finance the treatment of waste water. The revenue from these taxes amount to €2.7 billion in 2017.

The tax revenue of the water authorities in 2017 consists of the following (in millions of €):

- Water system/and road charge: 1,459
- Treatment/and pollution levy: 1,283

The water system and road charge are distributed over the tax subject categories in the following way:

- Households 41%
- Owners of property 47%
- Owners of nature areas 0.3%
- Owners of open land 12 %

The treatment and pollution levy are made up of the following:

- Households 75%
- Businesses 25%

Source: Regional water authority taxes in 2017, Dutch Water Authorities, April 2017

Self-financing

The system of regional water authority taxes means that regional water authorities are largely financially independent of national politics and economic fluctuations. The necessary investments in water control provisions therefore do not have to compete with other governmental expenditure. This financial basis may well be the best possible guarantee of sustainable water governance. In addition, this independence is an excellent starting point for attracting long-term loans to finance major investments (see also Chapter 5 on the NWB Bank).

Tax principles

The function of regional water authorities is based on 'stakeholder participation' and the principle that stakeholders pay a regional tax. As stated above, stakeholders pay a tax, but they also have a say in the water authority governing body. The form and content of regional water authority taxes are determined by a number of tax principles, particularly:

a. the beneficiary pays principle;
b. the polluter pays;
c. the cost-recovery principle;
d. the solidarity principle; and
e. the legality principle.

Re a. The water system charge is based on the Regional Water Authorities Act (see Article 116 et seq). The underlying philosophy behind this levy is that those who benefit from regional water authority activities also contribute financially to them. The interest is related to the extent to which the existing water management provisions are used and the costs connected with this. There is no link with harvest revenues or other forms of agricultural produce because this would make the tax revenues (and therefore maintenance of the water control infrastructure and care for the water quality) highly unreliable.

Re b. Everybody who discharges wastewater through the municipal sewerage system or is connected directly to a wastewater treatment plant belonging to a regional water authority pays a wastewater treatment levy pursuant to the RWA Act (see Article 122c et seq). If the wastewater is

discharged directly into a surface water body, a surface water pollution levy is payable pursuant to the Water Act (see Article 7.2 et seq.). This applies to every household and every business. The size of the levy depends on the pollution value of the wastewater. Households have a fixed rate, although the RWA Act has a provision for basing the pollution levy for households on the amount of drinking water delivered. In the case of businesses, the pollution is determined individually and more exactly, depending on the amount of pollution. The polluter is thus made financially responsible for the costs of water management. This puts into practice the internationally accepted principle of 'the polluter pays'.

Re c. The system used to determine the water system levy, the surface water pollution levy and the wastewater treatment levy is in keeping with the cost-recovery principle laid down in Article 9 of the European Water Framework Directive. This principle represents the obligation to recover the costs for 'water services' from the users, particularly households, businesses and the agricultural sector. Generally speaking, it can be said that most of the regional water authorities' tasks are covered by the concept of "water services".

Re d. Both the water system and surface water pollution levies are taxes. This implies that regional water authorities do not deliver an individual service in return for these payments. The water control provisions realised within a particular district by regional water authorities are based on a democratic decision-making process, in which all the interests involved have been carefully weighed (stakeholder democracy). Therefore, by definition, these provisions never correspond exactly with the subjective wishes of individual taxpayers. This situation is expressed in the structure of the tax system and can be seen as a manifestation of the solidarity principle.

Since 2011, this has been augmented by the financial agreements in the framework of the Flood Protection Programme, which are recorded in the Administrative Agreement on Water. Fifty percent of the subsidies that water authorities receive to strengthen primary flood defence systems is generated by the water authorities themselves by means of the water system levy. This amount is distributed over all water authorities on the basis of an allocation key stipulated in Article 7.24 of the Water Act. In 2016, this amount is 181 million euro.

The wastewater treatment levy, however, does have an individual consideration by the regional water authority; that is, the transport and treatment of the wastewater removed. This gives this levy the character of a retribution.

Re e. The water system levy and the pollution levy have their legal basis in the RWA Act and the surface pollution levy has its legal basis in the Water Act. The most important elements of the levies in question are laid down in these laws. The water authorities have adopted these regulations in their tax bye-laws and

supplemented them with stipulations about rates, payment periods, etc. Moreover, the formal laws laid down for the levying and collection of state taxes have also been declared applicable to regional water authority taxes (regulations for levying and collection, procedures for objections and appeals, and so on).

Targeted levies

Unlike most general state taxes and provincial and municipal taxes, the regional water authority taxes are linked to particular tasks. These taxes are often termed 'targeted levies' because the revenues from them are fully utilised for the costs of the tasks in question. The costs in question involve costs for the care of the water system (flood protection and the management of water quantity and quality), and the treatment of wastewater. The costs for the individual tasks in the water system are divided proportionally amongst the various administrative categories according to the interest the category has in each task.

