



**THE DRINKING WATER SUPPLY
IN FLANDERS
FROM 1800 TO THE
PRESENT DAY**

**CAN THE ORGANIZATION OF THE DRINKING
WATER SUPPLY IN FLANDERS SERVE AS AN
INSPIRATION FOR THE SOUTH?**

The drinking water supply in Flanders from 1800 to the present day

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PREFACE

Local government authorities in the South are currently faced with the need to organize drinking water supply themselves as a consequence of the decentralization process which in most cases has either recently been implemented or is planned for the near future. Decentralization shifts this responsibility from central government to local government. Both the municipalities and the community-based organizations involved are currently looking for models for how to organize drinking water supply in a decentralized manner. Under pressure from international moneylenders the municipalities or cities of the South are often influenced into opting to outsource this service, or large parts of it, to the private sector.

In Flanders and in Belgium, on the other hand, water is still assumed to be a public asset (even though, originally, private companies were also involved). The public drinking water supply as it is organized in Flanders and Belgium may, therefore, serve as a source of inspiration for the South.

After all, Belgium has every right to regard the organization of its drinking water supply as a success. Today the development of the distribution infrastructure has evolved to such an extent that the overwhelming majority of Belgians have access to drinking water 24 hours a day, 365 days a year. Interruptions are rare.

This has taken around 200 years to achieve. The organization of drinking water distribution by means of distribution networks gradually got off the ground in Flanders from 1850 onwards. There was an initial period of fairly rapid growth in the urban areas until the outbreak of the First World War.

However, it was not until the middle of the 20th century that more than half of the households in Flanders had tap water. The municipalities played a central role in the development of drinking water supply organization throughout the period. It should also be remembered that the municipal authorities have had the responsibility for providing drinking water to their residents since the French occupation (1794). At that time - just as is the case in many Southern counties today - only the bigger cities and a handful of municipalities were able to create the infrastructure required to provide drinking water to their inhabitants. The rural municipalities were still unable to mobilize the necessary resources to do so. In fact, many Belgian municipalities would never have been able to comply with their responsibilities had it not been for the technical and financial support and the legislative initiatives of the Belgian government. An important stimulus was the initiative of the national legislature to promote cooperation between the municipalities which resulted in the formation of the intercommunal companies (intermunicipal drinking water companies). Other important catalysts were economic and technological development.

The lengthy process of constitutional reform in Belgium, which began in 1970, divided the country into communities and regions, whereby powers and financial resources were handed to the regions. Now that the Belgian central government has handed the responsibility for drinking water supply to the regions, the Flemish Region has been entrusted with the important task of maintaining this service in Flanders for everyone and at an acceptable price.≈

This booklet aims to provide a concise overview of the historical and current organization of the drinking water supply and sanitation in Flanders and to point out a number of lessons which can be learned from Flemish experience.

The booklet will be distributed to local authorities in the South; at national and international forums, to European NGOs and NGOs involved in drinking water supply projects in the South; and to the various actors in the Belgian water sector.



1/ THE HISTORY OF DRINKING WATER MANAGEMENT IN FLANDERS AND BELGIUM

1.1 WATER AND HEALTH THROUGH THE AGES

The Greeks, Persians, Egyptians and the Chinese were already experimenting with the development of ways of extracting and distributing drinking water thousands of years ago. In Europe, the Romans¹⁾ were the masters of drinking water supply and the oldest archaeological remains relating to the extraction and distribution of water, including aqueducts²⁾, date from the Roman period. However, a great deal of the knowledge they had acquired was lost after the fall of the Roman Empire.

In the late Middle Ages³⁾, only the bigger cities had mains network of any significant size. The pipes were mostly made of lead and occasionally from wood, and brought water to the city from ponds located in the immediate vicinity. Water sellers sometimes also brought water to the cities in carts. In the rural areas, people took their water from wells using ropes and pulleys. In hillier regions, water was extracted from springs or galleries were excavated to tap underground lakes. The network thus created was primarily intended to supply public water points. The water was mainly used for safety purposes, in particular the extinguishing of the numerous fires, which plagued the towns of the period. Wooden houses with thatched roofs made fire a major hazard in many towns. Ordinary people drank light beer rather than water to quench their thirst. The brewing process meant that beer was free of germs, whereas water was often contaminated.

In the Middle Ages, the Bubonic plague⁴⁾ caused massive mortality in Europe. The number of victims of this pandemic is estimated at between 25 and 40 million people. Water, which was frequently contaminated, also caused epidemics both in the cities and in the rural areas. Between 1650 and 1750 water wells were covered in order to combat the increasing contamination.

Dysentery⁵⁾ epidemics were a regular occurrence from 1672 onwards. The effects were less catastrophic than those of the Bubonic plague, but dysentery was nevertheless responsible for a large number of deaths, in fact it was to be a determining influence on the mortality pattern of the 18th and early 19th centuries. A mortality rate of 5% of the population was not unusual in major outbreaks of dysentery.

In the nineteenth century, Belgium's rapid industrialization was also accompanied by severe poverty. In 1803, the spinning mills of Ghent, for example, only employed 227 workers, while by 1810, this figure had risen to around 10,000. In the second half of the nineteenth century, economic and social distress in the rural areas caused by repeated harvest failures led to an increase in migration to the cities. Areas of workers' housing sprang up located close to factories due to the demand for housing. The new arrivals lived in what were often small, ill-lit and overcrowded dwellings in slums packed tightly together on short, narrow streets. Poverty, misery and vermin were the order of the day. Sanitation and hygiene were practically non-existent. The water supply was generally very primitive. The townspeople population got their water from sources such as streams and rivers, urban canals and drainage ditches, springs, public wells or bought it from water sellers, while industry used transport canals and viaducts. Collecting rainwater was also a widespread practice. Water supplies were prone to sharply fluctuating deficits, with consequent water shortages in periods of drought, or in cases of over-exploitation, and pollution by human activities. The dozens of urban canals and drainage ditches with stagnant or slow-flowing water, which were used both for human consumption and for the disposal of waste, ran through the centre of the cities and regularly burst their banks.

1) The Roman Republic was founded some 500 years before Christ. It was replaced by the Roman Empire at the beginning of the first millennium and was to continue until its fall in 476. The Roman Empire was built around the Mediterranean, but also included most of Western Europe with the exception of Ireland and Scandinavia.

2) An aqueduct is an engineered construction consisting of a bridge over which a watercourse (a river or canal) or water conduit is re-routed allowing other traffic to pass beneath it.

3) I.e. the period between 500 and 1500 AD.

4) A disease transferred to humans by fleas carried on rats. Outbreaks were common in Europe until as late as the 19th century.

5) Dysentery is a severe form of diarrhoea characterized by the presence of blood in the faeces.

The impoverished slums were ideal conditions for the spread of infectious diseases such as cholera and typhus, causing terrible cholera epidemics in the years 1832-33, 1849, 1853-54, 1859 and 1866-67. The failure of the potato and rye harvests in 1846-47 took distress in Flanders to unplumbed depths. In Flanders the mortality rate was the highest in Belgium: 28% of newborn babies died before reaching the age of one.

There was thus a pressing need for a safe drinking water supply. In the cities, in particular, the drinking water springs quickly became exhausted and polluted. Even before the pioneering work of Louis Pasteur (1822-1895) and Robert Koch (1843-1910), which laid the foundation for modern bacteriology, it was already known that certain diseases were highly contagious, especially in the working class districts where hygiene was non-existent. In 1848, a series of popular revolts broke out in cities all over Europe and this was accompanied by the initial formulation of concepts such as public hygiene, public health and public sanitary services, which were subsequently put into practice. Conferences on hygiene, such as that held in Brussels in 1852, tackled quality requirements for drinking water. In some Belgian cities "Comités d'hygiène publique" (Public Hygiene Committees) were set up, which, for example, resulted in regulations for dwellings in interior courtyards and alleys. Among other things, rules regarding minimum sizes for rooms and windows in workers' dwellings were established.

After the severe cholera epidemic of 1866 (which claimed 2,961 lives in Antwerp alone) and the bacteriological research of Pasteur and Koch (the identification of the cholera bacterium), a far-reaching sanitation campaign was implemented in the last quarter of the nineteenth century. In a number of big cities, polluted canals were systematically filled in and a sewage and water distribution network was laid.

The government commissioned the building of public bath houses, where the population could get washed at accessible prices, and showers were gradually installed in schools, army barracks and prisons. Bathing had hitherto been a luxury.



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There was now a general recognition of the importance of hygiene, nutrition and sanitary services for public health. The working conditions of the factory employees also changed. Machines became more complicated and required better educated personnel, which in turn led to the emergence of a middle class which was better protected in order not to jeopardize production. The systematic concern for safe water and hygiene proved decisive in the prevention and combating of infection. Technological progress, especially in the steel industry and mechanical engineering, permitted the construction of large scale networks of water pipes under pressure. The filtering of surface water and the use of chemicals to treat water resulted in an immense improvement in water quality and an expansion of the mains network. In the second half of the nineteenth century, large dams were constructed in the Ardennes⁶⁾. The technique of sand filtration for the exploitation of surface water was developed and subjected to strict rules. For reasons of hygiene, however, this technique was originally little used in Flanders and Belgium. Contemporaries preferred high quality (spring) water, water from reservoirs and groundwater. ≈



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6) Hilly, wooded and sparsely populated area in Wallonia in the south of Belgium.



1.2 THE CENTRAL ROLE OF THE MUNICIPALITIES

The French occupation, which began in 1794, led to a political and administrative reorganization of what is now Belgium, which was later consolidated under Napoleon. The municipalities played an important role in this. The revolutionary decrees gave the municipalities, among other things, a mandate to “take appropriate measures to prevent disasters and plagues, such as fire, epidemics and epizootics⁷⁾ and to provide the necessary assistance to stop these”. In this way, the central government placed the responsibility for the public drinking water supply in the hands of the municipalities. In 1836, the Belgian Government incorporated this responsibility into the Municipality Act, creating the legal basis for the municipality’s duty to guarantee its residents access to drinkable water.

A characteristic of modern drinking water supply is that the production of sufficient water of acceptable quality is separated from the place where it is to be used. Originally water transport relied on gravity, but from 1875 onwards, pipes under pressure were laid. The water was transported to the consumer by means of an extensive network of pipelines, which sometimes included water towers⁸⁾.

The development of the drinking water supply began in the cities. It was not until much later that the network was extended to the rural areas. The most prosperous municipalities and cities had the financial resources necessary to build water production installations and mains water pipe systems. In 1858, Brussels became the first Belgian city to have a modern drinking water mains supply system.

In the big cities, the wealthy stratum of the population enjoyed a connection to the mains system, but the bulk of the municipalities were still without water distribution networks. There was a lack of money, know-how, will and public demand. Towards the end of the nineteenth century, a number of municipalities decided to join forces to set up public companies which would ensure the production, transport and distribution of water to the population, under their supervision. These were the first ‘intercommunal’ (or intermunicipal) companies.

