



Sustainable by nature

annual report 2016



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De Watergroep
WATER. VANDAAG EN MORGEN.

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Foreword by the President

Sustainable work is embedded in the genes of our company. The core task of De Watergroep – supply high-quality **drinking water** to over 3 million Flemish people – is, after all, based on a natural resource that we would be well advised to use carefully. To ensure a future-proof drinking water supply, we closely monitor the quantity and quality of our groundwater and surface water supplies. We monitor from source to tap and anticipate potential threats of any nature. In doing so, we consciously focus on knowledge development and sharing covering the most diverse aspects of water abstraction, production and distribution. Where appropriate, our in-house experts enter into partnerships with research institutions in Belgium and abroad. This enables us to keep our finger on the pulse of the latest technological advances.

Sustainability is also central to the broadening of our business activities in the areas of waste water and industrial water. The 64 municipalities that entrust their **sewer management** in whole or in part to Riopact benefit from a future-proof approach, enabling them to meet the requirements of the European Water Framework Directive by 2027.

As regards our **industrial water projects**, they are a great example of the circular economy in action. We ensure that waste water is no longer discharged but subjected to advanced purification and subsequently given a new lease of life within the production process. This allows

our industrial customers to save on their water bills or to pump up less groundwater. Last year, we signed promising contracts for new projects, both in Belgium and abroad. Together, they represent a future extra annual capacity of 1 million m³ of industrial water.

Sustainability also means that we, as a company, aim to establish a long-term relationship with our stakeholders: customers, members, employees, various partners, etc. Towards this end, we have focused heavily on **digitisation** in recent years. A new and uniform software platform for all our business processes, a mobile office for our employees, the roll-out of digital billing and payment platforms and upgraded HR software, the preparation of a fully fledged e-counter, etc. These are just a few examples of projects that should enable us to work even more efficiently and provide more room for tailored services.

I am proud to report a most satisfactory result for 2016, made possible by over 1,470 employees who use their expertise to offer a high-quality product and a customer-friendly service to our customers and partners. This annual report provides a nice snapshot of a company in full expansion, building on a rich history, and on its way to a sustainable future.

Herman Van Autgaerden, President Board of Directors



About De Watergroep



"Together with more than 1,450 committed employees, I am shaping the future of De Watergroep as a sustainable integrated water company. In the coming years, the emphasis will be on innovation, to ensure that tomorrow's generations will continue to benefit from affordable and potable water."

Hans Goossens
Director-General De Watergroep

→ Mission, vision and values

De Watergroep is an autonomous Flemish water company that delivers customised services within the entire water chain, to private individuals, companies as well as public authorities. Our mission, vision and corporate values summarise what we stand for and believe in.

Our mission

We supply a range of customised water solutions. Today, for tomorrow's generation.

Our vision

- ❖ De Watergroep is passionate about **water as a source of life and health**.
- ❖ Our **technological edge** is a strong asset that we constantly develop and exploit.
- ❖ We treat people and resources in a **sustainable** manner.
- ❖ We are a **leading partner** in Flanders and beyond.

Our values

- ❖ **Team spirit**
Collegiality is our first priority and transcends individual interests.
- ❖ **Reliability**
Promises should be kept.
You can count on us – we do business in a fair and proper manner.
- ❖ **Commitment**
Our employees act with the utmost care and attention, as if De Watergroep were their own company.
We stand for commitment, responsibility and ownership.
We work with passion and enthusiasm.
- ❖ **Care**
We take care of our customers, our colleagues and the resources we use.
We pay attention to our environment, welfare and safety.
We operate in a cost-conscious manner.
- ❖ **Initiative**
Our employees are given space to develop their skills.
We are willing to change and are open to new ideas, new techniques and methods.
We give creativity every opportunity to succeed.

→ Board of Directors and Management Committee

Board of Directors



From left to right: Standing: Luc Vande Caveye, Hedwig Kerckhove, Eric De Keyser, Danny Deneuker, Luc Asselman, Hans Goossens, Michiel Van Peteghem, Pieter De Cuyper, Dirk Robbeets, Francis Bosmans, Tania Janssens, Jozef De Borger - Seated: Kristel Gevaert, Gerald Kindermans, Albert Vandezande, Annie Mervillie, Mieke Van Hootegem - Not in the photo: Herman Van Autgaerden, Mieke Offeciars-Van De Wiele, Charlotte Van Strydonck.

President

Herman Van Autgaerden



Vice-Presidents

Kristel Gevaert
Tania Janssens
Albert Vandezande

Directors

Luc Asselman
Francis Bosmans

Jozef De Borger
Annemie Deckers (until 10 June 2016)
Danny Deneuker
Eric De Keyser
Hedwig Kerckhove
Gerald Kindermans (from 10 June 2016)
Annie Mervillie
Mieke Offeciars-Van De Wiele
Dirk Robbeets
Luc Vande Caveye
Mieke Van Hootegem
Charlotte Van Strydonck

Government Commissioners

Michiel Van Peteghem, Commissioner of the Flemish Government
Pieter De Cuyper, Government Commissioner of the Flemish Minister for Finance and Budget

Management Committee



From left to right: Paul Suenens, Karin Stengée, Hans Goossens, Luc Keustermans, Sammy Wuyts, Jan Hammenecker, Michel Vanroy, Eddy Troosters.

- ❖ Hans Goossens, Director General
- ❖ Jan Hammenecker, Commercial Director
- ❖ Luc Keustermans, Technical Director
- ❖ Sammy Wuyts, Director General Affairs

- ❖ Paul Suenens, Provincial Director West Flanders
- ❖ Karin Stengée, Provincial Director East Flanders
- ❖ Eddy Troosters, Provincial Director Flemish Brabant
- ❖ Michel Vanroy, Provincial Director Limburg

The Management Committee is responsible for the day-to-day management of De Watergroep. The Management Committee puts the company policies, determined by the Board of Directors, into practice. In 2016, the gross wages of the eight members of the Management Committee amounted to €958,793 (including the remuneration not subject to social security contributions).

End 2016, Director General Boudewijn Van De Steene retired after a career of more than 25 years within the Flemish water sector. He led De Watergroep for almost five years. His successor, Hans Goossens, is a Doctor in Chemistry. He made a career in the chemical industry and combines his expertise and international management experience with a strong passion and interest for water.

→ Functioning of the Administrative Bodies

The **Board of Directors** is composed of sixteen members and a president.

- ❖ The President of the Board is appointed by the Flemish Government.
- ❖ Eight of the sixteen members were appointed by the Flemish Government, four of whom on the recommendation of the partners in a provincial partners' meeting.
- ❖ The other eight members were appointed by the General Assembly, on the recommendation of the provincial partners' meetings.

The members of the Board of Directors each serve a six-year renewable term.

The **provincial committees** and the **provincial RioP committees** are made up of the members of the provincial water services of West Flanders, East Flanders, Flemish Brabant and Limburg and of the RioP water services of West Flanders, East Flanders and Flemish Brabant.

Central Administrative Bodies

The **General Assembly** of 10 June 2016 marked the end of the term of office of Mrs Annemie Deckers and Mr. Danny Deneuker. On the recommendation of the Limburg provincial member meeting, the General Assembly appointed Mr Gerald Kindermans as director and renewed Mr Danny Deneuker's term of office as director. The Flemish government renewed the term of office of Mrs Mieke Van Hootegeem. The Flemish government also decided that the terms of office of Mrs Mieke Offeciers, Mrs Tania Janssens and Mr Luc Asselman as member of the Board of Directors would be limited in time until the General Assembly of De Watergroep in 2017.

The **Board of Directors** convened thirteen times. The average attendance rate was 91%.

- ❖ In 2016, the following **committees** were active within the Board of Directors:
- ❖ the Office of the Board of Directors,
- ❖ the Audit Committee,
- ❖ the Internal Affairs Committee,
- ❖ the External Affairs Committee,
- ❖ the Consultative Commission for Pensions (composed partly of members of the Board of Directors and partly of delegates from the representative professional organisations).

The committees provide advice on their assigned files. The average attendance rate for the committees was 85%.

The members of the Board of Directors are remunerated according to the scheme adopted by the General Assembly on 8 June 2007 and amended on 6 June 2008. These remunerations are in line with the remunerations included in the decision of the Flemish government of 9 March 2007 on the remunerations of directors of external independent agencies of the Flemish government, and of government representatives overseeing these agencies.

The remunerations are published on the website of De Watergroep.

Provincial Administrative Bodies

Provincial water services The members of the Board of Directors who live in a municipality that is a partner of a provincial water service, are ipso jure member of the Provincial Committee, and the office of the Provincial Committee of that water service.

The Provincial Offices are responsible for the day-to-day administration of the provincial water services. The table below summarises the functioning of the Provincial Offices in 2016:

Province	Number of meetings	Attendance rate
West Flanders	11	89%
East Flanders	9	88%
Flemish Brabant	11	90%
Limburg	10	75%

RioP water services RioP water services for waste water management are active in West and East Flanders and in Flemish Brabant. The members of the Board of Directors who live in the province of the relevant RioP water service are members of the Provincial Committee and of the office of the Provincial Committee of that RioP water service.

The table below summarises the functioning of the Provincial RioP Offices in 2016:

Province	Number of meetings	Attendance rate
West Flanders	5	84%
East Flanders	4	64%
Flemish Brabant	3	89%

→ Good governance and responsible business practices

Care for the environment, social commitment and good governance are not only the levers for a sustainable policy, they are also the benchmarks for assessing an organisation. This way of working is embedded in the corporate culture of De Watergroep and is reflected in, among other things, well-considered risk management and active involvement in water projects in developing countries.

Well-considered risk management enables us to fulfil our core mission both now and in the future: **each day produce and supply high-quality drinking water to over 3 million customers**. In 2016, special attention was paid to measures aimed at combating terrorist threats.

De Watergroep shows its social commitment by participating in **water projects in developing countries**. In 2016, we contributed to better drinking water and sanitation facilities in DR Congo and committed ourselves to work on water programmes in the South, together with NGO Protos, until 2024.

Business risk management

Our core mission is to produce and supply high-quality drinking water to more than 3 million customers. Doing so on a daily basis requires well-thought-out and efficient risk management. Based on potential scenarios, we take measures that mitigate the risks and enable us to swiftly and effectively deal with the possible consequences. In 2016, again a number of concrete projects were started up and implemented, including in the context of terrorist threats.

Security of technical installations and terrorist threats

In 2013, De Watergroep started work on the compilation of a risk inventory as part of the water safety plans. Due to the increased terrorist threats in the wake of the March 2016 attacks, De Watergroep decided to review and update the existing security and access control of its technical installations and office buildings, designing a specific security plan for each building. We identified potential threats and developed an action plan that allows us to respond quickly and accurately to threats that could impact our employees and drinking water supplies.