4.3 THE WATER SYSTEM CHARGES

History

The institution of the Dutch regional water authority came about in the Middle Ages when farmers began to organise themselves at a local level in order to improve the management of the dykes and polders (see Chapter 1). This form of self-organisation was financed with local means. Initially these means consisted of payments in kind, for example, maintenance of dykes, embankments and waterways. This system was later "made public" and replaced by financial contributions. The drawback of payment in kind was the fact that it did not guarantee that the requisite maintenance would be carried out in time or adequately. Since the interest of the entire community was at stake here, the need arose for a management organisation that was enshrined in public law. The land owners exchanged their duty of maintenance for a duty of payment for the costs concerned. These costs were divided according to the amount of land they possessed and were then apportioned to all the land owners.

Through the assignment of administrative and legal powers (and for a long time even the power to administer justice), the financial aspects of the regional water authority organisation became more integrated into public law. In spite of this integration, the functional and decentralised character of regional water authorities has remained intact through the ages. This has had a permanent influence on the character of water system charges. These charges are based on the interest that people have in the tasks carried out by the regional water authority.

From the 1920s onward, owners of real estate in urban areas had a greater interest in reliable flood defences and good drainage. The activities of regional water authorities focused more and more on the protection of this real estate. At that time, the 'real estate' charge was introduced, so this real estate also fell under the apportionment levy.

Recently more significance has been assigned to the general task interests (interest of living, working and recreation) within the regional water authority district. With this in mind, residents (that is, people residing in the regional water authority district) were included in the tax assessment. Since 1995 'residents' have been involved in the levy as a separate category and this category has been represented in the governing board.

The objective of water system charges

Water system charges are mainly levied for expenses relating to the flood protection task and water quantity and quality management tasks. Regional water authorities have a limited number of tax categories, which are laid down in Article 117 of the RWA Act:

- residents (households);
- owners of natural areas;
- owners of other open land (mainly farmers);
- owners of real estate (households and businesses).

In the framework of the resident levy, every household is charged the same amount for each living space. Owners of undeveloped real estate and nature areas pay on the basis of the surface area of their property and owners of developed real estate pay on the basis of the real estate valuation (WOZ) in the market (the real estate valuation is the market value as determined by municipalities on the basis of the Real Estate Valuation Act).

Justification and tax base

The justification for the levying of water system charges lies in the interest that people have in the tasks carried out by the regional water authorities. As regards the owners of real estate, this can be seen from the point of view of the specific interest of the protection of the immovable property from flooding, the inconvenience caused by water and the importance of good quality surface water. These interests can be looked upon both from the point of view of maintenance of (the value of) these properties and the use made of them.

The residents (actually households) have a more general interest in the sense of being able to live, work and enjoy recreation in the water authority district. In the allocation of costs, this general interest is determined by the density of the population and varies within the ranges of 20% and 50% of the total costs. Under certain conditions, the regional water authority can raise the share of the costs calculated in this way by 10%. The other costs are distributed amongst the specific stakeholders, the persons entitled to the buildings and land on the basis of its economic value.

The interest of the various stakeholder categories is linked to the tax bases applied:

- **water system charge for open land and nature areas:** the surface area of the land
- **water system charge for real estate:** the economic value of the real estate
- **water system charge residents:** equal amount for each household.

Among the various landowners (and sometimes between owners of real estate), the extent of the interest in the water system, which depends on the nature and location of the immovable property, may vary somewhat. In view of these differences, it is possible for regional water authorities to set up rate differentiation. It can, for example, raise the rates for owners of surfaced public roads, greenhouses and ownerships in drained areas by a maximum of 100%. The rates for owners of real estate located outside dykes and owners of real estate in water storage areas can be reduced by a maximum of 75%.

The average amount paid by a household with its own home worth €200,000 in 2017 is:

- water system charge residents €79
- water system charge developed real estate €71

The average amount to be paid in 2014 for each hectare of open land for the water system levy €65[17]

Source: Dutch Water Authorities

4.4 THE SURFACE WASTEWATER TREATMENT AND POLLUTION LEVIES

History

In the 1950s the increasing pollution of surface water rose to alarming levels. Since then provinces have gradually assigned the care of surface water and treatment of urban wastewater to the regional water authorities (which used to be solely responsible for flood protection and water quantity management). The regional water authorities' need for a solid financial basis increased as the need for large investments in wastewater treatment plants grew. This basis was provided in 1970 by the Pollution of Surface Waters Act. This Act provides the water authorities with the surface water pollution levy as an instrument to finance a number of items.

The revenues from the surface water pollution levy covered all the costs of measures taken against the pollution of regional surface waters. These measures included the treatment of urban wastewater, monitoring, planning and the granting of discharge permits. The treatment of urban wastewater is currently the exclusive task of regional water authorities and, as such, is legally enshrined (see Article 3.4 of the Water Act).

The surface water pollution levy in its existing form was abolished when the Water Authorities (Modernisation) Act came into force in 2009. The transport and treatment of wastewater was defined as a separate task of the regional water authority. The wastewater treatment levy was incorporated in the RWA Act to finance it.