At the beginning of the twentieth century, 20% of Belgian homes were connected to the water mains, principally in Brussels and Wallonia.

The large number of natural springs in this area made the extraction of drinking water relatively easy, which also explains the emergence of large numbers of small companies. In the flat and predominately rural region of Flanders, however, the extraction of drinking water was more difficult and the financial resources were more limited, which in turn meant that the development of the drinking water supply was slower to get off the ground in Flanders than elsewhere.

The input of British know-how was important for the development of the drinking water supply in Flanders. In Britain, the industrial revolution had already permitted the development of the technical resources for building water mains networks, which meant that Britain had a significant lead on the rest of Europe. However, the British water companies were mostly private enterprises, whereas on the European mainland public initiative played a bigger role, especially in those countries which came under French influence after the French Revolution. The French Compagnie Générale des Eaux (General Water Company, or CGE), which was founded in 1853 to supply water to the major French cities, is an exception to this general rule in that it followed the British model.

Given the heavy investments required to set up the new water mains systems, some cities decided to outsource their construction. British companies were involved in the creation and the operation of water companies in other European countries and also in cities such as Antwerp (1881). Other examples of private initiatives are found in Ghent, Louvain and Namur. The city of Antwerp wanted to terminate the concession in the period 1907-1911, but the prohibitively high takeover price prevented them from doing so. This private initiative was not brought to an end until 1930 when the city authorities were unable to reach an agreement with the British owners on a new drinking water infrastructure in which the city also wished to incorporate the surrounding municipalities.

In 1879, the water services in Ghent were entrusted to a Belgian-French group, which later went bankrupt in 1885. The city then set up its own water authority. In Louvain water services were provided by a Dutch company from 1890 onwards and it was not until 1950 that a state enterprise, the Nationale Maatschappij der Waterleidingen (National Water Mains Company), replaced the Dutch service provider.≈

7) Epidemics among animals

8) A water tower is a water tank built at a certain height which helps to preserve a constant pressure in the mains network.

1.3

THE ROLE OF THE LEGISLATOR IN DEFENCE OF THE PUBLIC INTEREST



The enactment of the Act on Intercommunal companies in 1907 represents an important milestone in the organization of the drinking water supply in Belgium and a great many of the municipal partnerships date from this period. However, these operated in a legal vacuum. In establishing the right to form associations, the government set out to provide a legal framework for the existing intercommunal companies while at the same time encouraging other municipalities to work together.

The intercommunal companies enjoyed the advantages of commercial companies, as well as the right to make forced purchases in the public interest and the possibility of taking out loans at a low rate of interest. The central government and the provinces had the right to supervise the intercommunal companies and to purchase all installations unilaterally if these did not comply with the law. Private participation in the intercommunal companies was restrained by limiting their annual dividends. In other words, the law of 1907 established a new fundamental principle which continues to characterize the drinking water sector, namely that drinking water distribution must, first and foremost, serve the public interest. This law, the subsidy regulations for the laying of the infrastructure for water supply, the support provided by provincial technical services, the technical services of the competent government departments, and the setting up of a Hoge Raad voor Hygiëne (Supreme Council for Hygiene) appear, however, to have been insufficient to permit many municipalities to undertake initiatives which would have allowed them to extend their existing water distribution network in order to achieve a full level of service provision. In response to the law, ten intercommunal companies were set up in the whole of Belgium between 1907 and 1912 and more than 500 smaller companies (mainly in Wallonia), but otherwise no great changes ensued.

In 1912, only 3 million of the 7.5 million inhabitants had access to a water supply of acceptable quality. In practice, municipal particularism hindered the development of a nationwide vision of Belgian drinking water supply, with the result that public monies were not always efficiently employed. There was also often a lack of solidarity between municipalities with sufficient high quality water springs and the less fortunate municipalities.

In 1913, the Belgian government set up the Nationale Maatschappij der Waterleidingen (National Water Mains Company, or NMDW) which was given the job of intervening itself where municipal initiatives failed and to offer support in the planning and coordination of the drinking water supply. This approach marks the beginning of public water distribution as we know it in Flanders today. Central government, the provinces and those municipalities which wished to do so, were able to participate in water distribution in their area. Private persons or companies were also allowed to join the scheme, which was an attractive option for the municipalities as these company enjoyed significant government subsidies and many municipalities would not have been able to bear the costs of the investments without these grants. The disadvantage of this solution was that the municipalities had only a limited say in the company's operations and municipalities which joined the NMDW also surrendered part of their autonomy.

The First World War and the financial crisis of the years thereafter acted as a brake on the activities of the NMDW, but in 1923 the company resumed work on the continued expansion of the public water distribution networks.

By 1939, 220 municipalities⁹⁾ had joined the NMDW, especially those in the rural areas. Flanders lagged behind considerably and it was not until the second half of the twentieth century that drinking water distribution really took off. The importance of the individual as consumer in the economic process probably played an important role in this. After all, economic growth depends to a large extent on securing a high standard of living for as many people as possible. In 1950, 293 municipalities had joined the NMDW which supplied 1.2 million customer/users. By 1970, this figure had risen to 3.8 million customer/users. The early history of the NMDW shows that it mainly attracted municipalities in rural areas and smaller towns, which did not have the financial means to organize a hygienic drinking water supply on their own.

After the constitutional reforms in the 1970's and 80's (see 2.1. *The federal state of Belgium*) the NMDW was split up and its successor in the Flemish region was the Vlaamse Maatschappij voor Watervoorziening (Flemish Water Supply Company, or VMW), established by the Flemish decree¹⁰ of 28 June 1983 as a public law company in the form of a cooperative partnership. The bulk of the infrastructure for production and distribution of drinking water in Flanders has now been completed. In 1981, 98 % of the Flemish households were connected to the mains water supply. The current investments are largely replacement investments, principally for installations which have reached the end of their useful economic life, or in order to meet stricter European drinking water standards.≈



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9) At that time there were more than 2,600 municipalities in Belgium. After the mergers of 1977 the number was reduced to 596.

The Flemish, Walloon and Brussels Regions each have their own legislative and executive authorities within the federal state of Belgium.

10) The regional laws of Flanders (known as 'decrees') enjoy a legal status equal to that of federal laws.



1.4 RECENT DEVELOPMENTS IN THE SECTOR

From 1980 onwards, there was a sharp decline in the number of drinking water companies due to a spate of mergers and takeovers. In 1986, Flanders still had 136 independent drinking water companies. The drinking water in Flanders is currently distributed by the VMW, seven intercommunal companies and seven municipal water companies. The five biggest companies currently account for around 92% of the water supplied.

The new Municipality Act of 1989 adopted the vision of responsibility for public drinking water supply expressed in the law of 1836, practically without amendment. Some 25% of the drinking water supplied in Flanders comes from Wallonia. Of the drinking water produced in Flanders, approximately 51% comes from surface water and 49% from groundwater. In order to relieve the pressure on the important groundwater reserves in Wallonia, the Flemish drinking water companies are increasingly investing in surface water extraction.

Between 1983 and 1997, the production of drinking water rose from 272 million m³ to 349 million m³ without any noticeable increase in the number of mains subscribers. Water production has remained more or less constant since 1998. Domestic use is declining, while industrial use is on the increase. The fall off in domestic use is due to greater consciousness on the part of the consumer, partly as a result of sensitization campaigns, conducted by the drinking water companies and the government, aimed at persuading consumers that such a precious asset as drinking water should be used sustainably.

On 6 July 2001, a new decree¹¹⁾ on intermunicipal cooperation was approved in order to meet the need for more flexible forms of collaboration.

As a result of the saturation of the Flemish drinking water supply market, Flemish drinking water companies are trying to penetrate other markets, by increasingly presenting themselves as integrated water resources companies that not only provide water extraction and water distribution, but also offer a diversified range of services. Thus they also engage in activities in the field of water treatment and other services (legionella prevention¹²⁾, re-use of water and water audits¹³⁾, greywater supply¹⁴⁾, detection of leaks, etc). The so-called programme decree¹⁵⁾ of 2004 has speeded up this evolution further still as it includes the stipulation that every drinking water company must also guarantee the treatment of the drinking water it supplies. For this purpose, they are required to levy a contribution from the consumer which is to be shown on the customer's drinking water invoice.

Since 1980, the private sector has made renewed attempts to enter the drinking water supply sector, although these have been short-lived and marginal. At the beginning of the 21st century, almost all the private initiatives have disappeared.

In 2004, the Belgian Parliament approved a resolution entitled "Access to water for everyone", whereby Belgium adopted the position that water is first and foremost the responsibility of the government so as to guarantee access to water for everyone. The resolution also calls on the European Commission to withdraw their claims to water markets in some countries in the South which have recently been opened to competition via the GATS¹⁶⁾ negotiations.≈≈

11) In Belgium a decree is a law made at community or regional level, in this case the Flemish Region.

12) The legionella bacterium (*Legionella pneumophila*) is responsible for causing legionnaire's disease, which can occur when the bacterium is inhaled via small drops of water such as those produced in a shower or sprinkler installation.

13) A water audit is a detailed analysis of water use, of the roof surface area available for rainwater collection, of the possibilities for the separation of rainwater and wastewater; and an estimate of purposeful use of rainwater in the building, etc.

14) Greywater is the term used to denote water that is not as pure as high quality water used for drinking purposes, but which can still be used, for example, in industry. Households can use lightly contaminated wastewater from baths, showers, washbasins and washing machines after (local) treatment for doing the washing, flushing the toilet, cleaning the house and watering the garden.

15) The programme decree is a decree issued by the Flemish Government containing all the annual measures which they find it necessary to adopt in order to prepare the budget for the following year.

16) The GATS (General Agreement on Trade in Services) agreement is one of the multilateral trade agreements negotiated by the World Trade Organization (WTO) which sets out agreements and obligations in relation to international trade in services. It is intended to liberalize the trade in services, which includes the provision of drinking water supplies. The EU is keen to exploit water markets in other parts of the world, although without fully opening up its own water sector to others.



2/ CURRENT POWERS WITH REGARD TO WATER IN FLANDERS



2.1 THE FEDERAL STATE OF BELGIUM

The border between the Germanic and the Romance cultures runs straight through the middle of Belgium. The official language in the north of Belgium -Flanders- is Dutch and in the south -Wallonia- it is the French. The language divide between Flanders and Wallonia cuts the country, as it were, right through the middle.

The capital city Brussels, in the heart of federal Belgium, is the place where both cultures are present.

Since the constitutional reforms, which began in the 1970's, the language divide has now also become the official border between the regions. Belgium has undergone a peaceful and democratic transformation into a federal state, enjoying a considerable degree of administrative autonomy. This proved to be the best solution to the differences and incompatible visions held by Flanders and Wallonia.

In Belgium a unique form of federalism was created: the country was divided into communities and regions. In the period 1970-2001, the states were gradually given their own government, parliament and their own administration. The central Belgian government was required to transfer more and more powers and financial resources to the regional states and, at the same time, to the European Union.