Contingency plans and business continuity management

De Watergroep has contingency plans in place to respond quickly and appropriately to unforeseen circumstances. Because much of the information in these plans becomes quickly outdated, their contents were thoroughly evaluated and reviewed in 2016. For the contingency plans dealing with local threats to the quality and/or quantity of the drinking water, we also accelerated the implementation of a business continuity management system. This enables swift action to be taken to ensure the continuity of our operations if one of our office buildings or installations should fail.

Risk awareness campaign

In 2016, the risk project group within De Watergroep started with the elaboration of periodic internal risk awareness campaigns. In doing so, they focus on the active input from colleagues to prevent risks or accidents. This should result in a **culture of constant risk awareness**.



Draag je persoonlijke beschermingsmiddelen

Om ernstige letsels te vermijden, is het aangewezen steeds de gepaste persoonlijke beschermingsmiddelen (PBM's) te dragen.
Zie je een collega die de aangewezen PBM's niet draagt? Wijs er hem of haar dan even op.

Wat zie je op de foto?

- In de voorgrond staat een collega klaar om te schakelen in een middenspanningscabine van 12.000 Volt. De aangewezen PBM's zijn dan: aangepaste helm, beschermende handschoenen en kledij.
- Let ook op de medewerker in de achtergrond: hij bewaakt z'n collega. Voor hem is het gewone werkpak voldoende, aangezien hij tijdens het schakelen net buiten de cabine blijft.



Comprehensive risk management monitoring tool

The monitoring tool and the risk management database which went live in 2016 allow us to designate a person responsible for all actions pertaining to risk management, assign a time frame to each action, and monitor and report on their implementation. This enables us to draw up the necessary plans per site and per type of action. The first actions to be incorporated into the monitoring tool are those from the water safety plans. Other actions to be included are those from condition status monitoring, safety, well-being and ICT security. The statutory monitoring and reporting to the Flanders Environment Agency (VMM), our supervisor, can also be done from this tool.

Risk management and internal audit coordination

EY (Ernst & Young) is responsible for the audit work, but since mid-2016 the Business Risk Management department has also ensured the internal coordination and monitoring of the internal audit. This makes it possible to tailor the annual planning and the scope of the audits to the results of the risk reporting and assessment processes. The Business Risk Management department also liaises with the business on drawing up an action plan to concretely address the issues from the audits.

Commitment beyond borders: new project in DR Congo & long-term agreement with Protos

From its focus on social and sustainable enterprise, De Watergroep also endeavours to improve the drinking water supply in developing countries. In 2016, De Watergroep consolidated its cooperation with Protos, a non-governmental organisation (NGO) working on equitable and sustainable water management. This provides more people with access to drinking water, sanitary facilities and water for agriculture.

De Watergroep and Protos go for long-term cooperation

De Watergroep and Protos have been closely working together since 2003. Initially this happened through financial aid, but later we also shared our water-related knowledge and expertise with partners in developing countries. De Watergroep has thus developed into a real knowledge and technology partner of Protos.

For both organisations, this has already resulted in enriching exchanges, which is why in 2016 they embarked on an official **cooperation agreement** that runs until 2024. De Watergroep, together with Protos, is committed to continuing to implement water programmes in the South. In addition to €25,000 in aid on an annual basis, De Watergroep will continue to deploy its water experts for a number of specific Protos programmes. In Flanders, too, Protos and De Watergroep will focus even more on promoting sustainable water use.

More info about Protos? Surf to www.protos.ngo



Protos
long-term cooperation
on international
water projects



**Ituri (Democratic
Republic of Congo)**
development of
drinking water facilities



Surinam
support for sustainable
development

Better drinking water supply for Ituri (DR Congo)

In Ituri, Protos has for over thirty years been working on the development of drinking water and sanitary facilities. The thirteen drinking water systems installed there provide half a million people with water. However, this is still only slightly more than 10% of the population. Since 2014, thanks to a new law, local communities in DR Congo have been able to organise their drinking water supply. The project supported by De Watergroep assists them in this process.

De Watergroep provides not only financial support to these local communities, but also knowledge and expertise. It does so, among other things, by providing technical support for water supply projects, by providing training and by formulating proposals for an overarching support structure.

The project runs until 31 March 2018. By that date the thirteen drinking water committees in Ituri must work more efficiently and support 558,000 water users.

Support for sustainable development in Surinam

De Watergroep had already supported a development project in Galibi, Surinam. Today we are planning the construction of a new water production centre in the district of Commewijne in the former Dutch colony. At the same time, we are supporting a project there to outline the seventeen **sustainable development goals** of the United Nations. These sustainable development goals build on

the previous Millennium Goals. The project we support aims, among other things, to inform Surinam citizens about the development goals, focus on the role they can play in achieving these goals, and enter into a dialogue with them. This project is being implemented in collaboration with various local and international partners. De Watergroep is one of the partners supporting the campaign, mainly in Galibi and Commewijne.



Key figures

	2016	2015
Production (million m³)		
Groundwater	91.74	92.46
Surface water	35.16	33.46
<i>Total</i>	126.80	125.92
Purchased from third parties (million m³)		
SWDE	26.48	25.73
water-link	4.41	4.42
Farys	9.62	9.75
Other	1.37	1.62
<i>Total</i>	41.88	41.53
Sold to third parties (million m³)		
SWDE	3.58	2.99
Farys	1.85	2.06
Other	0.49	0.50
<i>Total</i>	5.92	5.55
Supply units		
In service	1,324,738	1,308,017
Existing	1,342,540	1,325,168
Municipalities in service area		
Fully supplied	158	157
Partially supplied	17	18
<i>Total</i>	175	175
Population	3,021,102	3,000,666
Capital		
Subscribed capital (euros)	902,640,250	897,881,575
Number of shares	39,505,610	39,315,263
Staff		
Statutory	1,300	1,307
On contract	172	166
<i>Total</i>	1,472	1,473

Drinking Water

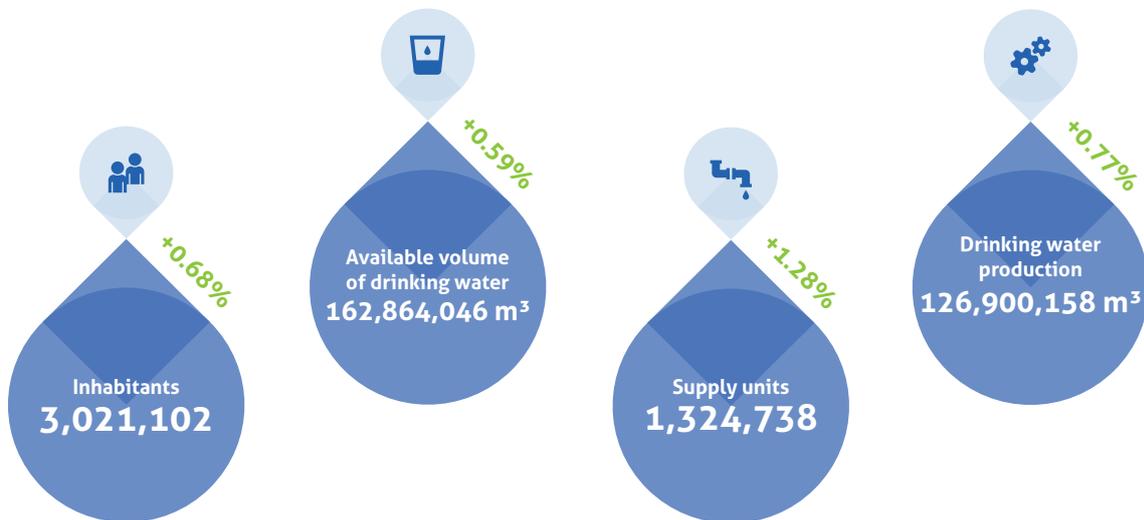


"With Herman Verbruggen as mentor of the Drink Tap Water project, we are calling on all Flemish schools to promote tap water as an environmentally friendly premium product. You're never too young to learn..."

Lisse Elsen
Drink Tap Water project coordinator

De Watergroep is a leading water company. We supply **high-quality water** to households and businesses. Building on a sustainable and future-oriented vision, we **invest** in our infrastructure, in new technology and in the know-how of our employees. This enables us to respond to the challenges ahead. We have a profound respect for the environment in which we work and treat our natural resources with care.

→ Drinking water production in facts and figures



- ❖ In 2016, De Watergroep **produced** 126,900,158 m³ of drinking water. This is **0.77% more** than in 2015.
- ❖ The **available volume** of drinking water for its own customers amounted to 162,861,046 m³.
- ❖ In addition, De Watergroep provides 5,285,980 m³ of **'other water'** or custom water: this is industrial water produced on site at industrial customers.

Water volume (m ³)	West Flanders	East Flanders	Flemish Brabant	Limburg	Total	2015-2016
Water available in own installations following treatment	36,431,457	15,431,674	28,439,656	46,597,371	126,900,158	+0.77%
Purchased from other provincial water services		1,599,137	882,941	184,815	2,666,893	
Purchased from third parties	11,963,104	11,460,245	17,061,789	1,394,107	41,879,245	+0.84%
Sold to other provincial water services		5,407	1,783,952	877,534	2,666,893	
Sold to third parties	1,300,255	1,825,408	2,656,273	136,421	5,918,357	+6.68%
Available volume of drinking water	47,094,306	26,660,241	41,944,161	47,162,338	162,861,046	+0.59%
Volume made available for grey water (from water production centre)	1,523,670				1,523,670	-1.01%
Available other-water volume	532,648	2,138,808	1,713,147	488,049	4,872,652	-4.05%
Available other-water volume (Netherlands) 413,328 m ³					5,285,980	-0.44%

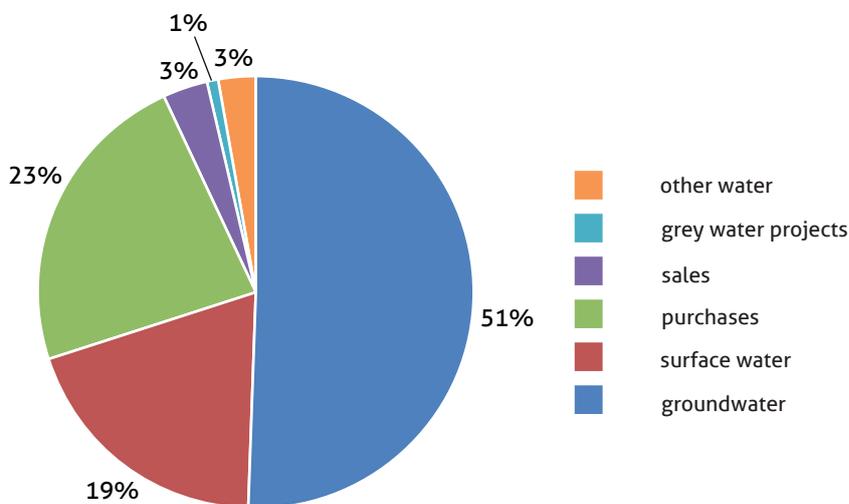
Water purchases increased by 0.84%. In 2016, De Watergroep purchased more water from Pidpa, IWVA, SWDE and Evides. **Water sales** increased by 6.68%. More water is being sold to IWVA, SWDE and SIDEN.