The other tasks within the framework of water quality management were brought under the care of the water system together with care for the water defences and water quantity. As explained earlier, the costs of this care are covered by the revenues from the water system levy. The surface water

18 If rate differentiation is applied, the rates in the same regional water authority can vary significantly.

pollution levy was retained for direct discharges into surface water bodies. The revenues from this levy are used for the care of the water system. The number of direct discharges into the sewerage system by the water authorities is small in comparison to the number of indirect discharges. The revenues from the surface water pollution levy are therefore limited. The surface water pollution levy is regulated in the Water Act. When this went into force at the end of 2009, the Pollution of Surface Waters Act was repealed.

The guiding principle of both the wastewater treatment and the surface water pollution levies is 'the polluter pays'. The individual charge is determined annually on an individual basis and depends on the amount and composition of the wastewater discharged.

Calculation of pollution units

The wastewater treatment and the surface water pollution levies are practically identical. The levy due is determined by the way in which the polluter disposes of the wastewater: discharge through the municipal sewerage or directly into a surface water body.

The calculation methods for both taxes are very similar. For the waste water treatment levy, the pollution value of industrial discharge is determined on the basis of the oxygen demand and on the levels of heavy metals and salts, where applicable. For the surface water pollution levy, since 1 July 2014 the pollution market value has only been determined on the basis of the oxygen demand. The levying standard is what is known as the 'pollution unit'. The oxygen consumption of the pollution unit equals that of the average amount of waste substances discharged per year per resident by means of the water used. For heavy metals and salts, a pollution unit applies for each unit of weight.

Businesses with a pollution value of less than five units are taxed on the basis of the fixed sum for business accommodation of one or three pollution units. Medium-sized businesses with an annual discharge of up to 1,000 pollution units are assessed on the basis of their water consumption (and average concentrations of pollutants), whereas big industries with an annual discharge of more than 1,000 pollution units are assessed on the basis of measurements, samples and analyses of their wastewater. The ratio of tax revenues of businesses to households averaged around 25%-75% in 2014.

In 2014, the wastewater treatment levy was an average of €56 per pollution unit (the rate per pollution unit varies between the various water authorities from €47 to €93). A household of two or more people pays the fixed charge for residential accommodation of 3 pollution units, which in 2014 amounted to an average of €169 (Source: Dutch Water Authorities). Persons who live alone pay 1 pollution unit. Low-income groups may be eligible for remission.

Effects

From the 1970s the quality of surface water has gradually improved as a result of large-scale investments in wastewater

treatment plants. In the Netherlands, the treatment of urban wastewater is a task that is currently executed solely by regional water authorities. It should be emphasised, however, that the existing communal treatment plants were set up without any government subsidies whatsoever. The guaranteed revenues from the surface water pollution levy have made it possible to finance them.

In addition, the surface water pollution levy has had a demonstrable regulatory effect on the discharge of industrial wastewater. The largest effect became evident in the first fifteen years after the introduction of the levy. A further decrease in discharges was only subsequently achieved at much higher cost (and, logically, higher tax rates). The following table illustrates the success of regional water authorities in combating the pollution of surface water.

Most point discharges in the Netherlands were almost entirely cleaned up within a period of around 25 years. This can be attributed to the levies and system of granting permits by regional water authorities (and the central government). Today policy is primarily aimed at what are referred to as diffuse sources that jeopardise water quality. These sources are primarily due to pollution from agriculture, traffic and urban areas (building materials).

Table 4: The total production of pollution units (in millions) by businesses and households, treatment in wastewater purification plants and the total discharge of pollution units into surface water in the Netherlands.

Year	1970	1980	1990	2000	2008
Production businesses	33.0	13.7	9.6	7.3	7.1
Production households	12.5	14.3	14.9	15.9	16.4
Treatment at wastewater treatment plants	5.5	12.6	15.8	19.2	20.5
Discharge to the surface water	40.0	15.4	8.7	4.0	3.0

Source: CBS (these statistics are no longer recorded; 2008 was the last observation year)

5 A DEDICATED FINANCIAL INSTITUTION: NWB BANK (NEDERLANDSE WATERSCHAPSBANK N.V.)

5.1 COMBINING STRENGTHS

Finances are a recurrent problem in the execution of local water management projects. Often the best way to resolve a recurring problem that affects more than one party is to join forces to find a solution under the motto: 'Strength in numbers'. Joining forces in this way may also provide a solution to financial problems. Depending on the particular circumstances, the solution may be found at a local, regional or national level.

The example given below illustrates how forces can be combined to achieve a joint goal and fulfil an important role. It also shows how successful working together in local water management can be.

5.2 BRIEF HISTORY OF THE DUTCH SITUATION

As the water management system became more extensive, more and more regional water authorities were established. Some of the water authorities were extremely small. This is illustrated by the fact that there were around 2,600 water authorities in the Netherlands in 1950.

After the end of World War II, these sometimes tiny organisations were faced with the enormous task of reconstructing water control works that had been destroyed and poorly maintained during the preceding years. A significant obstacle was the finding of the requisite financial means to do so. These big investments could simply not be made from current tax revenues. There was a huge demand for capital. And money was exceptionally scarce in the reconstruction period. The regional water authorities appealed to the general banks in vain all too often.