Belgium is divided into three regions, each of which has strictly defined territorial borders. The Flemish Region and the Walloon Region each consist of 5 provinces.

The Brussels Capital Region consists of 19 municipalities and is a bilingual zone. Each of the three regions has responsibility within its borders for the so-called 'ground-related' or 'hard' issues such as the economy, infrastructure, environment (which also includes water policy) and employment.

There are also three communities: the Flemish Community, which comprises the inhabitants of the Flemish Region and the Dutch-speaking inhabitants of Brussels. The French-speaking Community covers the inhabitants of the Walloon Region together with the French-speaking population of Brussels. Finally, there is also the relatively small Germany-speaking Community. These communities have competence over the so-called 'people-related' or 'soft' issues whereby the services to the population with regard to education, welfare, public health and culture are dependent on the language used.

In order to simplify this complicated structure Flanders opted to combine the parliament and the government of the Flemish Region and those of the Flemish Community into a single Flemish Parliament and a single Flemish Government. Thus in Flanders the same government exercises the powers granted to both the region and the community.≈



Flemish Region



Flemish Community



Walloon Region



French Community



Brussels Capital Region



German Speaking Community



2.3 REGULATIONS AND AGREEMENTS RELATING TO WATER

2.3.1. DRINKING WATER SUPPLY

In Belgium, the municipalities, the regions and the Belgian central government all enjoy powers with regard to the organization of the drinking water supply. How those powers and responsibilities are divided up is stipulated in the constitution, in special constitutional reform acts, and in specific laws, such as the new Municipality Act or the Flemish decree of 24 May 2002 on water intended for human use and the Flemish decree of 6 July 2001 on intermunicipal cooperation.

Since the constitutional reform of 1980 the role of the **federal government** with respect to drinking water supply has been limited to a number of economic items, such as price control and product norms. Before raising prices an application must be submitted to a price index commission. There are also a series of specifications and standards for building products which come into contact with drinking water, spring water and mineral water.

The **municipalities** are responsible for organizing the drinking water supply in their area and may decide for themselves on how to do this. This can take the form of their own municipal services or a municipal company, by means of concessions or by joining an intercommunal company. After 1913, municipalities also had the option of becoming a partner in the NMDW, a semi-governmental organization, which was the predecessor of the current VMW (see also 1.3 *The role of the legislator in defence of the public interest*).

The **Flemish Region** coordinates the regulatory tasks and establishes the framework within which drinking water supply must take place without involving itself in how this is achieved. Under the provisions of the Drinking Water Decree of 2002 the Flemish Parliament gave the Flemish Government the power to act as regulator for various aspects relating to water intended for human use, i.e. water which is used by humans both for human consumption (drinking water) and for industrial and agricultural uses.

The **Flemish Region** mainly limits itself to the issuing of a regulations aimed at protecting public health and relating to the minimum social and other obligations incumbent upon public water suppliers. These public obligations are concerned, for example, with the right of connection to a public water distribution network or the protection of the socially disadvantaged. This includes the right (under the decree of 1996), enjoyed by anyone living at an address with a mains connection, to receive 15 m³ water free of charge per annum.

2.2 THE FLEMISH GOVERNMENT

As a state within a federal Belgium, Flanders has its own legislative and executive authority with considerable exclusive powers in relation to both domestic and foreign affairs. Regional laws (Flemish decrees) are on an equal footing with federal laws. This autonomy gives Flanders the maximum potential to conduct a clear and coherent policy tailored exactly to the needs of the region. In 1980, the environment, water policy and water supply were added to the Flemish powers.

Flanders has 308 municipalities¹⁷⁾ and is divided into five provinces. Every municipality and every province has its own directly elected council and an executive body. The Flemish state has complete legal competence over the municipalities and the provinces, but also grants extensive powers to the municipalities.

The management of the water system is thus entirely in the hands of the Flemish government which regulates the use of the water by means of licences and authorizations and respects all legitimate claims. Supplying the population with water is a high priority in this regard.



Repairing water leak

17) In 1977 the number of Belgian municipalities was reduced from 2,359 to 596 (308 of which are Flemish) by a large scale series of mergers.



The Drinking Water Decree in a nutshell

The Drinking Water Decree was approved by the Flemish Parliament on 24 May 2002. It was intended in the first place to implement the European Drinking Water Directive aimed at protecting public health against the harmful effects of contaminated drinking water. However, the Flemish Drinking Water Decree goes further than this and has evolved into an important framework document for the future of the drinking water supply of which sustainable water management – together with an extensive control on drinking water quality – is one of the key elements.

The provisions of the decree have important consequences for the drinking water supply and the actors involved.

The divisions of tasks and responsibilities remains more or less unchanged. The municipalities are still free to determine how they organize the water supply within their area. Neither the provinces nor the region are entitled to interfere in this decision. The provinces and the Flemish Region still act as watchdogs for the public interest, such as by ensuring compliance with the law and making sure that intercommunal companies act in accordance with their articles of association.

≈ Extensive responsibilities for water suppliers

Under the terms of the decree, the Flemish Government places the responsibility for public service obligations onto the water suppliers. These can cover sustainable water use, social benefits such as the free supply of 15 m³ drinking water per resident, customer-friendliness, environmental protection, the right to mains connection, standard water invoices, cost reduction and the implementation of actions relating to sustainable water use.

On the 1st January 2005, the drinking water companies were given responsibility for treating the water they supply and were authorized to levy a reasonable contribution to the costs involved in this wastewater treatment obligation (see 2.3.3 *Treatment of wastewater*). A water meter is to be installed, at the start of the household network, in every home with a mains connection, by 2007. This will permit an accurate calculation of the costs, which is an essential instrument for arriving at a sustainable water use¹⁸⁾.

≈ Strict controls on drinking water quality

The Flemish Drinking Water Decree¹⁹⁾ extends and tightens the chemical and microbiological quality standards, making them a good deal stricter than before. The decree states that water intended for human consumption is assumed to be healthy and clean, i.e. that it does not contain micro-organisms, parasites or other substances in quantities which might be dangerous to human health. The decree includes an annexe giving a list of microbiological, chemical, and indicator parameters. In accordance with the European Drinking Water Directive, specific standards are applied, inter alia, for the lead content in drinking water²⁰⁾.

In the case of substances and micro-organisms for which no specific standards exist, the general requirement to exercise due care applies, which stipulates that these may not pose a danger to public health.

Another important point with regard to water quality is that from now on this must be measured at the tap and no longer at the connection point to the domestic network (in order to measure possible contamination in the domestic water pipe network as well).

Furthermore, in order to guarantee public health, the decree stipulates that customers using second circuit water (rainwater, surface water, recovered wastewater, greywater and groundwater suitable for low grade applications) are required to lay a separate internal network in order to prevent contamination of the drinking water mains network.

≈ Establishment of an independent regulatory body

The decree provides for the setting up of an independent regulatory body which will assist in the control and regulation of water suppliers. This body will prepare inventories, evaluate, advise and report on, among things, the transparency of the sector, service obligations, investments and the regulations relating to the sale of water. The regulator will also supervise costs and organize benchmark competition. The distribution of drinking water is, by nature, monopolistic as it is very expensive to lay two or more pipeline networks next to each other. Benchmark competition compares the performance of the various companies and provides incentives to companies which perform well.

The aim of this system is to maintain a good-quality service at a low price. It is important for the proper functioning of the system that there are a sufficient number of companies to make a comparison.

18) In the Antwerp region, in particular, the 'tap-counting' method is preferred to the use of water meters. The customer pays a standard charge per tap.

19) Stipulated in more detail in a resolution dated 13 December 2002 on the quality and supply of drinking water.

20) The application of the European Drinking Water Directive for lead content in drinking water means that until the end of 2013 the standard for lead is 25 µg/l and after 2013 this will be only 10µg/l. Transport and distribution pipelines are no longer made from lead, although lead connections do still exist. By 2013, however, all lead branch pipes will be replaced so as to comply with the 10µg/l standard. The domestic installation is no longer the responsibility of the drinking water company, however. It is nevertheless recommended that the lead domestic pipes should also be replaced, as failing to do so may lead to non-compliance with the standard.



2.3.2 WATERCOURSES, SURFACE WATER, GROUNDWATER

Management of watercourses

The [management of harbours and navigable watercourses](#) is the responsibility of the Flemish Region, which is responsible for all aspects of the financing of works.

The [management of non-navigable watercourses](#) is the responsibility of the Flemish Region, the province or the municipalities, depending on the importance of the watercourse concerned. Almost a quarter the total surface area of Flanders lies within the jurisdiction of 104 polder and water control boards. These are autonomous authorities which are responsible for the management of the watercourses in their area. The board members are democratically elected by the landholders (landowners in polder or watercourse). Their activities are financed by their own levies raised from the landholders and by subsidies from the municipalities or provinces concerned and the Flemish Region. The smallest polders or watercourses have an area of less than 100 ha, while the biggest covers an area of 26,000 ha.

Drinking water extraction

Approximately three quarters of the drinking water supplied in Flanders comes from Flanders itself, of which about 51% is produced from groundwater and 49% from [surface water](#). The remaining quarter is imported from Wallonia.

The volume of groundwater which can be drawn in Flanders without causing unacceptable drying out is too small to meet the demand for water. Thus Flanders imports part of its drinking water from neighbouring countries and regions with surpluses. In order to relieve the pressure on the important groundwater reserves in Wallonia, Flemish drinking water companies are increasingly investing in surface water extraction. Certain [surface waters](#) are designated as possible sources of drinking water production. This designation means that approval for activities which could be harmful to the quality of the surface water (such as the release of wastewater or the spreading of manure) is not readily given.

For the extraction of more than 500 m³ per annum [from navigable watercourses](#), a licence is required. For smaller quantities a notification suffices. Licence applications are submitted to the Flemish Region. Drinking water companies are also required to apply for a licence of this kind. The applicant pays a fee in relation to the volume of water extracted. Drinking water companies receive a 50% discount.

Anyone wanting to use [groundwater](#) must submit an official notification or apply for a licence. This also includes drinking water companies.



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For groundwater extractions of less than 500 m³ per annum, the user need only notify the municipality. No charges or levies are payable for small extractions of this kind. All larger groundwater extractions require a licence and the applicant is required to pay a fee. Municipalities are authorized to award licences for extractions of between 500 and 30,000 m³/per annum. Extractions of more than 30,000 m³ require authorization from the province. Moreover, the public must be given the chance to have their say on the scheme by means of a public enquiry and the Flemish Region is required to provide a written opinion.

Every public drinking water company may submit an application to [fence off water collection areas and protection zones](#). The Flemish Region is authorized to grant this after having consulted with the municipalities and the provinces and after the public have been allowed their say by means of a public enquiry. The water collection areas include the area immediately surrounding the technical installations. There are three kinds of protection zones, depending on the distance from the water collection area. In these protection zones, certain activities which might be prejudicial to groundwater quality are prohibited (e.g. maximum permitted quantities of manure).