Since 2015, grey water projects in West Flanders, with water produced in a water production centre, have been reported separately. This volume fell by 1.01% compared to 2015.

The net result of this water balance is that the **total available volume of drinking water** for distribution to customers increased **by 0.59% compared to 2015**.

The available volume of **'other water'** decreased by 0.44%. This includes 413.328 m³ produced for an industrial water customer in the Netherlands.

Water balance 2016



→ Number of inhabitants and supply units

More inhabitants The number of inhabitants in the service area of De Watergroep rose from 3,000,666 at the end of 2015 to 3,021,102 at the end of 2016. This is an increase by 20,436 inhabitants or 0.68%.

More supply units. The number of supply units in service rose by 16,721 units (+ 1.28%) from 1,308,017 at the end of 2015 to 1,324,738 at the end of 2016.

Same number of municipalities. The service area of De Watergroep consists of 175 municipalities, 158 of which are fully and 17 partially supplied. Following the takeover of the drinking water network in Mazenzele on 1 November 2016, the municipality of Opwijk is now fully supplied by De Watergroep.

Number of inhabitants on 31 December 2016

Province	2016	2015	Increase	% increase
West Flanders	817,159	811,631	5,528	0.68%
East Flanders	561,813	558,010	3,803	0.68%
Flemish Brabant	772,199	764,273	7,926	1.04%
Limburg	869,931	866,752	3,179	0.37%
Total	3,021,102	3,000,666	20,436	0.68%

Number of supply units in service as per 31 December 2016

Province	2016	2015	Increase	% increase
West Flanders	368,238	363,709	4,529	1.25%
East Flanders	248,206	245,143	3,063	1.25%
Flemish Brabant	327,068	322,964	4,104	1.27%
Limburg	381,226	376,201	5,025	1.34%
Total	1,324,738	1,308,017	16,721	1.28%

→ 32,630 km of pipes

On 31 December 2016, the pipe network of De Watergroep had a total length of 32,630 km. The natural expansion of the network was 124.7 km. This is the difference between the length of newly constructed pipes and the length of the pipes removed from service.

Pipe network length (km)	West Flanders	East Flanders	Flemish Brabant	Limburg	Total 2016	Total 2015
New in 2016 (a)	85.9	62.5	78.7	75.3	302.4	299.7
Out of service in 2016 (b)	49.1	37.6	49.7	41.2	177.7	163.1
Expansion in 2016 (a)-(b)	36.7	25.0	28.9	34.1	124.7	136.5
Total network in service as of 31-12-2016	10,309	5,109	7,948	9,263	32,630	32,461

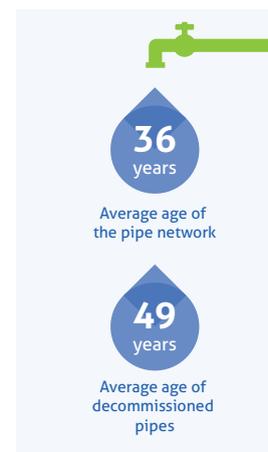
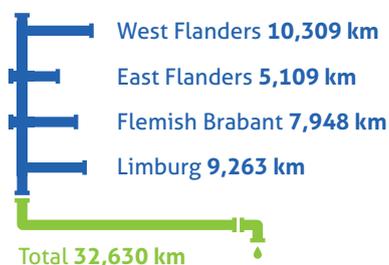
In 2016, De Watergroep took over the submunicipality of Mazenzele (Opwijk). This resulted in a modest expansion of fourteen km of pipes. The figures on the network length are also subject to change as more accurate information on the historical pipe network becomes available.

Pipe network has aged a little more

Newly constructed in 2016



Total network as of 31-12-2016



→ Quality from source to tap

Supplying high-quality drinking water. This is and will remain our core task. We take thousands of samples to monitor the quality of our product, from source to tap. We also invest in new technology that allows us to analyse samples faster and more efficiently and to respond to any future threats. Our laboratory plays a key role in this regard.

Analyses carried out in 2016

An extensive and comprehensive sampling programme

The Flemish drinking water companies are responsible for monitoring the risk management, the crisis management and the supply security of the drinking water being produced and distributed. In doing so, we must comply with the regulations on public service requirements as laid down in the Flemish Government decree of 8 November 2013.

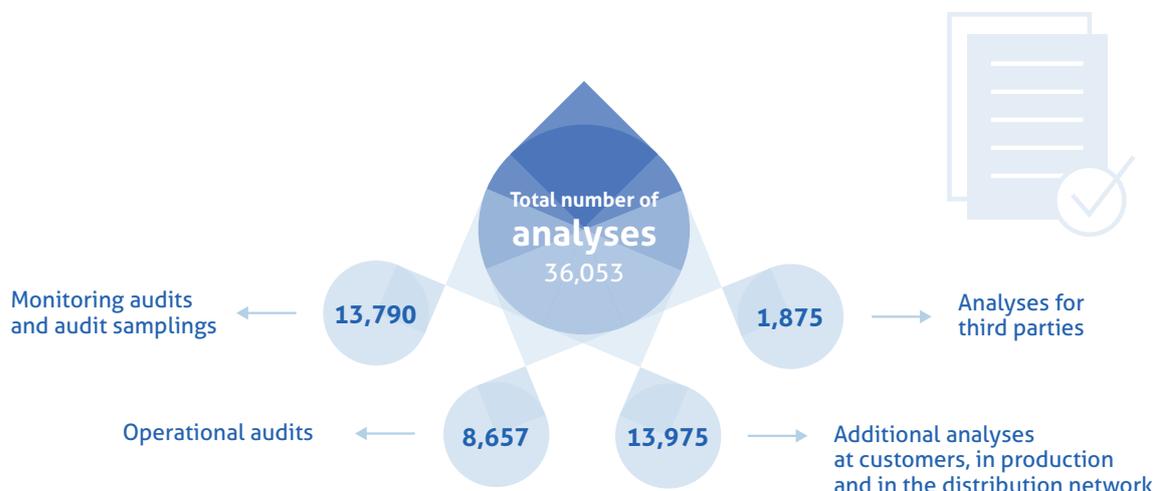
De Watergroep monitors the raw groundwater and surface water, the produced drinking water as it leaves the water production centres, the drinking water during storage and distribution in water towers and reservoirs, and finally also the mains water at the customer's kitchen tap. The monitoring programme also includes the inspection of water pipes in public buildings such as schools, daycare centres, hospitals and restaurants.

Two types of audits are distinguished: **statutory monitoring and sampling audits** and additional operational audits.

Monitoring audits are conducted to check general parameters such as pH level, conductivity and the presence of chlorine residues. We also analyse microbial organisms, heavy metals and nitrogen compounds. The audit package consists of a complete analysis that checks the monitoring parameters and determines the complete mineral composition of the water. It also includes the analysis of different organic micropollutants, such as residues of crop pesticides, chlorinated organic compounds and polycyclic aromatics.

Monitoring and sampling audits are carried out at the customer's kitchen tap, whilst the additional operational audits are performed on the produced water leaving the water production centre, and in water towers and reservoirs. Operational audits are also carried out for new expansions and for the monitoring of complaints.

In 2016, De Watergroep conducted 22,447 audits to check the quality of the drinking water: 13,790 monitoring and sampling audits and 8,657 operational audits. Furthermore, De Watergroep collected 13,975 samples. This was done not only to follow up on customer complaints, but also to analyse the operation of the water treatment plants for the production of drinking water and for expansions of the distribution network. In addition, the central laboratory of De Watergroep carried out 1,875 analyses for third parties, mainly on behalf of the Industry & Services business unit and the laboratory of the Soil Service of Belgium. A total of **38,297 analyses** were thus carried out by De Watergroep in 2016.



Control in the distribution network

The following table presents an overview of the instances of non-compliance observed in the distribution network. The figures pertain to measurement results of the first sampling at the kitchen tap; and therefore do not include any repeat measurements.

Number of parameters with a first instance of non-compliance in the network	West Flanders	East Flanders	Flemish Brabant	Limburg	Total	%
Number of samples	2,698	2,611	4,530	3,951	13,790	100
Number of non-compliant A-parameters	8	4	6	10	28	0.2
Number of non-compliant B-parameters	81	29	78	37	225	1.6
Number of non-compliant C-parameters	372	178	149	138	837	6.1

Of the 13,790 samples taken, **the percentage of instances of non-compliance was as low as 0.2%** for the micro-biological A-parameters. During repeat measurements, all samples were found to comply with the standards.

B-parameters are chemically toxic parameters such as lead, nitrate and nitrite. The percentage of instances of non-compliance, 1.6%, was due primarily to too high a lead content. The results of repeat measurements showed that non-compliance is mainly caused by the customer's indoor installation.

C-parameters are indicator parameters. They are not relevant to public health. These include, in particular, sodium, iron and coliforms. Instances of non-compliance with sodium standards are caused by poorly adjusted softeners. Coliforms and iron are generally due to poorly maintained indoor installations.

New legislation

On 28 June, the Royal Decree of 31 May 2016 on the protection of public health against radioactive substances in water destined for human consumption, was published in the Belgian Official Gazette. This RD requires water suppliers to check the water for a number of screening parameters such as tritium, radon and the total alpha and beta radiation values. De Watergroep worked closely with the FANC (Federal Agency for Nuclear Control) to develop a sampling program for this purpose. From mid-2017, an accredited laboratory will each year analyse 200 or so samples from the entire distribution area of De Watergroep for the presence of radioactive substances.

Quality of the raw water sources

The analyses carried out in 2016 to check the presence of degradation products of pesticides in the raw groundwater and surface water indicate that the pressure on our raw water source is increasing. If the same rigorous drinking water standard of 0.1 micrograms per litre ($\mu\text{g}/\text{l}$) remains in force for the natural degradation products of pesticides, this could significantly increase the production cost of drinking water. For a number of these new degradation products, activated carbon filtration does not constitute an absolute barrier. Additional treatment steps involving ozone, for example, are then necessary.

The raw water sources are also coming under pressure from climate change. In the summer of 2016, for example, the chloride content in the reservoir of water production centre De Blankaart exceeded the standard as the prolonged drought led to reduced rainwater runoff and increased chloride concentrations in the Yser. While this non-compliance does not constitute a threat to public health, De Watergroep nevertheless reported it to its supervisor, who subsequently imposed a modified monitoring programme until new rainfall caused the chloride content to fall again.