The main reason for this was that these banks were also experiencing a post-war capital shortage. But another important factor was that the loans granted by the general banks were generally short-term,

while long-term loans of 20 years or more were needed in this case. On top of that, many of the small regional water authorities, in particular, lacked the financial expertise to find the correct approach or an alternative solution to the problem.

At the time, most regional water authorities were organised in regional unions that were represented on a national level by the Association of Provincial Water Board Unions *('Unie van Waterschapsbonden')* which is now the Dutch Association of Regional Water Authorities (Dutch Water Authorities). One of the purposes of this Association was to discuss common problems. The alarming financial situation the regional water authorities found themselves in was just such a problem. There was no point in appealing to central government. Unlike the Provinces and Municipalities Funds there was, and still is, no Regional Water Authorities Fund. Throughout the centuries, the regional water authorities had largely provided their own funds through the levying of taxes.

The Dutch Association of Regional Water Authorities assumed the role of intermediary between the regional water authorities and investors to obtain the funds required and save the high costs connected with taking out a lot of small loans. Guaranteed by the water authorities, in the early 1950s the Association issued two long-term bond loans and took out private loans from some of them. A number of things rapidly became clear.

- The Association could not guarantee the continuity of these activities.
- It was not the Association's area of operation.
- The Association did not have the knowledge and experience for a more structural setup.
- The regional water authorities' capital requirements were expected to rise.

The situation was exacerbated by the disastrous floods of February 1953 that took the lives of many and caused terrible damage. Even more capital was needed to repair this damage. In short, the situation was critical.

In consultation with the Ministries of Finance and of Transport, Public Works and Water Management and the boards of a number of commercial banks, the Dutch Association of Regional Water Authorities decided to transfer the financial interests of the regional water authorities to a separate legal entity.

5.3 THE CONCEPT OF A BANK

Meetings with the regional unions and individual regional water authorities were organised throughout the country to convince them of the importance and major advantages of having their own bank. Not all the regional water authorities were enthusiastic from the start. Some thought that participation involved risks that they did not want to take. Others saw participation purely as an investment that they did not regard as part of their duties.

And many were cautious and preferred to wait and see which way the wind would blow and maybe participate at a later stage.

If such an organisation is to be launched successfully, it must have strong and widespread backing. This is essential not only for attracting enough initial capital, but also for ensuring sufficient business in the future to warrant its existence. Accordingly, a certain degree of consensus is required. And although it is in the Dutch national character to try to reach consensus, it turned out to be quite difficult in practice.

Ultimately, enough support was found before the launch and in 1954 the Nederlandse Waterschapsbank N.V. (NWB) was established. In 2014, the NWB Bank celebrated its 60th anniversary. [19]

Finally there was sufficient support to begin. Collaboration can, of course, take many forms; for example, a 'mutual fund', a partnership, a co-operative or a public limited liability company. In this case, the latter option was chosen. The regional water authorities, which are organisations governed by public law, decided to incorporate a company under private law. A lot of effort was put into obtaining the support of individual regional water authorities by persuading them to become shareholders. The response was not uniform. Some large regional water authorities provided their support by participating with a considerable number of shares. Various provinces also wished to participate.

The problem of a possible shortage of venture capital was resolved by creating two types of shares:

- A shares: these were fully paid up and carried one vote in the shareholders' meeting;
- B shares: only 25% was paid up on these, subject to the obligation (and therefore the risk) to pay the remaining 75% at the company's request. Significant security was thus created with little capital.

The Bank in formation was afforded so much trust from the beginning that major transactions could be conducted on behalf of the regional water authorities. Short-term financing was provided by the commercial banks.

Because of their legal framework and sound financial basis (resulting from their own tax system), the regional water authorities were, and are still, regarded as risk-free with regard to credit risk, as are other local authorities and the State of the Netherlands itself. The Bank did not, therefore, need to set up an organisation to assess the credit risks of local authorities and was able to devote its full attention to providing financial services. At a later stage (1981) the State of the Netherlands participated in the share capital, thus clearly accepting its responsibility for an orderly financing of the local authorities.

19 On the occasion of this diamond jubilee, the book '60 years: That Went Fast' (*'60 jaar: Hard gegaan'*) was published.

Result I: Security
The intended and realised result was to guarantee the provision of the following essential services to the participants, partners and shareholders:

- long-term loans;
- up-to-date financial services;
- a central treasury function;
- financial expertise centralised in one place;
- low interest charges.

Result II: Cost savings
Combining forces in this way led to major cost savings.

After all, it was no longer necessary for each individual regional water authority to build up its own specialised financial expertise. Economies of scale also meant lower financing costs.

Finally, any profit remaining at the end of the year belonged to the collaborating parties and could be distributed or re-invested in new activities.

Result III: Learning factor
The Bank's financial expertise and resulting advisory services contributed to the continually updated financial management of the regional water authorities.

5.4 FORM

At the time, NWB Bank opted for the format of shareholders in a public limited liability company. A collaborative organisation can take any kind of legal form. The key criterion for selecting a particular form is that it is the one best suited to the local situation. Costs must be kept as low as possible. To this end, the organisation must be small, flexible and transparent. If necessary, external advisers can be engaged or the organisation can work together with other parties.