Measurement network

The Flemish Region has now developed a measurement network to monitor the condition of the [groundwater](#). The Flemish Region measures both groundwater levels and water quality and has also undertaken to construct a measurement network to monitor the quality of [surface water](#).



Pollution of ground and surface water

Policy in Belgium after the Second World War was aimed at rebuilding the economy and restoring industrial production and securing a major increase in agricultural production. Increased production was achieved by mechanization and the application of intensive agriculture. Greater agricultural yields were achieved by the use of artificial fertilizers and pesticides and the use of concentrates as part of intensive cattle farming. However, the artificial fertilizers and manure used resulted in excessive levels of phosphates and nitrates which pollute ground and surface water.

Partly in response to the European Nitrate Directive, Flemish law has placed restrictions on the **spreading of manure** since 1991, involving regulations regarding the quantity of manure permitted and when spreading may take place. These restrictions are intended to reduce the amount of nitrate and phosphate in the soil and the quantity of ammonia in the air. For catchment areas intended for drinking water production, the restrictions for surface water are more stringent than for others.



Waste water treatment plant



Waste water treatment plant

2.3.3. TREATMENT OF WASTEWATER

The **Flemish Region** is responsible for constructing a measurement network to monitor the quality of surface water, drawing up an inventory of wastewater discharges and planning investments in the public infrastructure for water treatment.

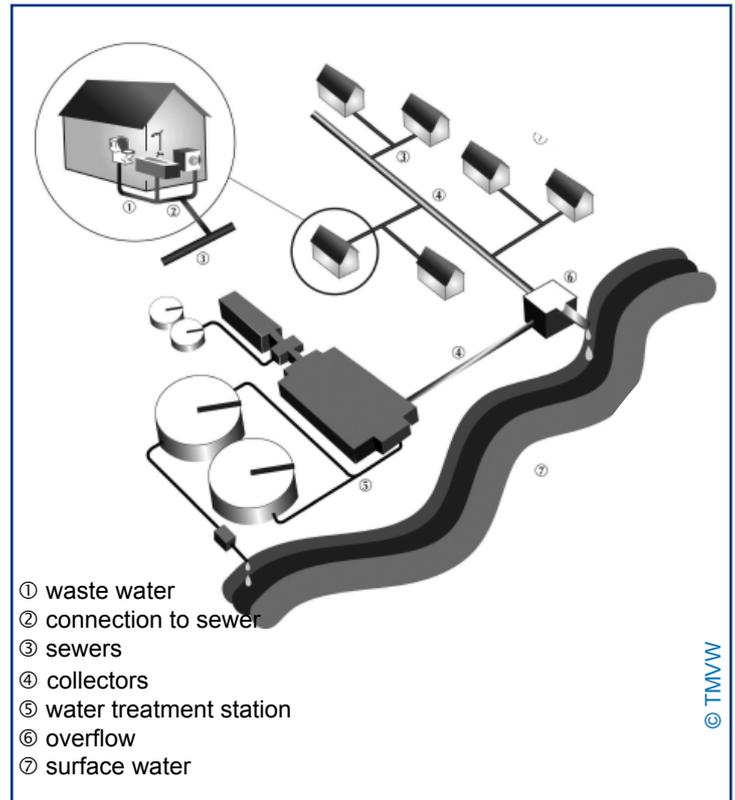
The **municipalities** are responsible for the collection of wastewater in their area. The municipality is responsible for laying and managing the sewers for transporting wastewater to the collectors, from where it has to be led to the wastewater treatment station. The municipalities can obtain subsidies for investment in their sewer network from the Flemish Government. The municipality enjoys complete freedom of choice as to how it wishes to carry out its responsibility to provide sewage services. It may also outsource the management of its sewers to a third party via a public service concession. In this way the city or municipality retains ownership of the assets, but transfers sewer management to a third party. The decision-making authority is left to the municipality.

The treatment of the collected wastewater is a task which falls to the Flemish Region. In 1991, the public limited company "NV AQUAFIN" was set up to take charge of the design, construction and outsourcing of supra-municipal public wastewater treatment. The Flemish Region is the majority shareholder. Aquafin is responsible for implementing water treatment plans drawn up by the Flemish government and is responsible for financing, building and operating the collectors and the wastewater treatment infrastructure in Flanders. Aquafin is paid on the basis of the real costs, as determined by the region, and of a contractually established profit margin. Since its creation, Aquafin has built 101 water treatment stations and renovated 39 existing plants. It has also built 593 pumping stations to transport wastewater to these stations and laid 2,630 km of new collectors at a total cost of 1.9 billion euros up to 2005, and further work to the value of 1.2 billion euros is still at the tendering or design stage.

Until recently, every drinking water consumer paid an environmental tax to the Flemish Region which was intended to finance the treatment of wastewater. As of 1 January 2005, it is now the drinking water companies who are responsible for treating the drinking water they deliver. AQUAFIN's treatment is therefore now paid by the drinking water companies.

Both the operating and investment costs are passed on to the drinking water companies, which in turn levy a reasonable (treatment) contribution from the drinking water users they supply. The consumer thus no longer pays an environmental tax to the Flemish Region, as in the past, but instead pays a treatment contribution via his or her drinking water invoice. The municipalities are also entitled to add on their own charge for their sewers based on the number of cubic metres of water used (the sewage tax). The customer's water invoice thus gives an integrated price per cubic meter. In this way, the consumer pays a more realistic proportion of the cost price of the water used and is thus encouraged to use drinking water more sparingly. In addition to the contribution of the municipal portion, the Region also pays a bridging subsidy so as to avoid an increase in the overall invoice to the consumer.

The Flemish Government monitors and regulates the amount of money charged by the drinking water companies.



Waste water system

2.3.4 INTEGRATED WATER RESOURCES MANAGEMENT

Flanders has already achieved a great deal in the area of water management. Not only has it provided an outstanding drinking water supply since the Middle Ages, but it has also made major efforts with regard to extending its canal network and the draining of marshland so as to render it suitable for agriculture.

Although the standard of living in Belgium is one of the highest in the world, the Flemish water management authorities are still faced with a number of problems. Undesired flooding, mainly as a result of poor environmental planning, is still frequent; water quality is far from optimal due to the extremely high population density²¹⁾ and effects of intensive agriculture; and there is exhaustion of groundwater reserves in some places, which is mainly due to extracting high quality groundwater for low grade industrial applications. The most important causes are: extensive industrialization, the high population density, the piecemeal approach of the water management authorities and the limited interaction with other policy areas.

At the end of the 20th century Flanders began to approach its water problems in an integrated manner. At the beginning of the 21st century the first steps have been taken but there is still a long road ahead of us.

Towards integrated water resources management

Integrated water resources management sets out to achieve a better match between the management of the water quantities, water quality and human and animal activities in and around the water. It aims at a sustainable and lasting approach to the pollution and loss of watercourses, the exhaustion of groundwater layers, of drought and water nuisance.

The geographic units best suited to the achievement of this objective are river basin districts, basin and sub-basin districts.

The concept of "integrated water resources management" dates from the early 1990's. It was also around this time that the first basin committee²²⁾ was set up in Flanders and other basin committees were to follow in the years thereafter. The idea behind these basin committees was to promote consultation between the various bodies responsible for the different aspects of water management and with the authorities responsible for other policy areas. These committees were also a first attempt at creating cross-border consultation between municipalities and provinces which belong to the same river basin. The basin committees did not however have official statutes or task profiles.

21) Flanders has 431 inhabitants per km².

22) Of the river Demer.

Integrated Water Policy Decree

In 1994, an initial attempt was made to formulate a decree on integrated water policy, but this did not become a reality until 2003. Its first implementing order followed in 2005. The Integrated Water Policy Decree strives towards a more purposeful approach to water policy, which, in Flanders, is spread across various policy areas and administrative levels. The decree represents the transposition of the European Framework Directive on Water into Flemish law (see 2.3.5 *International directives and agreements*).

In the decree, the water basin system forms the basis of the integrated water policy. River basins and river basin districts are the European geographic units of the water systems. Flanders falls between two river basin districts, those of the Maas and Schelde.

Consultation bodies were set up at each level (international river basin, basin, sub-basin districts) which are responsible for drawing up a water management plan for the level concerned. These plans are to be revised every six years. The aim is to create an intense cooperation between all the administrative and management services at each of these levels for the organization of water policy. The [Coördinatiecommissie Integraal Waterbeleid](#) (Integrated Water Policy Coordination Commission, or CIW)²³⁾ is responsible for coordinating everything at Flemish level and monitors policy coordination between the various policy areas and administrative layers. Civil servants prepare the water management plans, while elected representatives at regional, provincial or municipal level can provide their input on the final content. Before the sub-basin management plan, basin management plan and river basin management plan receive final approval, the public is also informed and given the opportunity to have their say, while advice will also be sought from social interest groups.

The decree also introduces the principle of [the water test](#). A licence is required for all planned building work in Flanders. The water test, to be conducted prior to the award of each licence, is intended to avoid building work having a prejudicial impact on the water system by making it impossible for contractors to build in flood zones, for example. The water test also ensures that provisions are made for the temporary storage of rainwater where large surfaces are hardened.



23) www.ciwvlaanderen.be



2.3.5 INTERNATIONAL DIRECTIVES AND AGREEMENTS

European Directives

The European Union plays an important guiding role in terms of the national legislation of the various member states. Since 1975, the European Parliament has been issuing directives which the member states have to transpose into national legislation. When a member state fails to transpose the directive into law on time, or does so incompletely or incorrectly or not as it was intended, the European Commission initiates legal proceedings against the member state concerned. If the European Court finds against that member state, it can be required to pay a fine or a non-compliance penalty. These directives thus have the effect of partially shifting the decision-making centre from national to European level.

The following directives affect Flemish water policy.

The **Nitrate Directive** which is intended to protect ground and surface water against pollution caused by nitrates from agricultural sources.

The **Urban Wastewater Directive** concerns the treatment of all domestic wastewater.

The **Drinking Water Directive** sets out to protect public health against the harmful effects of pollution. It stipulates the conditions which water must meet to permit its supply to the consumer as drinking water.

The **European Drinking Water Directive** (98/83/EC) on the quality of water intended for human consumption is the basis of current Flemish drinking water policy. It replaces the European directive 80/778/EEC which was the first directive to establish quality standards and control regulations at European level.

The **European Framework Directive on Water** (2000/60/EC), which has been in effect since December 2000, grew out of the awareness that water needs to be protected, not only as a resource which is vital to sustaining human life, but also as part of an ecosystem consisting of soils, fauna and flora. The prime objective of this directive is to safeguard water reserves and the quality of river basins in the long term.

The directive starts from the position that the **river basin** is the most efficient level at which to formulate water policy and to manage water. Within the river basin, all those involved in determining water policy must be consulted and in the case of a cross-border river basin, this must be done on an international basis. In the river basin, all authorities, social sectors and target groups work together on a common vision and tackle the water problems in the river basin together.