Accreditation and approval of the central laboratory

In 2016, the first supervisory audit took place as part of the **accreditation** by **Belac**, the Belgian accreditation body. Due to our application to extend the scope, this supervisory audit went much further than previous audits and included a detailed scrutiny of ten different analysis methods. Methods that were examined included those used by De Watergroep for the analysis of herbicides and for the research on the detection of metaldehyde. Metaldehyde is the active ingredient in slug pellets, which are commonly used in vegetable gardens. Belac approved our application to extend the scope, also because our measurement values are very good compared to those of international laboratories.

The central laboratory of De Watergroep thus has a **very comprehensive scope for the analysis of drinking water, groundwater and surface water**. This analysis can moreover be carried out using a large number of analysis methods, both from the microbiology and the inorganic and organic chemistry disciplines. This makes the central laboratory the **leading laboratory in Flanders**.

In October 2016, the Flemish Institute for Technological Research (VITO) also audited the central laboratory. The audit yielded only a few comments. The laboratory implemented a number of modifications and received **approval from the Environmental Permit service** of the Environment, Nature and Energy department of the Flemish Government, at the end of the first trimester of 2017.

Broadening of the analysis service offering

To enhance the operational reliability and analysis offering of the central laboratory, De Watergroep purchased two **gas chromatographs**. These devices can automatically detect volatile organic micropollutants. This allows De Watergroep to undertake many more analyses and to report results more quickly to customers. With the implementation of a second **plasma torch**, the central lab can now also detect heavy metals more quickly.

In 2016, the laboratory also established an analysis method to determine the presence of **perchlorate** in water. Perchlorate is a residue of grenade ammunition and is also found in some fertilisers. The detected

concentrations of perchlorate in the groundwater and surface water are, however, very low and do not pose any problem to public health.

Since 2016, the microbiology/biology department has been using the technique of **mass spectrometric identification of indicator bacteria**. This technique identifies each bacterial species based on its protein composition. This allows us to perform the identification immediately after the analysis via the cultivation method, resulting in a time saving of two days as compared to the conventional identification techniques. Since 2016, this department has also been applying the analysis with **flow cytometry** to monitor flushing actions in distribution pipes. This technique provides an image of the microbiological composition of the water already a few minutes after the sampling, with a clear distinction being made between living and dead bacteria. The analysis results obtained clearly represent an added value for the evaluation of the flushing actions carried out.

The laboratory also tried out the technique of '**next generation sequencing**', which is able to represent the complete microbial composition of water by determining the genetic material of the bacteria present in the water. This technique might enable us to very quickly assess the impact of a bacteriological contamination in the distribution network in the event of a calamity and might provide crucial information about the effectiveness of flushing and decontaminating the distribution network.

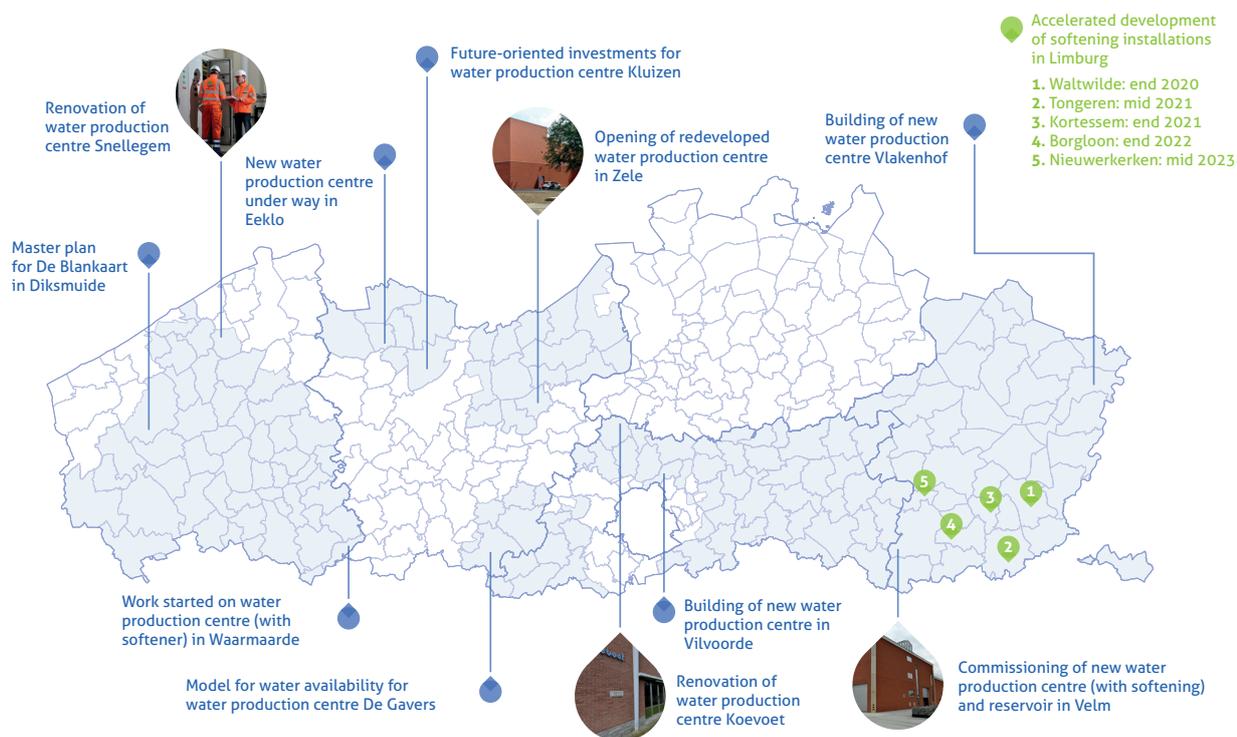
Also at work for third parties

The central laboratory generated additional income by using its expertise for carrying out pesticide analyses on behalf of other drinking water companies and laboratories.



→ Investments in drinking water production

In 2016, too, De Watergroep invested heavily in the renovation of its production and network infrastructure. For this, we draw on a wealth of in-house expertise, which we continue to develop in synergy with relevant knowledge partners.



West Flanders

Master plan for De Blankaart is taking shape

Water production centre De Blankaart in Diksmuide each year produces some 10 million m³ of drinking water, accounting for one-third of all the drinking water in West Flanders. Dating from 1973, De Blankaart is the oldest water production centre where De Watergroep produces surface water-based drinking water. The centre will therefore undergo a **thorough facelift**:

- ❖ the use of the latest technology will make water treatment more efficient and sustainable,
- ❖ the reservoir will be renovated,
- ❖ there will be a new logistics building with a visitor area and a laboratory.

Alongside a study on future water availability, this production centre is also conducting a **pilot study** on possible alternatives for conventional surface water treatment, the objective being to reduce costs and improve quality. In this way, De Watergroep wants to prepare itself for the predicted prolonged periods of drought with less precipitation, especially in summer. Conventional surface water treatment consists of flocculation, sedimentation, chlorination, filtration, activated carbon filtration and residual disinfection. Since February 2016, De Blankaart has been investigating the possibility of applying a combination of **ion exchange** and **flocculation-flotation** to eliminate organic substances and turbidity. Our work on this subject, which attracts great international interest, is carried out under the DOC2Cs European research programme, together with two other drinking water companies and two universities: the British South West Water, the Dutch PWN Technologies, the Delft University of Technology and the University of Lille.

Important lessons from the pilot study

The pilot study revealed the advantages and drawbacks of ion exchange as an extra step in the elimination of organic substances and was found not to lead to a major quality improvement. It is therefore doubtful whether the new treatment station will use the ion exchange technique. The flocculation-flotation test, by contrast, yielded good results. The semi-industrial study also provided important information for the design of this treatment step. It appeared, for example, that the flow rate within the treatment process can be raised higher than originally thought, which could result in lower investment costs than originally estimated.

Water production centre Snellegem renovated

The existing water production centre in Snellegem (Jabbeke), with a capacity of 3,500 m³ drinking water/day, dates from 1967, so that a thorough renovation was required. We renewed the electromechanical equipment and the cover of the open filters and also renovated the building and the well shelters. The renovated water production centre was taken into service just before the summer to allow peak water consumption to be met.

Sufficient water for De Gavers

In 2016, the Flemish Institute for Technological Research (VITO) studied **the water availability model for water production centre De Gavers**, for the purpose of expanding the production capacity to 50,000 m³/day. The study showed that sufficient water is available in the Bossuit-Kortrijk Canal and, by extension, the entire basin of the Upper Scheldt. It is nevertheless advisable to properly regulate and monitor water use and consumption. The analysis, in fact, indicates that, during dry periods, the water availability for the different water consumers within the system is running up against its limits.

Water production centre Waarmaarde

In Waarmaarde (Avelgem), construction work has started on a new water production centre with softening. The pumped up water first passes through three grain reactors for softening, followed by conventional treatment (cascade aerator and open sand filters). The production centre has a maximum production capacity of 750 m³ per hour and is scheduled to go into service at the end of 2018.



Pilot study De Blankaart

East Flanders

Renovated water production centre with softening officially inaugurated in Zele

De Watergroep invested 5.2 million euros in the renovation of the water production centre in Zele, allowing softer water to be supplied to the inhabitants of Zele, Berlare and parts of Laarne. The old water production centre dates from 1948 and was no longer able to treat the full capacity of the production centre, so that a thorough renovation was required. The renovated water production centre **removes iron and softens** the groundwater from four groundwater extractions **in a single step** and supplies nearly 1.5 million m³ of drinking water to customers per year. The staff of De Watergroep were responsible for the design and monitoring of the renovated production centre. For the combined iron removal and softening process they used the technology of an external partner. Although hard water is perfect drinking water, softening reduces limescale build-up in sanitary facilities and domestic appliances.



Water production centre Zele



Water production centre Kluizen

New water production centres under way in Eeklo

The water production centre in Eeklo each year produces on average 1.2 million m³ of drinking water from three well batteries and two deep wells. The oldest part of the existing water treatment station dates from 1937 and has reached the end of its technical lifetime. It will therefore be replaced by a completely new production centre with an associated dosing and storage building. It will be equipped with state-of-the-art treatment techniques, including an additional softening step and activated carbon filtration. Construction was started in 2016 and the new production centre will be completed in 2019. In the meantime, the existing water production centre will remain operational, after which it will be partly demolished. A part of the old water production is heritage listed and will be renovated.

Future-oriented investments for Kluizen

Water production centre Kluizen draws raw water from unnavigable watercourses in a vast capture area. In the summer period, not enough high-quality surface water is available. Seasonal storage in the reservoirs enables us to bridge this period without the intake of raw water. During prolonged periods of drought, however, water storage in the reservoirs is inadequate to ensure supply security.

Since periods of drought will occur more frequently as a result of climate change, there is a growing need to store more water in the reservoirs. This is why a siphon structure to pump over water has been built on the bank of the diversion canal in Nevele. In the first and second line of Kluizen (oldest part of the water production centre), we are also renewing all existing concrete filter floors. This work was started in September 2015 and will run until early 2017. Due to the phased implementation, drinking water production in this part of the station could continue at half capacity.