The Bank's Articles of Association explicitly state that the Bank may only grant loans to or guaranteed by the public sector and to some extent to public/private partnerships for the benefit of the Dutch public sector. In the Dutch situation this means that the credit risk is minimal.

Start-up problems
1. Finding a group of like-minded organisations that is large enough to start
2. Complying with the required regulations according to national legislation
3. Seeking and finding support from existing banks during the initial stage
4. After getting started, increasing the number of participants
5. Building up financial support
6. Finding the right people
7. Becoming a trusted bank.

Up and running
- Once the organisation is up and running, it may have a self-perpetuating effect. This may even lead to the bank acting as financier for other sectors of the local authorities. This can again lead to an extra benefit for the original participants.
- From the outset, the financial institution must build up a reputation for respectability and reliability which at least matches that of its founders and clients and, if possible, is even better.

- In the development of a financial institution, there comes a time when a healthy detachment forms with regard to its involvement with its shareholders/ participants, and vice versa. In this case, that means that the institution must have an in-depth knowledge of its shareholders' sector, but that it should otherwise focus entirely on developing and providing attractive financing options. That is its core task.
- It is generally thought that there are now more than enough banks in the world. However, there is still room for more specialised banks and financial institutions. This is only possible as long as their objectives do not encroach, or at least do not encroach too much, on the field of the general banks. The activities must be restricted to just a few products, such as in this case the long-term financing of infrastructural works.
- If in due course the organisation succeeds in meeting international standards, this further increases the opportunities for working together with the supranational development banks and attracting funds on the international capital market.

The NWB Bank in a nutshell

The Dutch government sector is regarded internationally as being extremely creditworthy and has a credit rating status equal to those of the Dutch State (Aaa/AA+). It is therefore essential that the NWB Bank has the same status so that it can act as an efficient financier for its clients (share-holders, etc). The NWB Bank has ratings from the Standard & Poor's and Moody's credit-rating agencies. From November 2014 onward, as a systematic bank in the eurozone, the NWB Bank came under the direct supervision of the European Central Bank (ECB).

5.5 KEY NWB BANK FIGURES

Additional proof of how successful the concept of a highly specialised bank can be is furnished by the following selection of key figures. Core figures for the NWB Bank as of 31 December 2016:

Balance total:	€94,4 billion
Equity capital:	€507 million
Tier 1 capital	€1,824 million
CET 1 ratio	50.5%
Tier 1 ratio	61.2%
Leverage ratio	2.3%
Net profit:	€107 million
Operating expenses/ interest ratio:	8.6%
Credit ratings:	AAA/Aaa
New credit per annum:	€7.1 billion
Number of employees:	57

The success of the NWB Bank is largely attributable to its low cost base. This is due to the small size of the organisation. Since the financial crisis the NWB Bank has enlarged its organisation strongly and attuned itself to to the higher supervision standards of the ECB and the DNB and to the increasing regulations in the field of corporate governance and bank rules. Besides that the NWB Bank has invested in diversification of the credit grant for public/private investments of its clients within the public sector. The same applies

to the other customer groups, such as municipalities, provincial governments, social housing (guaranteed by the State and the municipalities) and the health sector (guaranteed by the State). In 2014, the NWB Bank easily passed the European Asset and Quality Review (AQR) and stress test for banks.

Apart from being important to the public at large, a continuous low cost base also benefits the competitive position of the Bank. Local authorities are free to choose the source of their borrowed funds. Accordingly, when taking out a loan, they always ask for several quotes from lending institutions (including private parties) with the purpose of selecting the cheapest offer.

5.6 CORPORATE SOCIAL RESPONSIBILITY

The NWB Bank deems corporate social responsibility to be very important. It is therefore an integral part of the general policy.

One example is the NWB Bank's initiative to support water management projects in developing countries.

In close conjunction with its shareholders and in co-operation with the Dutch Water Authorities, on 22 December 2006, the NWB Bank established a foundation by the name of NWB Fund *(Stichting NWB Fonds)*. The objective of the fund is to finance projects set up by the regional water authorities in the framework of international co-operation. The revenues from this fund facilitate the individual regional water authorities in deploying their knowledge to realise partnership by co-operation in projects with foreign organisations.

In mid-2014, the fund had root capital of €20.5M, which was deposited in full by the NWB Bank. In a few years' time, the fund will amount to €25M. At present, every year the NWB Fund has €800,000 available for financing and support of international cooperative activities of water authorities, aimed at:

- Promoting sustainable management of water systems and water chains
- Strengthening capacity for decentralised local or regional water governance.

During the first five years of the NWB Fund, a wide range of activities was carried out in 17 different countries. In 2011, the Dutch Water Authorities decided to focus more on international co-operation and, where possible, to combine forces. Responding to the Cabinet policy for international co-operation, a country focus has been introduced and more attention will be paid to the export potential of the Dutch water sector as a whole.