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The directive puts forward specific **objectives** with regard to the quality of surface and groundwater so that the evolution of the water condition and the effectiveness of water management can be quantitatively tested. In order to permit this testing, the directive provides for thorough studies of the existing water condition in each river basin, including studies of the human impact on the water condition and an economic analysis of water use. All member states are required to create a measurement network in order to carry out this monitoring. The member states are also required to draw up a management plan and a programme of measures for each river basin, in accordance with the framework set out in the Framework Directive. In order to recover the costs of implementing the Framework Directive on Water, the member states have to establish a pricing policy based on the principle that the polluter pays. It is hoped that this will motivate users to use water more rationally. Each member state must report regularly on the implementation of the directive and the current state of affairs to its own citizens, the European Commission and to the other member states involved.

All member states were required to have transposed the Framework Directive on Water into national law before the end of 2003. In Flanders, the Framework Directive was transposed into the Flemish decree Integrated Water policy of November 2003 (see 2.3.4 *Integrated Water Resources Management*).



Worldwide agreements

Worldwide agreements play a steering role for water policy at all levels.

The protocol on water and health approved in 1999²⁴⁾ was ratified by a sufficient number of countries world-wide (Belgium also) in May 2005 and has been in force since 4 August 2005.

The protocol is the first multilateral legislative instrument for the prevention and control of water-related diseases by means of an improved and harmonized water supply and water management.

The implementation of the protocol is supported by the World Health Organization (WHO) and the European Economic Commission of the United Nations (UNECE). The protocol is regarded as an instrument which contributes to the achievement of the Millennium Objectives (see below) and promotes a holistic approach in order to prevent, control and reduce water-related diseases. The protocol sets out to achieve these objectives by providing safe drinking water, the installation of adequate sanitary services, and protecting springs on a river basin basis. It has subsequently been signed by 35 countries, among which Belgium.

Other important international agreements are those announced by the UN in September 2000 in the eight Millennium Development Goals (MDGs) to combat poverty and hunger and to improve education, health care, the status of women and the environment.

All governments have promised to work together to achieve these objectives by 2015.

The seventh objective includes the goal of halving the number of people without access to safe drinking.

A similar water-related declaration was also made by heads of state and government leaders from the entire world at the World Summit on Sustainable Development held in Johannesburg in 2002. Among other things, this included an objective with regard to water and sanitation: to halve the number of people without access to safe drinking water and basic sanitation by 2015 at the latest.



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24) The protocol is in line with the Convention on the protection and use of transboundary watercourses, and international lakes (Treaty of Helsinki) which came into effect on 6 October 1996.



3/ CURRENT ORGANIZATIONAL STRUCTURES OF THE DRINKING WATER SUPPLY IN FLANDERS

3.1 CURRENT ORGANIZATIONAL STRUCTURE

The organization of the drinking water supply in Flanders is characterized by a great diversity in terms of the forms and structures of management: regional companies, intercommunal companies, municipal companies and concessions. A constant in all these forms is the supervisory role of government.

Drinking water supply in Flanders is currently divided up between the VMW, eight intercommunal companies and seven municipal companies.

3.1.1. INTERCOMMUNAL COMPANIES²⁵⁾

The decree on intermunicipal cooperation of 6 July 2001 regulates the organization of the partnerships between Flemish municipalities. Intercommunal companies can take the form of a public limited company, a cooperative partnership or a non-profit organization.

There are currently eight intercommunal companies operating in Flanders which together are responsible for around 66 % of the drinking water supply.

The following organizational structure applies to the organization of the intermunicipal cooperation between Flemish municipalities.



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Management

A **board of directors**, consisting of representatives of the municipal partners, administers the intercommunal company, while a management committee looks after the day to day running and an auditor supervises the accounts.

The supervision by the Flemish Government is exercised by a government supervisory director who reviews all documents and decisions. He or she may suspend decisions in cases where the public interest is prejudiced, laws are infringed or where the intercommunal company acts contrary to the articles of association. The Flemish minister for internal affairs has the ultimate power of supervision.

The **general meeting**, composed as per the articles of association, represents all the partners and has the ultimate right of decision in all important matters. The composition of the general meeting is established by the articles of association and must be convened at least twice a year. The members of the general meeting are municipal representatives who report to the municipal council and are thus subject to public scrutiny and supervision. Some of the larger intercommunal companies have also set up **regional advisory committees** to boost the information flow to their partners. The members of the advisory committees are appointed by the municipal partners in proportion to their number of inhabitants. The regional advisory committees can also put questions to the board of directors or demand inquiries.

25) The term 'intercommunal companies', as used in this booklet, refers to "intermunicipal partnerships" as described in the decree of 6 July 2001 on intermunicipal collaboration. In practice these two terms are used interchangeably.

Financial structure

The **share capital** of the intercommunal companies is made up of contributions from the partners in the form of cash and users' rights. The partners also contribute intangible assets such as experience and qualifications. The articles of association stipulate how the various types of shares are to be divided up and how the dividends due to shareholders are to be calculated. The profit can be paid out to the partners or held back. The partners may subscribe to increases in share capital of the intercommunal companies should these occur. In return, they may receive additional shares, generally with a fixed remuneration. Money paid out to the partners may take the form of a fixed percentage per share or may be related to operational results.

Supervision by the municipalities

The decree of 6 July 2001 on intermunicipal cooperation strengthened the role of the municipal councillors as representatives of the population with respect to companies acting under the instructions of municipalities. Specifically, the municipal council has a deciding role with regard to the admission of new members, amendments to the articles of association, general meetings, nomination of candidates for directorships, inspection of the minutes with the obligatory participation by the councillors from the opposition and reporting to the municipal council.

Operation

Some intercommunal companies operate both production and distribution on their own account. In this case they own all the installations themselves. In some cases, however, the municipalities only own the distribution network. In that case, the municipality can operate the distribution itself, join a "distribution intercommunal company" or they can have the "production intercommunal company" operate the distribution under their instructions.

Range of services

The original objectives of these intercommunal drinking water companies was the study, establishment and operation of all installations necessary for the public drinking water supply. Since then, a number of intercommunal companies have evolved into integrated water companies, offering a diversified range of services.

3.1.2. VLAAMSE MAATSCHAPPIJ VOOR WATERVOORZIENING (VMW)

The Flemish Water Supply Company (Vlaamse Maatschappij voor Watervoorziening) is a Flemish public institution and is the most important drinking water company in Flanders. It is a Flemish public company with the Flemish Region, the provincial authorities of East and West-Flanders, Flemish-Brabant and Limburg, and the municipal members in these provinces as sole shareholders. It has a central executive board and four regional executive boards responsible for the operation of drinking water supply in the four provinces.

The regional executive boards ensure drinking water supply to users in their area. They are responsible for the daily production and distribution of drinking water and for ensuring proper functioning and maintenance of all infrastructure used in the production and transport of drinking water, including control of users' mains connections.

3.1.3. MUNICIPAL COMPANIES

In a small number of cities and municipalities the production and/or distribution of drinking water is in the hands of a municipal company. These companies enjoy financial and technical autonomy but are not legal persons in their own right. They rather come under the legal personality of the municipality. The setting up of municipal companies with legal personality has, however, been permitted since 1995.

These municipal companies are run by a board of directors and a management committee, whose members are appointed by the municipal council and the board of directors respectively. The majority of the members of the board of directors must consist of members of the municipal council.

3.1.4. CONCESSION

A concession is a contract signed between a public administrative authority and a legal corporation with a private or public character. The concession entrusts the operation of a public service to a private organization under a series of conditions set out in the deed of concession. If the public interest so requires, the concession-awarding authority can withdraw the concession and/or amend the conditions of the concession unilaterally. In this event the concession holder may be entitled to compensation.

The history of the Flemish drinking water supply shows that concessions were rarely awarded to private companies in the past and that this now no longer even exists.≈≈

3.2 PUBLIC OR PRIVATE SERVICE

Most Europeans receive their drinking water from a public company. Private companies dominate water supply in only two member states: in the United Kingdom (88%) and France (75%), although the activities of private companies are not inconsiderable in Spain (37%) and Germany (18%). On a worldwide basis, an estimated 10% of the water management is in private hands. A small number of such enterprises dominate the water market. The biggest and best known are the French "Ondeo" (formerly Suez Lyonnaise des Eaux), the French "Veolia" (formerly VIVENDI) and the German "RWE". Other major enterprises operating in the market are: Severn Trent, Bechtel, Biwater, Bouygues/Saur, US Water, Anglian Water, and the Kelda Group.

Water is one of the most valuable commodities. The lack of a sufficient supply of pure water serves to increase its value even more, a fact which has not gone unnoticed by the multinational water companies.

According to the World Bank and most international organizations, the private sector - with its capital, technical know-how and management expertise - is the actor best suited for the achievement of the Millennium Objectives. They also take the view that private companies are able to operate more efficiently, thereby reducing the cost price of water.

The World Trade Organization (WTO) fully supports the liberalization of the service sector. Countries can opt for liberalization on a sector by per basis. The GATS agreements cover the cross-border liberalization of service provision within the WTO. After education, public transport, the health care, gas and electricity supply it is now the turn of water supply to be liberalized.

A heated debate is raging abroad over the pros and cons of public versus private drinking water supply.

Community-based organizations in the North, with organizations such as 11.11.11²⁶⁾ and PROTOS in Belgium, and community-based organizations and governmental authorities from the South warn against this privatization of water. They recognize that an efficient water supply system costs money and that water cannot therefore be supplied to everyone free of charge and that many public sector water distributors by no means excel in the areas of efficiency or openness.

However, they are concerned that multinational enterprises are primarily interested in the water market in the big cities where profits can easily be made, with the risk that rural areas may be forgotten and that water is in danger of being subjected to market laws of supply and demand.

Moreover, studies show that private companies are not necessarily more efficient than other forms of management. Abuses and corruption are to be found just as much in the private sector as in the public. In many cases privatization is followed by massive increases in price of water. Disastrous private management in Bolivia, the Philippines and Argentina, for example, are ample illustration of the risks of putting water management into the hands of the private sector. Bolivia is a case in point, where a 300% rise in the price of drinking water led to large scale popular revolts.

There are, however, alternative ways of managing the drinking water sector via public or public-private systems. It is very important that local authorities in the South are allowed to decide for themselves as to what they regard as most efficient way to achieve this and that they retain control over the management of this valuable commodity.

Public and private sector collaborations generally take place by means of concessions of between ten and thirty years. Such concessions consist of a contract whereby the government outsources the management of the drinking water distribution network to a private company. The company concerned either pays a fee for the concession right and is allowed to keep any operational revenues or – alternatively – it may charge all its costs, including management costs to the governmental authority concerned. In some cases the governmental authority continues to own the infrastructure and in others it does not, which brings with it a lesser or greater dependence on the private sector partner.