Flemish Brabant

Water production centre Vilvoorde

Water production centre Drie Fonteinen in Vilvoorde was taken out of service a few years ago, mainly because of the absence of an iron removal facility. The existing building was also severely outdated. De Watergroep is therefore building a new water production centre that will supply water to 15,000 customers in Vilvoorde. The price is estimated at 1.5 million euros. The water from the extraction in Vilvoorde, which is located in the middle of an urban redevelopment project, originates from the deep and well-protected Chalk Formation of Gulpen. The existing well is 140 m deep and produces water with ideal hardness, but with just a little too much iron. This means

that only limited treatment is needed to fully comply with the drinking water standard.

Water production centre Koevoet

Water production centre Koevoet is being fully renovated. The existing building is being refurbished and the complete electromechanical equipment will be renewed. There will also be a new sedimentation basin. The work is due to be completed by the summer of 2017.



Water production centre Koevoet

Limburg

New water production centre in Velm

In Velm, De Watergroep commissioned a new water production centre and a new reservoir in 2016. This was followed in the spring of 2017 by the start-up of the new softening plant, which uses an environment-friendly technology with grain reactors. This will reduce the amount of calcium in the water originating from four water wells and from the Halingen and Waalhoven sources, without affecting the amount of magnesium. The new reservoir has been integrated into the landscape and offers a magnificent view from the green roof. It has a water capacity of 3,500 m³ and is equipped with new pump installations ensuring a constant water pressure.

Water production centre Vlakenhof

In Maaseik, De Watergroep is building a new water production centre as part of the water supply plan for the province of Limburg. The plan is to provide all Limburg municipalities with softer water in the future. The water that will be pumped up and treated in Maaseik is soft by nature, so that no additional softening is required. The expansion of water production centre Vlakenhof will allow more soft water to be pumped from the extractions in the Meuse valley to South Limburg.

In 2016, construction work on the building continued, after which the electromechanical equipment can be started. Based on the current planning, a larger part of Limburg will have soft water by the beginning of 2018. The total investment cost for the entire project amounts to around €14 million. Large parts of Kinrooi, Maaseik and Dilsen-Stokkem, together with a small part of Maasmechelen, will be supplied from Vlakenhof. The storage capacity for North Limburg will also be significantly stepped up.

Accelerated development of softening plants

In Limburg, De Watergroep is investing at an accelerated pace in five softening plants. They will be put out to tender by 2020 at the latest and together represent an investment of €46 million. The planned commissioning schedule is as follows:

- ❖ Waltwilder: end 2020
- ❖ Tongeren: mid 2021
- ❖ Kortesseem: end 2021
- ❖ Borgloon: end 2022
- ❖ Nieuwerkerken: mid 2023.



Water production centre Velm

→ Geosystems database further refined

The GIS database is a key tool in the management of the 32,630 km of pipes of De Watergroep. In 2016, a number of further refinements and additions were made which benefit its functionality and user friendliness.

Development of first GIS viewer with branch pipes

In 2013, De Watergroep developed a revised overall GIS strategy. Central to this strategy is a GIS database that contains all information about the branch pipe system. Since 2015, we can export that information and provide it with a geographical code based on the address information of the branch pipes. This made it possible to add spatial GIS information, such as the delivery area to the branch pipe information in the ERP system. In 2016, we set up a trial project to geographically visualise the branch pipes. This led to the development of a GIS viewer that allows for the **schematic calculation of branch pipes**.



Image from GIS viewer

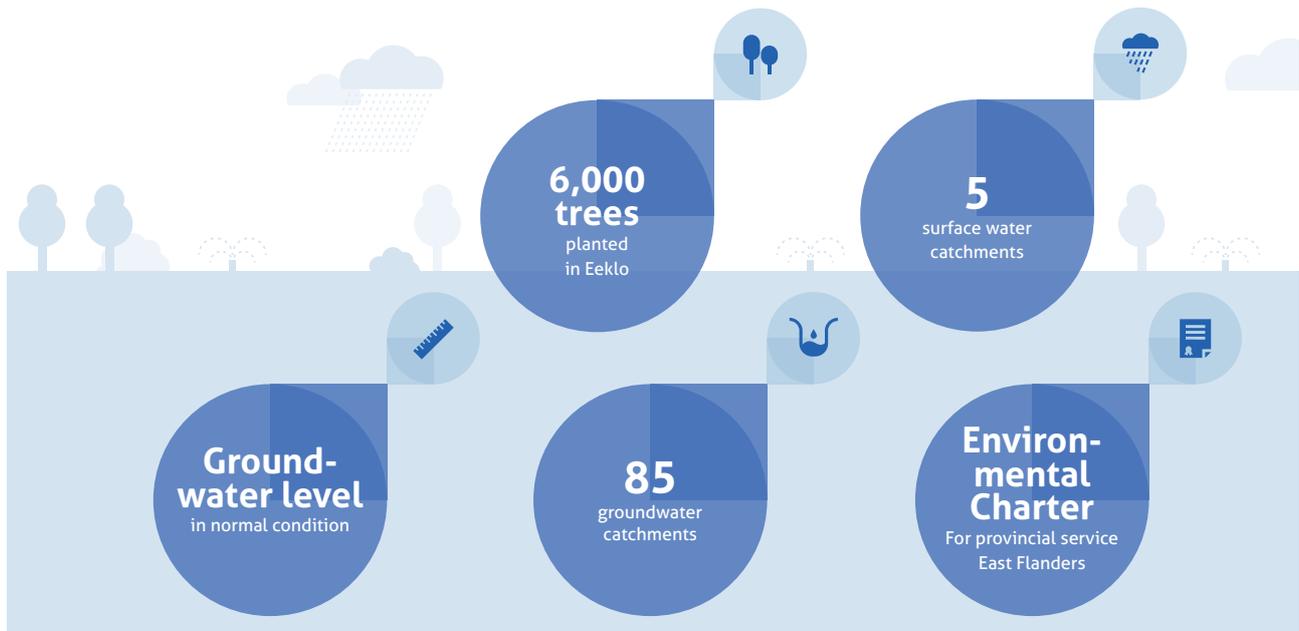
Targeted corrections to network in GIS database

In 2016, the measurement programme of the over 350,000 visible devices of De Watergroep, launched in 2012, was completed. Based on these measurements, De Watergroep will now make targeted corrections to the pipe network in the GIS database.

The next phase in this large-scale implementation will provide De Watergroep with numerous advantages. For example, staff will be able to locate pipes and devices in the GIS viewer more quickly and the use of paper detailed drawings will be drastically reduced. It will also be possible to forward more accurate information about the pipe network to third parties. This should eventually also result in fewer claims arising from excavation operations. In 2016, De Watergroep started with the preparations for the major project on the targeted corrections to the network in the GIS database.

→ Water sources and environment

For its drinking water production De Watergroep depends on natural resources: groundwater and surface water. With a view to the future, we are actively working to secure these sources. After all, sustainable operation is important for the environment, for the quality of the water, and for the available stocks.



Our raw water sources

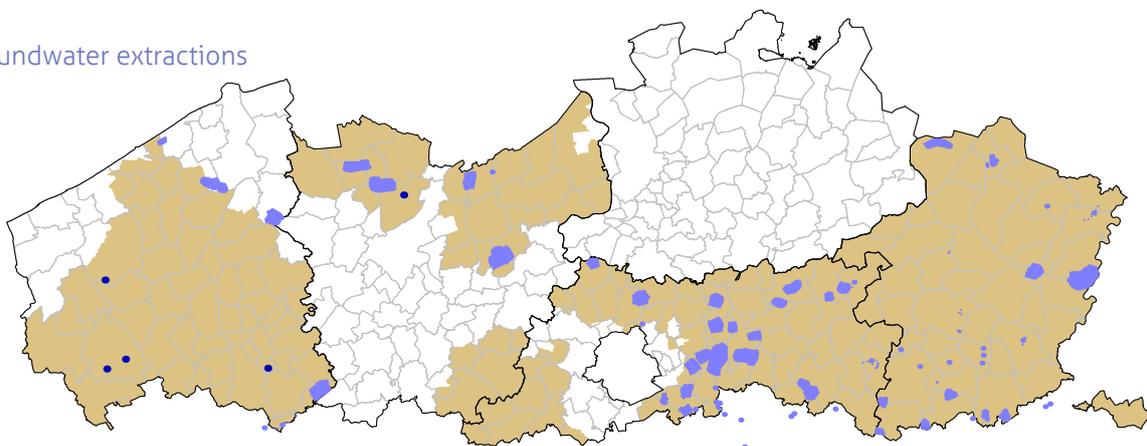
Ninety water extractions

De Watergroep owns 85 groundwater extractions and five surface water extractions. In addition, De Watergroep operates twelve groundwater stations in Wallonia for the Société Wallonne des Eaux (SWDE). The water being produced there is delivered to us.

Most **groundwater extractions** are located in Flemish Brabant and Limburg. The highly productive aquifers present there offer a good extraction potential. The **surface water extractions** are all situated in West and East Flanders. The Pajottenland-Denderstreek supply area, by contrast, has no groundwater and/or surface water extractions. Here, water is supplied via deliveries.

● surface water extractions

● groundwater extractions

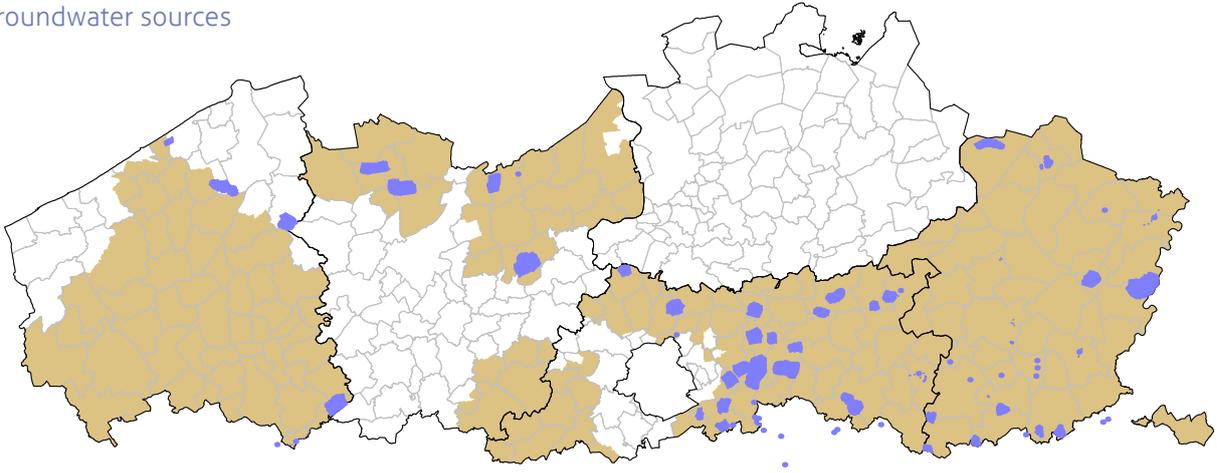


Overview of groundwater and surface water sources

Groundwater sources

The following figure presents an overview of the groundwater sources and their respective protection zones. The SWDE groundwater sources are located just below the linguistic frontier and are marked with a dot.