With the financial contribution of the NWB Bank, the NWB Fund is now supporting water governance co-operation in Bangladesh, Egypt, Ethiopia, Indonesia, Mozambique, Nicaragua, Vietnam, and South Africa. For the delta countries of Bangladesh and Mozambique, special projects have been set up to stimulate a unified effort and to professionalise the

contribution of water governance. In Ethiopia, Nicaragua, Vietnam and South Africa, co-operation with other local and Dutch water sector partners is growing. Content-related spearheads of the knowledge activities include: Good Water Governance and finding new solutions for water treatment by recycling energy and raw materials (in cooperation with Aqua for All).

6 THE ASSOCIATION

In the 1920s, associations were set up in each province and the water authorities in those provinces became members – the provincial water authority unions. The main goal of these unions was to promote the interests of the regional water authorities at a provincial level. To that end they acted as counterparts of the provincial authorities with regard to issues that jointly affected the regional water authorities in the province in question. Because of the increasing number of mergers of the regional water authorities and the catchment basin approach, as a result of which many interprovincial regional water authorities have come about, many provinces no longer have a regional water authority union.

The regional water authorities soon needed an organisation to promote their interests on a national level, hence the setting up of the Change to 'Association of Provincial Regional Water Authority Unions *('Unie van Provinciale Waterschapsbonden')* in 1927. All the provincial regional water authority unions were members. From 1968 onward, the individual water authorities and not the water authority unions were members of the Association. The name of the Association was changed to Dutch Association of Regional Water Authorities (Dutch Water Authorities). At present, all 21 water authorities are members of this association.

The Association aims to promote the interests of regional water authorities at a national and international level and is developing joint visions and viewpoints to that end.

The national representation of interests particularly relates to government and parliament. This function manifests itself, for example, in consultations with the Ministers and Members of Parliament, by advising on bills and policy documents, by participating in advisory and consultative bodies and by maintaining contact with national media, etc. The Association is the point of contact for Ministries, national politics and interest groups for local and regional water management.

The international component has become an indispensable part of the day-to-day business of the water authorities. European policy offers opportunities and risks that have a long-term effect on Dutch water

policy. An effective representation of interests in Brussels is therefore vitally important. Dutch Water Authorities realises this through a *Bureau Brussel*, together with Vewin, the association of drinking water companies.

Bureau Brussel represents the water authorities in the European Commission and the European Parliament. In addition, *Bureau Brussel* is part of the European networks, such as EUREAU, EUWMA, CEEP and EWA. EUREAU, the European union of national associations of water suppliers and wastewater services, is the coordinating organisation of water utilities. EUWMA, the European Union of Water Management Associations, unites decentralised managers of water resources. CEEP is the European Centre for employers in the public sector. EWA, the European Water Association, represents water professionals and institutes in general. The former Association Chairperson Peter Glas is the chairperson of the Water Governance Initiative, which was established in 2012 on the initiative of the OECD and in which various organisations from over thirty countries are working together to improve the "governance" of water management.

Called 'Dutch Water Authorities', the Association puts the joint international policy of the water authorities into practice. International knowledge is shared in this framework. For example, water authorities help to improve sustainable global water management, prevent and control calamities and support the Dutch business sector internationally.

DWA share in several countries its knowledge on water governance issues (administrative organization, legislation, planning, financing, stakeholder involvement and co-operation) and day-to-day water management (maintenance, water safety, water quantity and quality matters, waste water treatment, dredging, monitoring and so on) with local partners (see www.dutchwaterauthorities.com for more information and info@dutchwaterauthorities.com for contact).

In addition to the external representation of interests, the Association advises its members – that is, the water authorities. The association draws up directives, model bye-laws (also in the area of taxation) and model plans and helps the water authorities to effectively utilise European funds. The Association also publishes a monthly magazine for its contacts entitled The Regional Water Authority *('Het Waterschap')* and regular newsletters that keep the regional water authorities up to date with relevant developments in The Hague and Brussels.

Finally, the Association is an employers' organisation. It negotiates with central government personnel organisations and makes agreements on employment terms for regional water authority personnel that are binding for the regional water authorities.

Besides the Association, the water authorities have also set up a number of other co-operative organisations. At a national level, these include STOWA and the Waterschapshuis. *STOWA, Stichting Toegepast Onderzoek Waterbeheer*, the

foundation for applied research in water governance, is the knowledge centre for decentralised water managers. Together with external partners, STOWA implements knowledge projects based on current and future themes related to regional water management, such as water safety, water quantity and quality, ecology, wastewater treatment and climate resilience. In *Waterschapshuis*, water authorities work together in the field of ICT. *Waterschapshuis* is the controlling and implementing organisation for the water authorities in the field of information and communication technology.

The highest level within Dutch Water Authorities is the general assembly (governing board), which convenes four times a year and on which all the regional water authorities have a seat. The direct leadership is in the hands of the managing committee, which comprises six members who are appointed by and from the general assembly. The committee meets eight times a year. In addition, the Association has a number of permanent, predominantly administrative decision-making committees, on which all the water authorities are represented. Under these committees, there are a number of official working parties. Due to this structure, the Association is generally very well aware of the issues confronting its member regional water authorities so that it can promote its members' interests in The Hague and in Brussels in the best way possible. The costs incurred by the Association – primarily personnel costs – are financed by contributions made by the member regional water authorities.