There is now a consensus in Belgium that water is a communal asset and that it ought to remain in public hands, as can be seen from the water resolution "access to water for everyone", approved on 14 April 2005 by a plenary session of the Belgian Parliament.

After a campaign by 11.11.11, this resolution was supported by many Flemish municipalities (60%) and provinces (80%).

Among other things, this resolution requests that representations should be made to the European Commission to withdraw the 72 questions for liberalization of the water supply included in the GATS negotiations.

The organization of the public drinking water sector in Belgium can in any case serve as a model for a successful drinking water supply.≈≈

26) The umbrella organization of the Flemish North-South movement.

3.2.1 THE NETHERLANDS: A PUBLIC MODEL WITH BENCHMARKING²⁷⁾

The Netherlands has a large number of organizations and structures, many of which are centuries old, which can be regarded as contributing to the “Netherlands – water land” concept. The organization of the water management in the Netherlands was originally entrusted to a series of water boards which now constitute the lowest administrative tier. Since then, the trend has been towards ever-larger regional partnerships.

In the 19th century, the Rijkswaterstaat (Department of Waterworks) was set up to supervise the water boards and to assume responsibility for the major rivers and Dutch maritime waters. Groundwater is formally the responsibility of the provinces and this is something which has gained increasing recognition in recent decades. For a long time, drinking water supply was left to private initiatives and was only taken over by the state in the course of the twentieth century. Where there were no private initiatives, the state set up mains water companies.

The severe water pollution in the 19th century resulted in the outbreak of large scale epidemics, which, in turn, persuaded municipalities to lay sewage systems. The responsibility for wastewater was, just as in the case of sewers, in the hands of the municipalities. The laying of sewers together with an insufficient investment in water treatment led to a further decline in the quality of the surface water. Algae bloom and fish mortality led to the creation of the Law on the Pollution of Surface Water in 1970, which placed the responsibility for the treatment of wastewater with the provinces. All the provinces have subsequently entrusted the implementation of this function to the water boards, which have built wastewater treatment plants, resulting in an enormous improvement in the quality of the surface water in the Netherlands. This historical development has been a determining factor in the organization of both management and policy in the water sector.

Given that the public drinking water supply is a public responsibility, measures are now being taken to prevent privatization. Mains water companies which produce drinking water and then distribute that water via the mains network, remain in state hands. A bill has been prepared to be placed before the Dutch parliament to keep the sector in public hands.

The most important arguments put forward in support of the bill are the fact that the sector works well as it is; the negative experiences with privatization in France and in England & Wales; and the particular characteristics of good quality water.

Various parties supervise drinking water quality and water charges. Given that the drinking water sector has not been privatized, there is no market for drinking water in which providers compete. Large scale users (100,000 m³/per annum), on the other hand, are allowed to negotiate with drinking water companies regarding the quality of the service and the prices to be charged for that service, as the market for large scale users has been decontrolled.

At present, water charges are controlled by the shareholders of the drinking water companies (municipalities and provinces). As part of the revision of the Mains Water Supply Act which is currently underway, the government wishes to replace this decentralized supervision with a system of centralized supervision.

Monitoring of water quality is conducted by the Rijksinstituut voor Volksgezondheid en Milieu (The National Institute for Public Health and Environmental Protection, or RIVM) and reported to the environmental health inspectorate of the Ministry of Housing, Regional Development and Environmental Management (VROM), whose responsibilities include environmental management.

The Dutch drinking water sector makes repeated use of benchmark²⁷⁾ studies. The first such study created more transparency in the sector and many companies carried out large-scale reorganizations after major differences with regard to efficiency were revealed. The government now wishes to include provisions in the revised Mains Water Supply Act, which will oblige all mains water companies to participate in benchmark studies. Over the years, there has been a tendency for operations to be undertaken on an increasingly large scale, which has resulted in a sharp reduction in the number of water companies in recent years. This upsizing allows water companies to operate more effectively in both national and international projects and partnerships and, above all, permits them to follow a more demand-led approach. Partnerships between sewerage, wastewater treatment and drinking water companies are increasingly common.≈

27) Benchmarking involves comparing the performance and underlying processes of an organization and improving this performance using 'best practice' (the benchmark) as a target.



3.2.2. ENGLAND AND WALES: A PRIVATE MODEL WITH STATE REGULATION

The current structure of the water sector in England and Wales is largely the result of two major reforms in 1973 and 1989, respectively.

In the early 1970's, the British government came to the conclusion that the water sector was too fragmented and not efficient enough. At the time, water services were provided by more than a thousand public (largely municipal) bodies and a handful of private companies. The government thus decided to embark on a radical reform programme, based on the concept of integrated river basin management, set out in the Water Act of 1973. In 1974, ten public water companies were set up, known as Water Authorities, each of which was responsible for the management of a single river basin. The public water companies then bought the municipal water services. In areas without private water enterprises, the public water companies were responsible for the production and the distribution of drinking water, as well as the collection and treatment of wastewater. The drinking water and wastewater sectors were thus institutionally integrated.

In the remaining areas, private companies known as Statutory Water Authorities or 'water only companies' were responsible for (part of) the water distribution, while water production and wastewater treatment was carried out by the public water companies, which were also given regulatory responsibilities in areas such as environmental protection and environmental and flood hazards. With the exception of those areas where private water companies were already operating, the public water companies thus received what was tantamount to a regional monopoly.

Upsizing and integrating the services provided were the keynotes of the reorganization of 1974. The role of private companies was restricted to water distribution and they were subject to regulations setting their profit margin at a maximum of 5%. The 1974 reform did not prove a great success, however, and both the public and the private water companies came up against severe financial problems. The public companies were dependent on the government for capital and the possibilities for external financing were limited. The Water Authorities proved themselves capable of surviving with the financial resources available, but, as time went by, it became apparent that this was at the expense of the service provided and was achieved by postponing what were often essential investments.

The private drinking water companies were regulated, but they too had to make major cuts in costs at the expense of the service provided and investments.

In the mid 1980's, it became clear that more investment was urgently needed in the water sector, but the government was not prepared to finance these investments. In 1989, the water sector was privatized so that the companies would be able to attract sufficient financial resources via the capital markets.

There were already plans afoot for privatization of the water companies as early as 1984, but these had to be shelved due to strident public protests and the run-up to 1987 general election. After a Conservative victory at the polls, the public regional water companies were privatized under the terms of the Water Act of 1989. The public water companies and all their assets were offered on the stock market in almost exactly the form which they had been given in the 1970's. Only the regulatory tasks were transferred to other bodies. In order to make the companies more attractive to potential buyers, the government remitted their debts to the tune of £4.5 billion and provided an additional £1 billion of government money, and the companies were also excepted from corporation tax for a period of ten years. The government did the same with the Statutory Water Authorities, which were already private. Their debts were not remitted, however, nor did they receive any financial support or an exception from taxation. All water companies were awarded a 25 year concession for the water production in their region with a 10 year notice period. The regulatory tasks were transferred to four government bodies which assumed responsibility for the supervision of the water prices, environmental aspects, quality requirements and takeovers and mergers.

Opinions differ with regard to the achievements of the English water market. It is a fact that investments declined, which was not the intention. There was also a sharp increase in the number of households being cut off and the average rise in the annual invoice for the supply of drinking water and the drainage of wastewater in the period 1989/90 to 1998/99 was 102 % in nominal terms and 46% in real terms. On the other hand, however, because production costs declined and the capital costs rose only moderately the higher prices charged resulted in an increase in profits.≈≈



3.3. THE PRICE OF DRINKING WATER AND SOCIAL ASPECTS IN FLANDERS

In Flanders, drinking water companies are required to submit their proposed charges to the charges commission of the Ministry of Economic Affairs, on which representatives of trade unions and consumer organizations also sit.

Which company supplies your drinking water depends on where you live and prices differ considerably between the various drinking water companies. You can't choose your drinking water company, however. Identical use for a family of three persons of 135 m³ per annum might result in a total invoice of around 400 euros with one company and 280 euros with another. The price difference is primarily due to local availability of water.

By law, every resident with a mains drinking water connection receives the first 15 m³ mains water (per annum) free of charge, which amounts to around forty litres of water per person per day and is more than enough for drinking purposes. If one uses more than 15 m³, one pays for it. The charge is based on use categories. For normal domestic use, the charges go up the more one uses. Other costs involved are the one-off drinking water mains connection and the fixed annual subscribers fee. This charge system is intended to encourage rational and sustainable water use.

A different charge scale is applied to large-scale users and here the opposite principle is applied: they pay less for using more.

Drinking water invoices have risen sharply since 1 January 2005, as a contribution is now charged for the treatment of the water which we pollute, the so-called treatment contribution. In this way the user pays a more realistic contribution to the total cost of the water he or she uses.

In addition to social allowances, a discount is also offered to families which treat their own wastewater. If there are no sewers on their street and no specific plans to provide sewage infrastructure, these families are required to treat their own wastewater, which can be done using a small, individual treatment installation.

Some companies offer a discount to water users who actively help in this way to avoid overburdening the sewage system, by, for example, laying an infiltration installation in their garden or by installing a 'green roof'²⁸⁾. There are also a number of allowances for those with financial difficulties, such as discounts on the mains connection price, exemptions from the subscriber's fee and/or the treatment contribution.

In theory, a non-paying customer can be disconnected from of the mains water supply via the intervention of a municipal body known as the Local Advisory Committee (LAC). In practice disconnection is only considered in case of manifest refusal to pay on the part of customers unable to adduce any social or financial reasons for their non-payment.≈



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28) A green roof is a roof covered with plants. The plants are chosen for their resilience to diverse weather conditions such as frost, heat and wind.



4/ LESSONS

4.1 SUCCESS FACTORS

In the period up to 1850, the situation with regard to drinking water supply and sanitation in Belgium and Flanders was dire. However, from 1870, large amounts of money were invested in the production and distribution of pure drinking water. The result was an explosive growth between 1870 and 1920, principally affecting urban areas.

The history of the drinking water supply in Flanders permits us to point to the following success factors:

- National policy was aimed at providing every Belgian with healthy drinking water at a reasonable price; private participation was not prohibited, but was subject to severe restrictions.
- Responsibility for water supply was given to the municipalities and municipal initiatives were encouraged by the creation of a legal framework to oversee these activities.
- Central government established its own company - the Nationale Maatschappij der Waterleidingen – to support municipalities which lacked the resources or know-how to organize their drinking water supply on their own.
- The technological advances which permitted the distribution of drinking water under pressure using cast iron pressure pipes led to a spectacular expansion of the drinking water mains network.
- Economic development provided financial resources which could be deployed for the further expansion of the drinking water supply.