● groundwater sources



Overview of the De Watergroep groundwater sources and the SWDE groundwater sources operated by De Watergroep

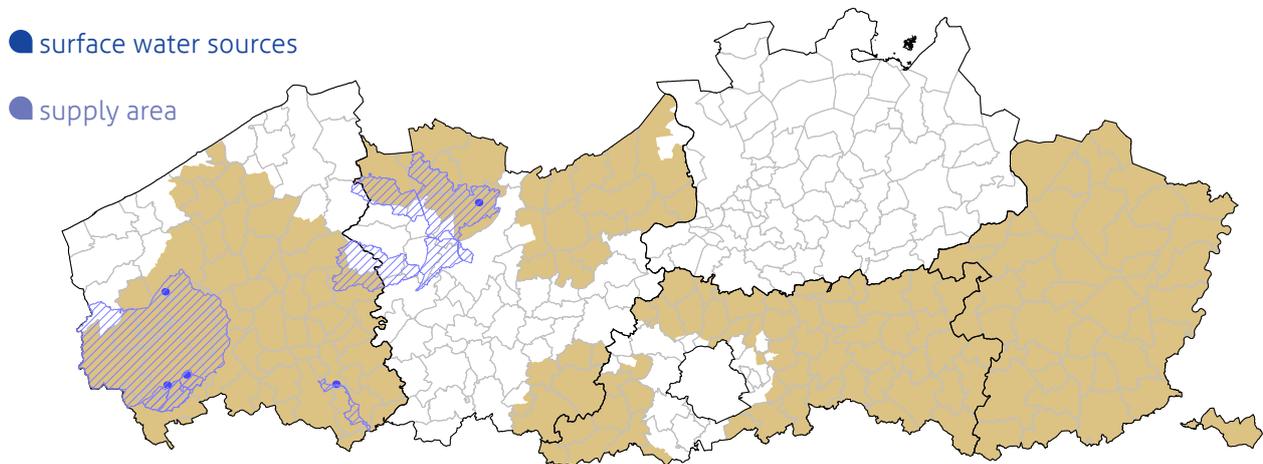
An overview of the licensed capacity of our extractions:

Supply area	Licensed capacity	
	Day	Year
West Flanders	59,300	12,290,000
East Flanders (Waasland-Meetjesland)	29,780	8,870,400
East Flanders (Pajottenland-Denderstreek)	0	0
Flemish Brabant	134,660	48,273,600
Limburg	235,950	80,276,000
Total	459,690	149,710,000

End 2016, De Watergroep had a total licensed groundwater extraction capacity of 459,690 m³/day and 149,710,000 m³/year. To this should be added 81,160 m³/day or 21,590,800 m³/year from the groundwater extractions in Wallonia. To consolidate further sustainable groundwater extraction, tests were started in 2016 for the full automation of the water-level monitoring network. Implementation will start in 2017.

Surface water sources

The following figure presents an overview of the surface water sources with indication of the demarcated capture areas.



De Watergroep operates five surface water catchments. Four of these are located in West Flanders, the fifth is located in the Waasland-Meetjesland supply area.

Overview of surface water sources by supply area:

Supply area	Surface water catchment	Source	Intake capacity		Reservoir capacity m ³	Production capacity	
			Minimum m ³ /day	Maximum m ³ /day		Minimum	Maximum
West Flanders	De Blankaart	Blankaartvijver en Ijzer	0	234,000	3,000,000	15,000	40,000
West Flanders	Zillebeke	Bollaertbeek en Pollepelbeek	Limited	6,000	N/A	0	4,000
West Flanders	Dikkebus	Kleine Kemmelbeek	Limited	6,000	N/A	0	4,000
West Flanders	De Gavers	Kanaal Kortrijk-Bossuit	32,000*	32,000*	N/A	32,000*	32,000*
East Flanders (Waasland-Meetjesland)	Kluizen	Brakkeleike-Burggraevenstroom	0**	172,800	11,200,000	60,000	60,000
East Flanders (Pajottenland-Denderstreek)	Nil						
Flemish Brabant	Nil						
Limburg	Nil						

*: To be increased to 50,000 m³/d

***: In Nevele, up to 500 m³/h of additional water will be siphoned from the diversion canal towards the Burggraavenstroom watercourse, so that in the future water can also be taken in during the summer period (theoretically 12,000 m³/day)

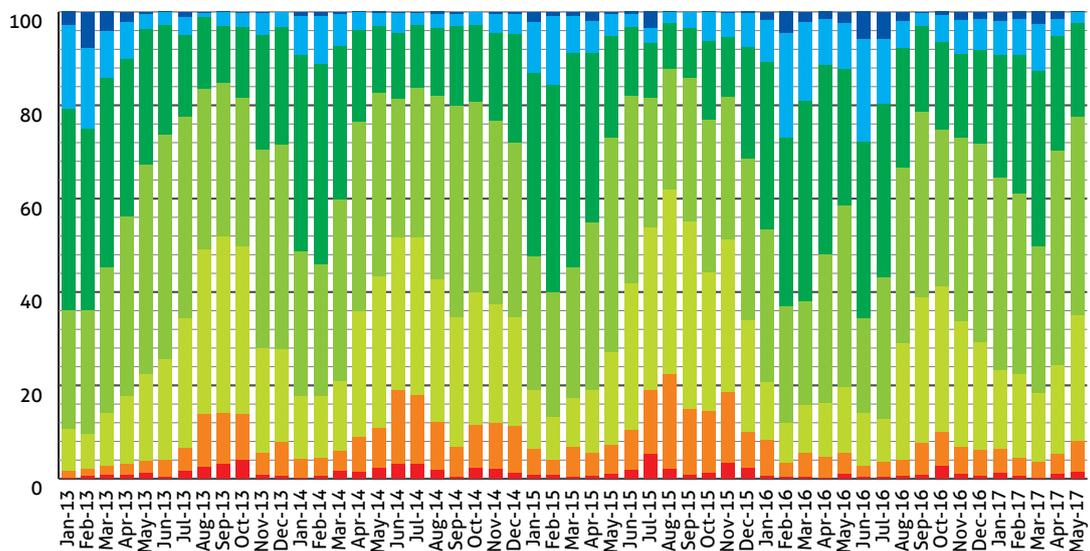
To secure the water supply, it was decided in 2016 to increase the capture capacities of water production centres De Gavers and Kluizen. The capacity of De Gavers will be increased to 50,000 m³ per day. A VITO study showed that sufficient water is available for this purpose in the Kortrijk-Bossuit Canal, connecting the Scheldt and the Leie. For Kluizen, the intake capacity of the two reservoirs having a total storage capacity of 11,200,000 m³ will be increased further to cope with the potential effects of climate change. In Nevele, in collaboration with the Flanders Environment Agency, up to 500 m³ of extra water per hour will be siphoned towards Kluizen.

Evolution of the groundwater level in 2016

Each month, De Watergroep measures around 1,600 groundwater levels in and around its water catchments. 980 of these monitoring sites are inspection wells that are used to monitor the groundwater level. The remaining monitoring sites are wells from which De Watergroep draws water. The Water Sources and Environment department interprets these data using a level indicator to ensure the sustainable management of the aquifers and water catchments.

First more and then less precipitation than on average

In 2016, precipitation totalled 942 millimetres. This figure exceeds the average of 853 millimetres. 68% of the total precipitation fell in the first half of the year. This explains why from January to July there were on average more high groundwater levels than in previous years. There was much less precipitation in the second year half, so that groundwater levels remained low until in December 2016. All in all, conditions could be qualified as normal. The level changes confirm that extraction for **drinking water production is in balance with natural replenishment.**



Evolution of groundwater level

Pilot project for subsurface iron removal in Kessel-Lo

Subsurface iron removal is a technique to considerably reduce the iron concentration in pumped-up groundwater. The iron thus remains in the subsurface, which, first and foremost, benefits the environment. Since less iron will have to be removed by the above-ground treatment facility, less flush is required to rinse the sand filters and there will also be less iron sludge for which a sustainable outlet needs to be found. Finally, iron in groundwater often gives rise to the precipitation of iron minerals in the filters of production wells, requiring frequent regeneration of the wells. Subsurface iron removal bypasses this problem, resulting in substantial cost savings.



Test setup in Kessel-Lo

Test in Kessel-Lo Vlierbeek

Subsurface iron removal involves the injection of oxygen-rich water into the soil. Local soil properties cannot be predicted, but they do determine the efficiency of this technique. That is why in 2016 tests were carried out on the groundwater extraction in Kessel-Lo Vlierbeek. Water was pumped out of a well and then injected, as required by law, into the same layer in the well, after having first

removed the iron flakes through sedimentation and ultra-filtration. In 2016, four such tests were carried out. The results were positive and no geochemical reactions that adversely affect water quality were observed. The tests also provided a better insight into chemical reactions and allow a cost-benefit analysis to be performed.

De Watergroep employees planted 6,000 trees in Eeklo

Healthy forests and nature are a guarantee for good water quality. For the better the natural quality of the water, the less treatment is needed. And less treatment naturally also benefits the environment. That is why in November we planted 6,000 trees at the Aalstgoed water extraction in the forest of Eeklo - one of the 21 forests owned by De Watergroep. On 11 November, 2,500 of these trees were planted by our own employees and their families.

A 38-hectare area in Aalstgoed was thus planted with different tree species which, more than the poplars that originally stood there, contribute to biodiversity. The tree-planting day is further proof that we take our social responsibility seriously. We ensure not only an

uninterrupted supply of high-quality drinking water, but we also do it in a sustainable manner with respect for our natural resources and the environment.



Environmental Charter for De Watergroep West and East Flanders

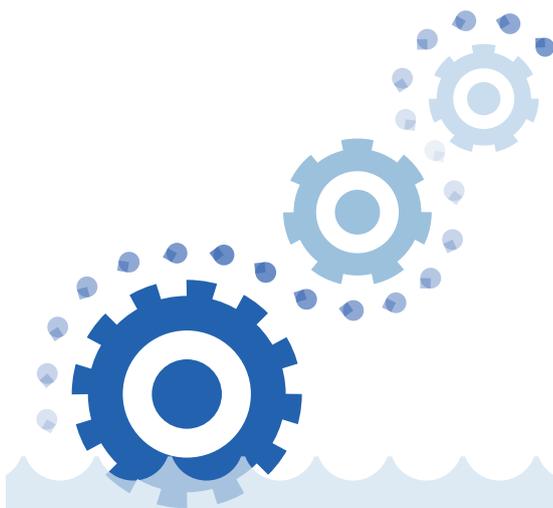
The Environmental Charter is a project of **VOKA East Flanders** that rewards companies that **excel in environmental care** through a number of concrete actions. The provincial water service of East Flanders was awarded the Charter in June 2016, among other things, for the thorough renovation and expansion of the water production centre in Zele, which has been producing soft water since autumn 2016. In addition, there was a broader action plan that guarantees an environmentally friendly business management. A new action was prepared for 2017.