Dutch Water Authorities employs around fifty-five employees. The general manager of the Association is also secretary of the general assembly and the governing board. The Dutch Water Authorities bureau, which is located in The Hague, acts as secretariat and is also the executive body of the association. For more information about Dutch Water Authorities, see the Association's website (www.dutchwaterauthorities.com).

7 FINAL CONCLUSIONS

The main elements – the building blocks – of the Dutch regional water authority system are described in the preceding chapters. In succession, the chapters focus on the constitutional position of the regional water authorities, including their legal and constitutional basis, the democratic legitimacy resulting from their own governing body and the financial independence achieved through their own tax area. Subsequently, the role played by the NWB Bank in attracting outside capital is discussed briefly, as well as the role the Association plays as national promoter of the regional water authorities.

This final chapter summarises the building blocks once more.

Firstly we can conclude that regional and local water management in the Netherlands is largely functionally decentralised. Regional water authorities play a key role in this as functional authority. 'Functional' because, legally speaking, regional water authorities' tasks are limited to the care of the water system and management of wastewater treatment. Authority because regional water authorities based on the Dutch Constitution, formally speaking, are 'invested with authoritative power', and have their own governing bodies, tax area and legal powers, which are derived from the Regional Water Authorities Act, the Water Act and the authorities' own bye-laws.

As a functional authority, regional water authorities can focus entirely on water management, which is therefore safeguarded from political whims. This functional character, by the way, does entail a certain risk. Since water management is closely linked with other fields of government care, particularly structural planning, environmental and nature management, regional water authorities will have to be open to these relationships and provide a framework for them. Regional water authorities focus on integrated water management while explicitly looking for co-operation with other authorities (provinces and municipalities) and non-governmental organisations (residents' organisations, farmers, businesses, managers of nature reserves, drinking water companies, etc).

The planning systems in the policy areas mentioned, in particular, offer the required starting points for this and in practice this potential risk is not really an imminent threat. Regional water authorities have open eyes to society's ever-changing wishes concerning water management. This, too, is something regional water authorities understand, as is shown by the following concrete example. After World War II the government's policy was primarily focused on increasing food production. In order to fully exploit the agricultural land, a number of watercourses were channelled and straightened by the regional water authorities to improve drainage. Nowadays the ecological significance of such watercourses is also highly valued. With this in mind, over the past decades the water authorities have implemented various projects to restore these streams to their previous meandering courses, and this has once again created a suitable habitat for many species including the the kingfisher.

It goes without saying that an adequate system of legal instruments is of paramount importance if the desired modern integrated water management is to be achieved. For example, water quality cannot be improved and protected until detrimental discharges are prevented or regulated via a permit system. Chapter 2 illustrates that the regional water authority indeed possesses adequate powers and can, where necessary, enforce compliance with the prevailing rules and regulations.

This clear-cut constitutional position as a functional authority with an adequate set of legal instruments forms the first building block in the regional water authority model.

The second building block, elaborated in Chapter 3, deals with the democratic legitimacy resulting from regional water authorities' own governing bodies, which are composed of water management stakeholder categories. In that sense, the regional water authority can quite rightly be characterised as a 'stakeholder democracy'. After all, stakeholder categories (interest groups) submit lists of candidates for the regional water authorities' elections. This representation is crucial for the democratic legitimacy of regional water authorities. And ultimately, it results in stakeholders deciding how and at what cost water management actually takes place, thus also creating support for the measures that will have to be taken. From this perspective, it is just as essential that the regional water authority is not made up solely of representatives of the general task interests (residents), but also representatives of the specific task interests (farmers, businesses and managers of nature areas). After all, they bear a substantial part of the costs made by regional water authorities and they must have a say in the board in accordance with the interest-pay-say triad. As Chapter 3 has shown, the new Regional Water Authorities Act of 2007 has led to considerable changes in the representation of stakeholders in the assemblies. The essence has, however, remained unchanged.

The third and final building block in the regional water authority model concerns the financial independence of regional water

authorities that results from their own tax area. This was discussed in Chapter 4. The core message is that regional water authorities are largely self-supporting and are in a position to bear the costs of their tasks by levying their own taxes – the water system levy, the wastewater treatment levy and the surface water pollution levy. This financial independence is highly valued and is the best guarantee of sufficient financial means for today's modern water management. It is not a very tempting thought to be (fully) dependent on the state's ever scarce financial means, which, moreover, are earmarked for a wide range of policy areas (education, health care, defence, and so on). In this respect, everyday practice shows that regional water authorities are aware that they have to work at the lowest possible social cost, so that tax rates can be kept reasonable. This can be illustrated by the fact that a family living in the low-lying Netherlands pays the regional water authority an annual average of €320 in regional water authority taxes. It is not surprising to hear that the stakeholder categories, that have to pay these taxes, are represented in regional water authority assemblies and thus determine how high the tax rates should be. This, too, may serve as an illustration of the interest-pay-say triad.