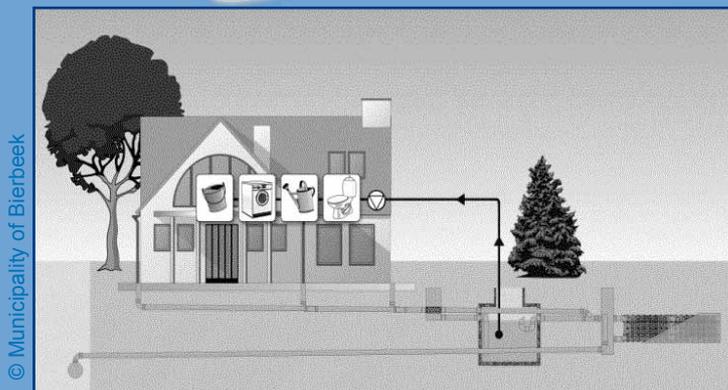
4.2 WHAT COULD HAVE BEEN DONE BETTER

Despite the giant strides made from 1850 onwards, a number of major failings can be identified, which are now costing us huge sums of money in cash and jeopardize, to a greater or lesser degree, the sustainability of our water supply, the quality of our environment and, in consequence, our health. Countries wanting to improve their drinking water supply and treatment should take note of these possible snags.

Different systems for drinking water, rainwater and greywater

Severe restrictions apply to the pumping up of groundwater, which, in some parts of Belgium, forces agriculture and the industry to use drinking water to meet their water requirements. The quality of our drinking water is, however, far too high for applications such as industrial cooling, sprinkling in greenhouses or initial rinsing of vegetables. Moreover, we also use drinking water to flush the toilet in our own homes, to wash the car or to fill swimming pools. Of an average water use of 120 litres per person per day, less than a third need comply with the highest quality standard. Water used to flush the toilet (WC²⁹⁾, to wash the car or to fill the swimming pool does not need to be so pure. Flushing the toilet uses forty litres of drinking water per person per day! A large number of toilets in Flanders are now being connected up to rainwater supplies.

Laying a **double supply system** should be considered where possible, even though the investment involved is expensive.



Re-use of rainwater

29) WC stands for 'water closet', a toilet with water flushing.

Separate drainage of rainwater and wastewater

If the opportunity to do so arose, we would definitely change our policy for the drainage of water and the treatment of wastewater.

Before 1980, little effort was made to treat wastewater. We used drainage ditches, brooks, rivers and streams as sewers with result that a number of rivers were “dead” with regard to aquatic life.

Discharge responsibilities, the increased monitoring of discharge points and the drawing up of stringent conditions for obtaining or renewing company operating licences have steered industry towards treating its own wastewater.

The European Directive on urban wastewater led the Flemish Region to set up the public limited company Aquafin NV, on 21 April 1990, which is responsible for the treatment of surface waters in Flanders. In 1990, more than 70 % of the homes discharged wastewater directly into watercourses. In 2005, this was less than 40%.

The target is for a connection level of more than 90%. Our rivers and streams are indeed a lot cleaner now than they were, but there is still more to be done. In the past four years, no noticeable improvement in water quality has been observed, with the result that we are at the bottom of the European ranking. The problem of the highly polluted silt deposits on the beds of our waterways will haunt us for decades to come.

Much too much pure rainwater ends up in the sewers, resulting in a sharp decrease in wastewater treatment efficiency. Furthermore, heavy rainfall leads to problems of flooding and pollution in places where these sewers discharge excess water.

Just as in the case of water supply, every building and every hardened surface should have two parallel drainage systems: one to transport heavily polluted water to the water treatment station, the second to take rainwater directly to nearest watercourse.

At the beginning of the 20th century, some Flemish cities did use a small-scale double supply system for drinking water and greywater (slightly contaminated water). However, a combination of frequent infringements by consumers during building work and the lack of municipal resources for effective supervision led to the abandonment of this system.

In the last few decades, there has been a proliferation of initiatives and projects aimed at encouraging the use of “grey” water. The production of useable greywater does require some treatment, however. Once (local) treatment has taken place, this water can be used for doing the washing, flushing the toilet, cleaning the house and watering the garden. For industrial purposes, drinking water companies offer partly treated greywater to large-scale industrial users. This practice is much more common in the Netherlands than in Belgium, however.

The most viable application is local water supply with rainwater. This system is ideally suited to domestic applications where the volumes of water required are not very large. All new houses are now required to be equipped with installations for rainwater collection and there are (financial) incentives to encourage the use of rainwater for flushing the toilet and watering the garden. However, the rainwater tank can run dry in periods of low rainfall and this is exactly when drinking water is also at its most scarce.

The collection and the use of rainwater is also indicated for industrial or agricultural applications where large concrete or asphalt surfaces are available.



Reed land for household wastewater treatment

Limiting the extraction of groundwater

Until the end of the twentieth century, too little attention was paid to the limited availability of groundwater and far too much water was extracted from the ground. In some places, this led to a sharp drop in the groundwater level, with a possible decline in water quality as a result. Reduction in use may permit a rapid recovery of the water level, but the restoration of water quality takes much longer, however. Setting up a system for monitoring the level and quality of the groundwater in good time, is of big importance.

Greater emphasis on integrated water management

The economic development of Flanders has resulted in the execution of engineering and building projects which have had lasting influences on our water system. Since the Middle Ages canals and rivers have been straightened and widened to facilitate waterborne transport and to ensure that water flowed into the sea as quickly as possible. Marshlands were drained so that they could be used for agricultural purposes. More and more green areas were built on to provide office buildings, car parks, homes and other buildings. Even areas which in the past were considered unsuitable for building on, such as natural flood plains, have been exploited for construction.

These projects have contributed to the achievement of the standard of living which Belgians now enjoy. We have also repeatedly pointed out throughout this booklet that the expansion and development of the drinking water supply would probably not have been possible without the economic development which Flanders and Belgium have undergone. Yet there is also a less positive side to all this. The presence of extensive hardened surfaces prevents water from entering into the soil. This overly rapid drainage is exacerbated by our wide and straightened watercourses, which in turn adds to the flood problems encountered in areas located further downstream. The limited infiltration, the draining of marshlands and the rapid run-off also lead to the destruction of a large number of ecosystems which require wet environments. In order to keep these harmful side effects to an absolute minimum, it is of vital importance that economic development should try to treat the water system with as much care as possible. The principle of integrated water resources management is an essential approach in this regard (*as explained in more detail in 2.3.4. Integrated water management*).



Flooding

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Eradicating price differences with a “virtual drinking water bank”

Significant differences can be observed in the price per cubic metre which the user pays for his or her water in Belgium and Flanders, depending on which company he or she is served by.

The main reason for this price difference are the location of the water source (and therefore also of its purchase price), the initial quality and the quantity available. A hypothetical ‘drinking water bank’ ought to be created into which all the water produced goes and from which companies can buy water for storage and distribution. This would result in a more uniform end price and also immediately create an egalitarian price for everyone. ≈



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5/ CONCLUSION

When it was realized, around 1850, that improved hygiene and pure drinking water could do something towards preventing the causes of diseases and epidemics related to contaminated water, the drinking water supply in Flanders was taken thoroughly in hand. The government realized at quite an early stage that it had an important role to play in supplying the population with pure drinking water at socially acceptable prices.

By combining the forces of the municipalities in intercommunal structures, huge advances were made in the construction and management of the drinking water systems. The inter-communal management model based on democratic control and the participation of municipal representatives can serve as an example of sound management and good service. Large scale drinking water networks were indicated in Flanders because of its very high population density. For sparsely populated rural or semi-urban areas, however, other systems are more appropriate.

Nevertheless, the pollution of surface and groundwater as a result of heavy industrialisation and intensive agriculture was dealt with much too late in Flanders. Consequently, it will still take a number of years more to undo the damage and to return to an acceptable environment.

In recent years Flanders has converted the main thrust of the European framework directive on water into a series of specific initiatives by which integrated water resources management based on river basins has become a reality.

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Mr Bart De Bruyne, acting director of communications of the Vlaamse Maatschappij voor Watervoorziening.

Mr Christian Legros, director of Belgaqua, the Belgian water sector federation.



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INTERCOMMUNAL DRINKING WATER COMPANIES IN FLANDERS IN 2006

- AWW Antwerpse Waterwerken - www.aww.be
- BIWM Brusselse Intercommunale Watermaatschappij - www.biwm.be
- IMVV Intercommunale Maatschappij voor Watervoorziening in Vlaanderen - www.imvw.be
- ISWa Intercommunale Samenwerkingscomité van Waterbedrijven - www.iswa.be
- IWVA Intercommunale Watermaatschappij van Veurne-Ambacht - www.iwva.be
- IWVB Intercommunale voor Waterbedeling in Vlaams-Brabant
- PIDPA Provinciale en Intercommunale Drinkwatermaatschappij der Provincie Antwerpen - www.pidpa.be
- TMVV Tussengemeentelijke Maatschappij der Vlaanderen voor Watervoorziening - www.tmvw.be

BRIEF OVERVIEW OF THE LEGISLATION

- *Law of 18 August 1907 on the associations of municipalities and private persons for the establishment of water provision services, rescinded by the law of 22 December 1986 on the intercommunal companies, rescinded by the decree of 6 July 2001 on intermunicipal cooperation.*
- *Law of 17 January 1938 on the regulation of use by public authorities, associations of municipalities and concession holders of public services or services of public utility, of the public domains of central government, the provinces and the municipalities, for the laying and the maintenance of pipelines with special reference to gas and water pipelines.*
- *Decree of 28 June 1983 regarding the establishment of the Flemish Water Supply Company.*
- *Decree of 20 December 1996 for the regulation of the right to a minimum supply of electricity, gas and water.*
- *Decree of 6 July 2001 on intermunicipal cooperation.*
- *Decree of 24 May 2002 on water intended for human use.*
- *Resolution of the Flemish Government of 13 December 2002 on regulations regarding the quality and supply of water intended for human consumption.*
- *Decree of 18 July 2003 on integrated water policy.*



CENTRE OF EXCELLENCE IN WATER IN A NORTH-SOUTH CONTEXT

WHO ARE WE?

PROTOS is a non-governmental organization (NGO) working in international development for the last 25 years. PROTOS has specialized in water: drinking water, hygiene and sanitation, use of water for agricultural purposes and finally integrated water resources management.

With political and ideological neutrality PROTOS advocates equitable, participatory and sustainable water management in the North and the South.

THE MISSION OF PROTOS

PROTOS seeks to promote fair and mutually beneficial relations between North and South. It aims to facilitate sustainable and empowering development that is well integrated in the local cultural and social context and that strives to improve the standard of living and the general wellbeing of destitute groups in the South. From PROTOS' perspective water is key. Given its expertise in the field, PROTOS specifically advocates equitable, sustainable and participatory water management in both the North and the South.

Equitable water management assumes solidarity amongst all users to ensure that each individual has the right to sufficient water for well-balanced human development.

Sustainable water management pursues the optimal use of available water sources without threatening other people, the environment and resources for future generations.

Participatory water management requires the involvement of all individual users and the community, including disadvantaged groups, providing the opportunity for them to take control over their futures, and ensuring gender equity.