The provincial water service of West Flanders, too, was nominated as candidate for the **West Flanders Sustainable Enterprise Charter**. A screening at the end of 2015 was followed by further elaboration and screening in 2016. The action plan focuses not only on environmental care, but also on well-being and efficient working. The Charter was awarded in April 2017.

For more information visit www.charterduurzaamondernemen.be

→ Water Technology

The Water Technology department prepares water supply plans showing how the water catchments and the water distribution can be used in both normal and disturbed conditions. Those water supply plans are based on network modelling and indicate where new investment projects are required for production and transport of drinking water. Moreover, research is conducted into new environmentally friendly technologies. Our specialists design the complete treatment process for producing water based on groundwater or surface water.



- Pilot project for subsurface iron removal
- More soft water in the future
- Quality modelling supports operation of water treatment
- Pilot project on systematic drainage
- InfoWorks simulates peak days in West Flanders
- Smart measuring systems for household customers
- Valorising our electrical flexibility
- European subsidies for innovative drinking water technology

De Watergroep embeds cooperation with the Dutch KWH Water

In the margins of the Belgian state visit to the Netherlands, De Watergroep joined KWH Water on 28 November 2016, thereby becoming the first foreign shareholder. Until then, KWH Water had only Dutch water companies as shareholders.



De Watergroep had previously joined the collective research programme of the Dutch water companies, Vewin and the KWR research institute (daughter of KWH Water): the **Business Sector Research (BTO)**. The BTO is a worldwide pioneering applied **scientific water research programme** that helps water companies in fulfilling their social mission: to supply safe and healthy (drinking) water.

The shareholdership in KWH Water is interesting because of KWR's extensive expertise in knowledge development, its high scientific quality and the collaboration with international organisations and networks. In the meantime, KU Leuven and UGent signed a Flemish-Dutch Water Knowledge Development cooperation agreement in April 2017, at the initiative of De Watergroep.

More customers will have softer water in the future

De Watergroep aims to eventually supply soft water to all of its customers. To this end, we committed ourselves, among other things, to speeding up work on five new softening plants. Hard water is healthy drinking water, but it does cause comfort issues, especially in hot water applications. When building or renovating water production centres, we always examine whether central partial softening is required as an additional treatment step. Experience from the first pilot projects is integrated into the design of new installations.

A standard design for grain reactors

As standard, De Watergroep uses the technique of softening water in grain reactors for central partial softening. To increase efficiency, the **design of grain reactors** was standardised in 2016, based on the experience with existing installations. The standardisation also takes account of future prospects such as the use of calcite (broken and screened lime pellets) as seeding material. This standardisation allows De Watergroep to embed the knowledge gained and to better integrate future situations into new designs.

Softening and optimisation in Flemish Brabant

The planned purchase of soft water from water-link in Zemst and the construction of two large softening plants will eventually allow soft water to be supplied to a large part of Flemish Brabant.

From 2021, virtually all of our customers in central and north-western Flemish Brabant will receive soft water. This is the result of a contract concluded by De Watergroep under which it will purchase every year around 4 million m³ of water from fellow drinking water company water-link. Water production centre Walem will supply 11,000 m³ per day via a new 14.4 km supply pipe with a 600 mm diameter between Walem and Zemst, where it will be connected to the drinking water network of De Watergroep.

The purchase provides De Watergroep with a solution to solve a number of bottlenecks in the current water production in the region. The water production centres are sensitive both to well clogging and to pesticides and their degradation products. Furthermore, the water catchments in the Voer Valley in Flemish Brabant are particularly vulnerable to pesticides and their degradation products and the water there contains a relatively large amount of calcium, so that central softening is required.

De Watergroep will store the soft water in the Meerbeek reservoir and distribute it from there. Because of the great impact on the water supply in Flemish Brabant, the signature of the contract with water-link in November 2016 was preceded by an extensive analysis.

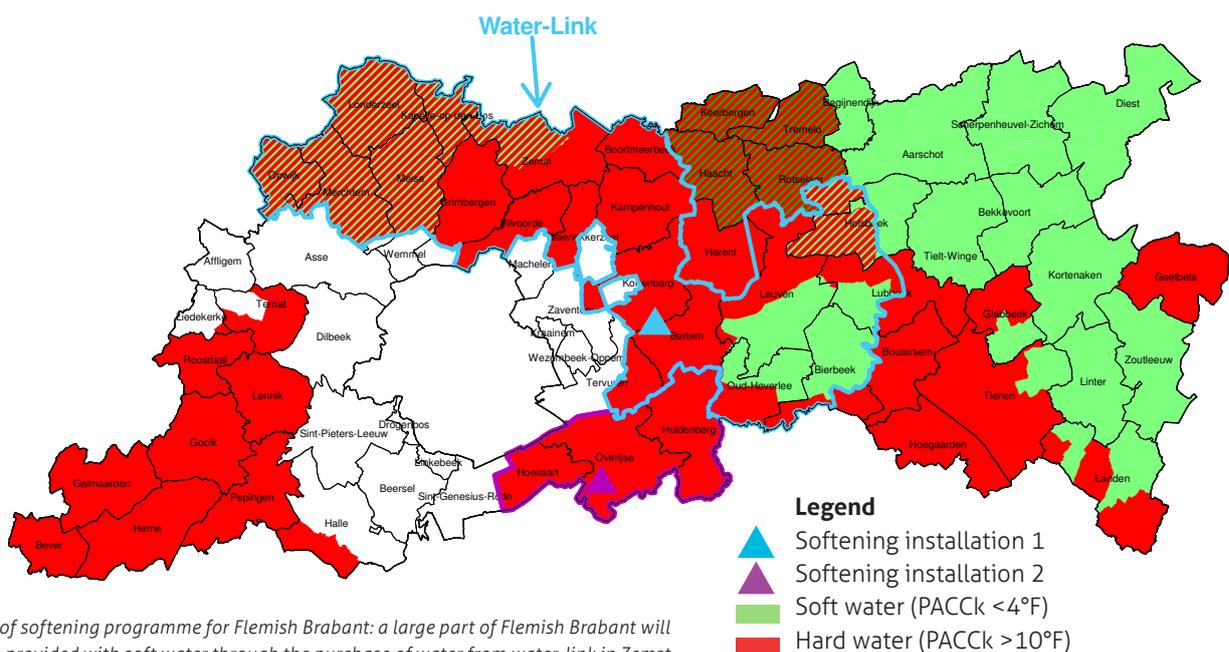
The collaboration with water-link also has an impact on the investment plans for central partial softening in Flemish Brabant. The water that will be supplied from Zemst is soft by nature, so it will no longer be required to soften this water. This obviously has a positive impact on the price tag and on the ecological footprint of De Watergroep.

To allow the water supply from water-link to be fully put into service, De Watergroep will accelerate a number of planned investments, including the construction of a softening plant near **Bertem**, where the region's own water production is treated.

To be able to respond to emergencies, De Watergroep will develop a quick-starting reserve capacity in the existing catchments of the Dyle Valley. In addition, the catchment areas of the Voer Valley will be retained as a strategic reserve, so they can possibly be reused in the long term, for instance as a result of global warming.

Quality modelling supports operation of water treatment processes

In 2016, De Watergroep for the first time used the PHREECQ computer program to simulate and steer drinking water processes. This program is used mainly by geologists to calculate chemical reactions. The Water Technology department expanded the capabilities of PHREECQ. The program can now also be used to calculate the aeration, softening, iron removal, nitrification and dosing of chemicals. This enables us to simplify and make water treatment operations more efficient. In 2016, we developed an interface in Excel that integrates the complete treatment process of the water production centres in Zele and Velm into the program in an accessible manner, so that all water production operators can quickly get started with it.



Map of softening programme for Flemish Brabant: a large part of Flemish Brabant will be provided with soft water through the purchase of water from water-link in Zemst and the construction of two new water production centres in Kortenberg and Overijse.

In 2017, we, together with the operators and the quality departments, will study how the model and the user interface can be optimally used as support during operation.

Pilot project on systematic drainage

In Vlamertinge, near Ypres, De Watergroep initiated an innovative pilot project on systematic drainage involving a minimum of flushing water and a maximum of sediment removal. The objective is to anticipate complaints related to brown water.

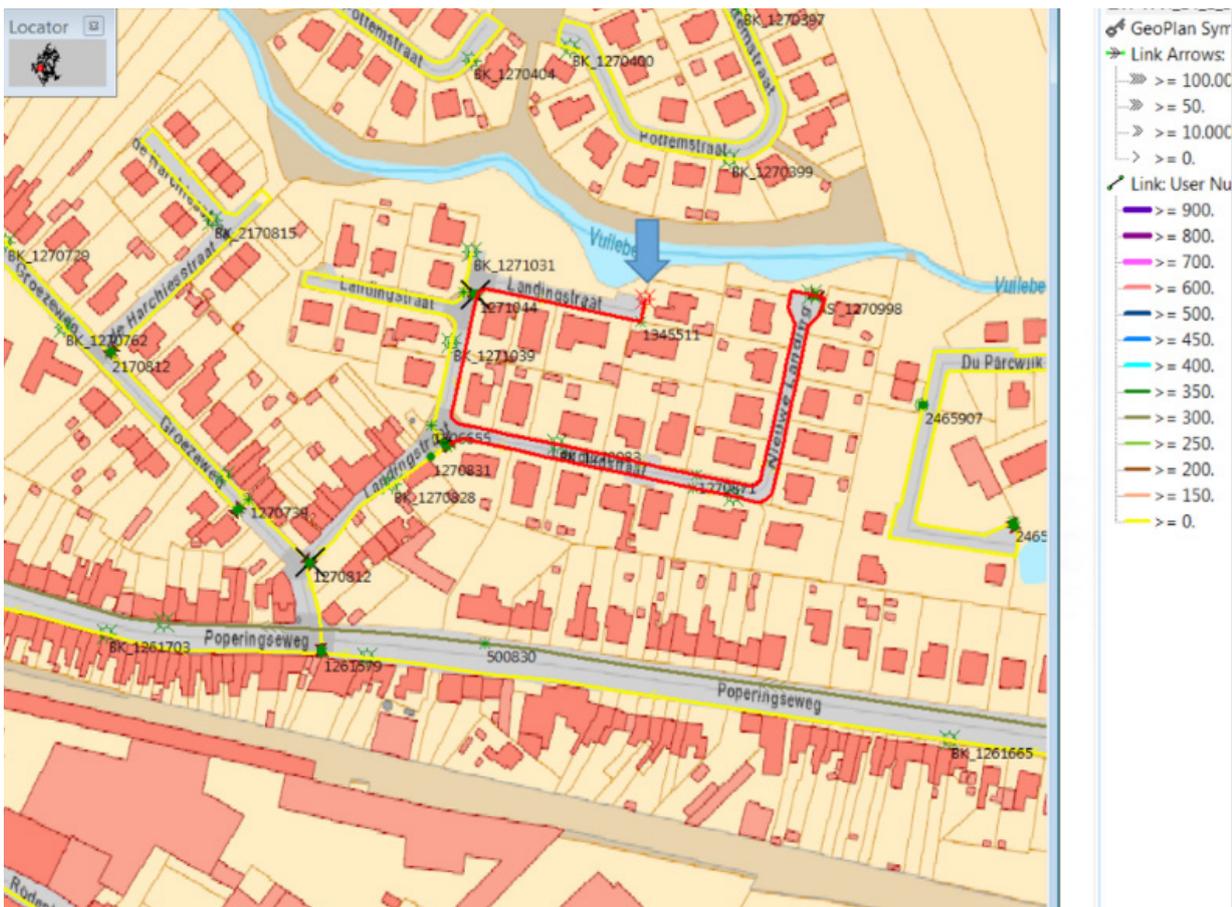
This project is based on the rules of thumb that have been applied for years by KWR, the Dutch research centre. In practice, this was done by simulating different drainage actions in the InfoWorks software package. This allowed us to calculate the effect of the temporary closing of specific valves in combination with the opening of a specific hydrant. This provided us with a clear picture of the flow direction, the flow rate in the pipes and the actual