With these three building blocks, that is, the clear constitutional position as functional co-authority with adequate legal powers, the democratic legitimacy resulting from their own governing bodies and the financial independence resulting from their own tax area, today's Dutch regional water authorities are adequately positioned to face the future. It is at least as important to ascertain that this 'formula' works. For example, water quality in the Netherlands has improved considerably over the last few decades and further improvement is currently hampered mainly by diffuse sources of water pollution (building materials, traffic, agriculture, and the like), which lie beyond the regional water authorities' direct control. Moreover, the dykes are relatively safe – in this respect the Netherlands' water defences are never really 'complete' – and the regional water authorities reacted adequately to the near-flood in 1995. Within two years roughly 100km of river dykes had been reinforced and about 150km of embankments had been constructed along the river Maas. The regional water authorities are currently working hard to implement concrete measures in the search for space for water in order to prevent flooding as a result of (extreme) rainfall. They are also taking the measures necessary for ecological recovery. In the years to come, the recent Delta Decisions will require a major effort from the water authorities. In all of this, the regional water authorities have a 'broad outlook' and are constantly trying to work together with other authorities and non-governmental organisations. There is, therefore, absolutely no danger of them working in isolation.

Since the essence of the water management situation in the Netherlands is similar to that of other countries – even though all areas have their own special circumstances – it is quite conceivable that the 'building blocks' described in this publication could be exploited outside

Dutch borders. The developments currently taking place in countries such as Ethiopia, Indonesia and South Africa show their value. They are not intended as blueprints, but they might well be seen as experiences, from which others may also wish to benefit.

These building blocks underline the importance of a good institutional structure in water management; that is, of good Water Governance. The concept of 'Water Governance' must be interpreted in the broader sense of the term. It should be understood to include: the administrative organisation and task distribution in water management including the legal, and other, instruments available, financing structure, administrative decision-making and accountability, public participation, administrative supervision, legal protection, inter-government co-operation, the relationship of water system management to adjoining policy areas (in particular, structural planning) and, moreover, to communication, perception and appreciation.

The NWB Bank considers its sound status and special characteristics necessary for it to operate effectively within the Dutch setting. The description of the NWB Bank is not intended as a blueprint for situations in other countries, any more than the building blocks are. What is important is that the form of collaboration opted for and the status of the financial institution is well geared to the setting in which it operates. The NWB Bank was not such a solid bank from the start, and neither was the government sector as professional and well-developed then as it is today. In this respect, the NWB Bank's development has really kept pace with that of the government over the years or, to put it differently: starting up one's own financial institution is highly appropriate for a situation in which the problems are substantial and the required structures have yet to be developed.

Anticipating and being prepared for climate change and social developments will continue to be significant challenges in the future. To this end, regional water authorities operate with a broad outlook, in co-operation with the central government, provinces and municipalities. They take concrete steps. The Dutch Water Authorities recently signed a climate agreement with central government, and the regional water authorities are co-operating in the 'The Energy and Raw Materials Factory' project in order to make their energy consumption sustainable and recover valuable raw materials from waste water. They also take a broad outlook in the geographic sense: including the cross-border catchment basins, in Europe and globally. Climate, water systems, knowledge, legislation and socio-economic issues now have an international dimension, by definition. Here lies an important task for the regional water authorities themselves and for the Dutch Water Authorities.

BIBLIOGRAPHY

Ven, G.P. van de (editor): *Man-made lowlands*, Matrijs Publishers, Utrecht 1993, ISBN 90 5345 030 0.

Havekes, H.J.M.: *Functioneel decentraal waterbestuur : borging, bescherming en beweging. De institutionele omwenteling van het waterschap in de afgelopen vijftig jaar* (dissertation), SDU The Hague 2009.

Havekes, H.J.M. and Van Rijswick, H.F.M.W.: *European and Dutch Water Law*, Europa Law Publishing, Groningen 2012, ISBN 978 90 08 95210 71.

Havekes, H.J.M., Putter, P.J. de (ed): *Wegwijzer Waterwet 2014,* third edition, Kluwer, Alphen aan den Rijn 2013, ISBN 978 90 13 07127 6.

OECD (2014), Water Governance in the Netherlands: Fit for the Future?, OECD Studies on Water, OECD Publishing.

Havekes, H.J.M. and Van Rijswick, H.F.M.W., *Nederlands Waterrecht in Europese context,* Kluwer, Deventer 2014.

Havekes, H.J.M. and Wensink, W.J.(ed), De Waterschapswet. *Een artikelsgewijs commentaar*, Kluwer, Deventer 2015.

Havekes, H.J.M., Hofstra, M.A.,Van der Kerk, A, Teeuwen, H.H.A., Van Cleef, R. and Oosterloo, K. *Building Blocks for good water governance,* Water Governance Centre, The Hague 2016.

Dekking, J.W.C., *Waterschapsbelastingen 2017. Het hoe en waarom*, Unie van Waterschappen, Den Haag, 2017.

VISITING ADDRESS
Koningskade 40
2596 AA The Hague
+31 703 519 751
The Netherlands

MAILING ADDRESS
P.O. Box 93218
2509 AE The Hague
The Netherlands

June 2017

info@dutchwaterauthorities.com
www.dutchwaterauthorities.com