To achieve these objectives, PROTOS commits to:

Support participatory development programs in the South, aimed at improving the socio-economic situation of the local population through better access, distribution and valorisation of water.

Strengthen capacity, empower organizations and improve understanding of the role of community participation and collaboration so it engenders continued use of gained skills in other development initiatives.

Promote collaboration between all stakeholder involved in planning and implementation of local development, including civil society organizations and local authorities.

Stimulate the debate on equitable, sustainable and participatory water management in both the North and the South, through PROTOS and its partner organizations' experience and practice.

THREE AREAS OF ACTION

Development programmes in the South

North-South partnerships started in Haiti in 1979, expanded to North-Eastern Congo in 1985, and later to Rwanda, Burundi and Uganda. In 1997 PROTOS began its activities in Ecuador, Benin and Mali. Since 2000 it also supports a number of activities in Burkina Faso, in collaboration with the Italian NGO CISV. In 2006, PROTOS starts another programme in Madagascar.

PROTOS and its partners encourage the local population to work together and find their own solutions to problems related to water. PROTOS provides general support and assistance in planning, implementation and management of development programmes. These programmes focus on two fields: sustainable access to drinking water and sanitation, and the valorisation of water for agriculture. From 2002 integrated water resources management has been used to frame activities/programmes. This involves attention to different uses of water, consultation with and collaboration between different users within a defined area (community, river basin), in order to assure access to water for present and future generations.

Increased impact is achieved through networking and joined action with other agencies on e.g. hygiene promotion, agricultural production chain.



Specifically, the activities of PROTOS and its partners in the South lead to:

- ≈ access to drinking water and basic sanitary infrastructure for poor communities;
- ≈ access to and valorisation of water for agriculture, through installation and/or rehabilitation of irrigation infrastructure, damming or draining, water saving and erosion control techniques, ...
- ≈ sustainable use of water infrastructure and optimal use of water for health (through hygiene promotion activities) and economic development (through support for agricultural production and commercialisation);
- ≈ optimal management of the infrastructure, through capacity building in technical and managerial aspects.

Equally important in the programmes are the more strategic objectives, resulting in:

- ≈ Stronger social position of disadvantaged groups within society. In many cases this refers to women, whose active involvement is stimulated, leading to an increased recognition of their role in provision and management of water and sanitation infrastructure and communal development.
- ≈ Increased initiatives for self-development: the knowledge and skills acquired through participation in the water programmes reinforce both local civil society and local governments to take leadership in new initiatives taking into account the interests of disadvantaged groups within the community.
- ≈ Increased collaboration and consultation between civil society, public and private sector, each with their specific roles and responsibilities.
- ≈ Protection of natural resources: through awareness raising, consultation and negotiation between different users conflicts over water are resolved and initiatives taken by the community to assure availability of water resources in future (protection of sources, reforestation ...).

Overview investments in the south (in thousands of euros):

2000	2001	2002	2003	2004
2.466	3.681	3.987	3.632	4.764

In the North: Education and awareness raising

The training programs and education campaigns of PROTOS focus on the social dimension of water issues. They contribute to larger international solidarity with all people who do not have (sufficient) access to safe water. Moreover, PROTOS advocates for water to get a higher priority on the political agenda. By networking with all organizations working in the field of water, both in the North and in the South, PROTOS plays an active role in the international movement that is working for sustainable, participatory and equitable water management.

Knowledge management - Services

PROTOS shares its expertise with other organizations and individuals. PROTOS has a documentation unit and an advice service. Assistance is offered to other drinking water, sanitation and irrigation programs for project planning and evaluation, and for staff training, for example at the request of the Belgian or Luxemburg governments, the European Commission, Belgian or foreign NGO's such as SNV, Cordaid, ICCO, Misereor. Furthermore PROTOS carries out assessment studies, surveys and takes advisory roles for organizations in the South as well as in the North. PROTOS also produces publications and technical manuals on water and makes them available to third parties.



ORGANIZATION

The organizational structure consists of a head office in Ghent (Belgium), 3 regional supporting units and 3 local branches.

The office in Ghent is in charge of general policies and co-ordination, education and awareness raising in the North, assistance to development programmes in the South and knowledge management and consulting services.

The regional supporting units represent PROTOS in each region. These staff teams collaborate with the partners to provide guidance and support for local activities.

The units are located in:

- ≈ Cotonou (Benin) for Benin, with a local branch in Mali
- ≈ Cuenca (Ecuador) for Ecuador
- ≈ Port-au-Prince (Haiti) for Haiti.

The unit for the Great Lakes Region (Uganda, Rwanda, Burundi and Eastern Congo) has been replaced by two branches: one in Uganda and the other in Rwanda. In each office the staff consists of one expatriate for immediate support to the local partners. In 2006 a new unit will be created in Madagascar.



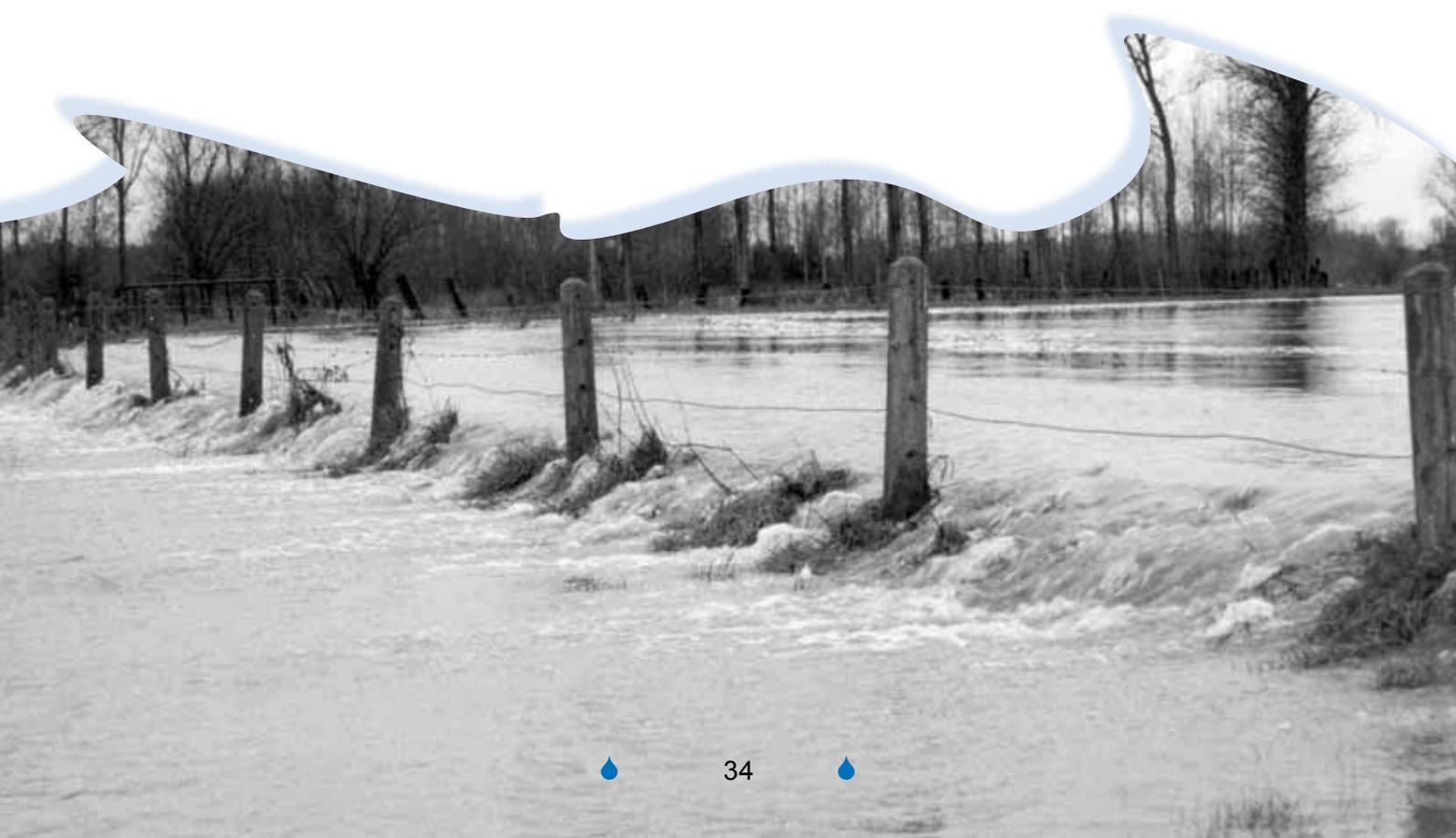
PARTNERSHIPS

PROTOS is building long-term partnerships with local organizations in the South to implement programmes and formulate policy. (These Partners have an input in the general policies of PROTOS).

Besides these local partners, PROTOS also works with other partners who may provide financial support and expertise; co-implement programmes in the field, and/or participate in awareness raising or advocacy activities in the North. These partners include UMUBANO (the Flemish-Rwandan Association), CISV (Italian NGO), WaterAid (UK), CICDA (France), CONCERN (Ireland), VECO (B), OXFAM (UK), the International Secretariat for Water (ISW).

In the North, PROTOS links with a number of consultative structures, such as 11.11.11, the Flemish Platform for Sustainable Development VODO, the NGO-Platform for the province of East-Flanders, the Flemish Platform on Haiti, the Flemish World Centre for International Education WIO, and collaborates with a number of water-actors, such as Belgian water companies, the Belgian Association for the World Water Contract, The Flemish Partnership for water,

Through all partnerships, PROTOS seeks to improve the contents of its own activities and increase the impact of its activity in the South and in the North.





This booklet is the result of a shared project involving the non-profit organization PROTOS vzw and the Flemish partnership “Water for Development”. The latter is a joint venture between actors in the water sector and is intended to allow Flanders to make a tangible contribution to the Millennium Objectives¹⁾ of the United Nations and to help towards the achievement of the objectives of the Johannesburg summit²⁾ with regard to water and sanitation³⁾, in order to help reduce the number of people without access to water or sanitation.

¹⁾ The Millennium Declaration was approved at the General Assembly of the UN in New York in September 2000 by all the then 189 UN member states. The declaration sets out eight Millennium Development Goals (MDGs) to combat poverty and hunger and to improve education, health care, the status of women and the environment. All governments have promised to work together to achieve these objectives by 2015. The seventh objective includes the goal of halving the number of people without access to safe drinking water by 2015.

²⁾ At the World Summit on Sustainable Development held in Johannesburg in 2002, heads of state and government leaders from the entire world renewed their commitment to fighting poverty and protecting the environment. The execution plan includes the following objectives with regard to water and sanitation: to halve the number of people without access to safe drinking water and basic sanitation by 2015.

³⁾ The word “sanitation” means here the totality of investments, knowledge and attitudes which promote a healthy living environment and covers: improvement of hygiene, management of wastewater and rainwater, management of industrial and domestic waste, human and animal excreta.



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