drainage rate. The exercise was highly successful and opens the door for the general introduction of systematic drainage.

Compact mobile electromagnetic flow meters were for the first time deployed in the field. Not only can they control the drainage rate to be attained, they also record non-revenue water.



Avoid brown water complaints through high-speed sediment removal. The mobile flow meter records flow and volume.



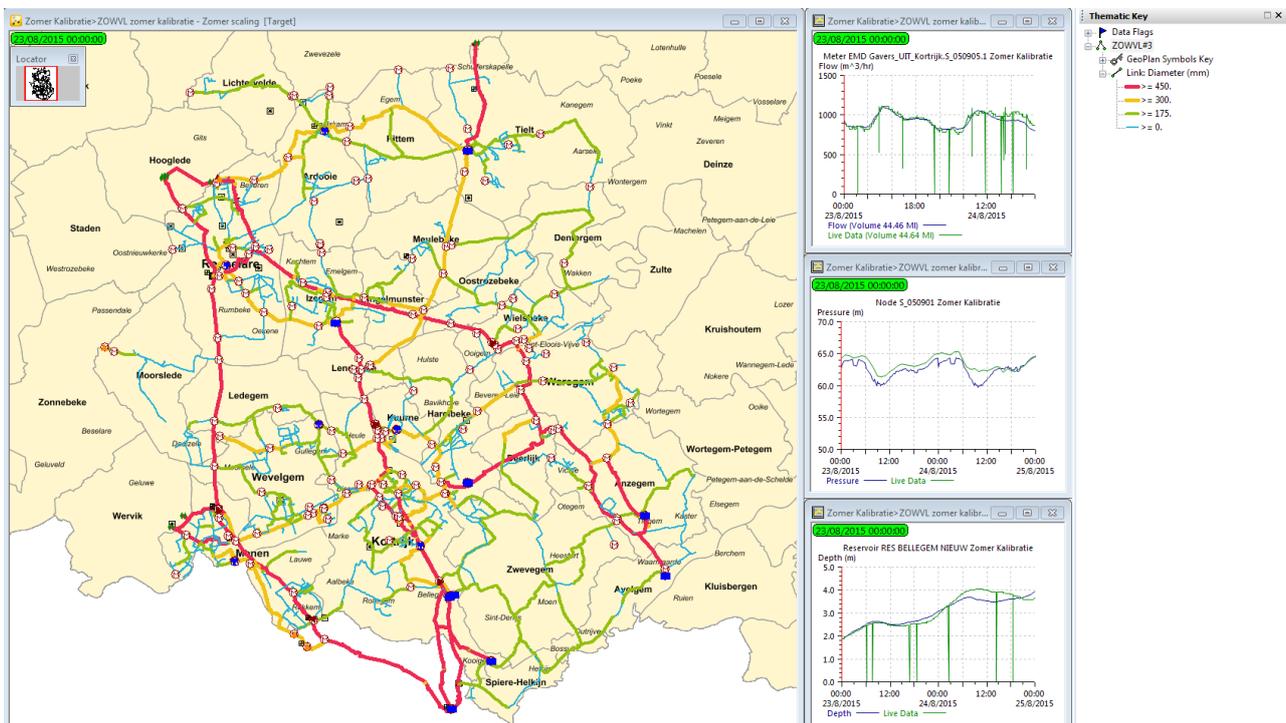
Rinsing action simulation

InfoWorks simulates peak days in West Flanders

The network models of the InfoWorks WS software package simulate average days and peak days in the West Flanders supply area. This allows us to gain an accurate insight into the operation of the pipe network and the installations. Bottlenecks are clearly highlighted: pipes with high friction losses, with stagnant water, or with insufficient pressure on peak days. The models enable us to simulate three successive peak days in order to determine whether reservoirs and water towers will then be empty. In this way, we can assess whether sufficient storage capacity

is available. The network models are also the basis for the supply plans that De Watergroep is required to draw up as part of its public service requirements.

These water supply plans identify bottlenecks that require additional investments or serve as a basis for new licence applications necessary to ensure supply security. As such, they are a major input for the investment plan and supply plan for the long term.



Infoworks

Smart measuring systems for household customers

Smart measuring systems are gradually becoming affordable to household customers. Wireless 'Long Range, Low Power' radio networks are becoming available. In combination with low-power sensors and good batteries, it is possible to set up a smart measurement system that provides the customer with a detailed overview of their water use. In 2016, tests with the currently available protocols,

LoRa and Sigfox, were carried out in Leuven and Tienen. In addition to simply forwarding data on measured water consumption to a database, these smart meters can be used for services that provide added value to customers. Examples include water use analysis and indoor installation leak detection.

Valorising our electrical flexibility

Water networks are able to create buffers via reservoirs and water towers. The Water Technology department uses a smart control for pumping large water volumes and replenishing reservoirs when excess electricity is available on the grid and for switching off pumps in case of electricity shortages. With this so-called demand-response concept, we help electricity grid operators keep their grid in balance. In 2016, this concept was successfully tried out in the pump control to the Meerbeek reservoir in Flemish Brabant.

European subsidies for innovative drinking water technology

Within the **DOC2Cs** consortium, De Watergroep cooperates with PWN Technologies (Netherlands), South West Water (UK) and the universities of Lille and Delft on the development of innovative techniques to remove dissolved organic carbon (DOC), which for all kinds of

reasons end up in the surface water, from drinking water. This cooperation receives funding from the **Interreg 2 Seas programme**, which runs until 2020. The project is a European cooperation programme between Great Britain, France, the Netherlands and Belgium (Flanders). A total of €241 million is provided through the European Regional Development Fund (ERDF) to co-finance projects. The overall objective is to develop an innovative and sustainable area that protects the natural resources and promotes the green economy.

This project leads to an intensive exchange of knowledge and experience between drinking water companies, universities, knowledge centres, contractors and engineering consultancies, all active in surface water treatment. It also opens up market opportunities for technology providers and leads to lower environmental taxes and improved drinking water quality.

More information at www.interreg2seas.eu or doc2cs.com.



→ Cross-border projects

De Watergroep likes to share its expertise to participate also in cross-border drinking water projects in a commercial context. In 2016, we built a drinking water reservoir in Voeren for our Dutch colleagues of WML (Water Company Limburg). We also signed consultancy contracts for the expansion of the drinking water supply system in the Indian city of Mysore and for the construction of a water production centre in Surinam.



De Watergroep and WML collaborated on a new drinking water basement in Voeren

In autumn 2016, De Watergroep commissioned a new drinking water basement (or reservoir) in Voeren. This reservoir is located in Belgium, but has been operated by the Dutch Water Company Limburg (WML) since it was commissioned. After ten years, WML will also become the owner of this reservoir, which ensures the water supply for the WML customers. In case of technical problems, it can also be used for the drinking water supply in Voeren. The reservoir, which allows 2 million litres of water to be stored in two basins, provides higher supply security for customers of both WML and De Watergroep.

De Watergroep helps Indian city in sourcing drinking water

On 26 April 2016, during the Flemish trade mission in Mumbai, India, Director General Boudewijn Van De Steene signed a cooperation contract with Indian investment group IL&FS (Infrastructure Leasing & Financial Services Limited). Under this cooperation, De Watergroep will provide advice on the expansion of the drinking water infrastructure in part of Mysore, a city in the south of India with over 700,000 inhabitants. The project covers the construction of 600 km of drinking water pipes and 70,000 take-off points. The total project, which will take two to three years to complete, is worth around \$35 million. In India's rapidly growing economy, drinking water supply continues to be a source of numerous problems. Some districts on the outskirts of big cities, for example, have water, which is also often contaminated, for only one hour on no more than two days a week.



Drinking water basement in Voeren

De Watergroep builds water production centre in Surinam

In Commewijne (Surinam), De Watergroep is building a water production centre with a capacity of 500 m³ per hour that will supply drinking water on the basis of surface water from the Surinam River, using a combination of ultrafiltration and activated carbon filters. It will provide 50,000 inhabitants, who now have their drinking water supplied by road transport, with high-quality drinking water. The contract signed for this purpose in early 2017, confirms that De Watergroep is broadening its activities and using its know-how also in commercial projects in Belgium and abroad. De Watergroep will be the first Flemish drinking water company to build an installation of this size with state-of-the-art technology abroad. De Watergroep provides training to employees of the Surinam Water Company (SWM) to operate the installation, but will also continue to monitor the management for the first ten years following its commissioning.



Collaboration with IL&FS

Waste Water

Riopact brings together the expertise of two experienced partners in waste water management: De Watergroep and Aquafin. Municipalities that partner up with Riopact also participate in the expansion and maintenance of their sewerage system. They can choose from a variety of services, ranging from a total package to specific tailored services. Only when waste water is maximally purified can water again be assigned a central role in our environment.

Together we are building a healthy water environment where it is good to live.

Since 2012, Aquafin and De Watergroep have joined forces in Riopact. Together they provide an extensive range of services to assist cities and municipalities in ensuring compliance with the European Water Framework Directive by 2027. Already **64 municipalities** have placed their trust in Riopact. Each partner within the partnership

assumes the tasks in which it is specialised. This guarantees efficiency gains that also benefit the members. Now, more than ever, municipalities are a genuine partner in the sewerage story. This is also reflected in the baseline "partner in local water management".

→ Opwijk 16th Riopact partner

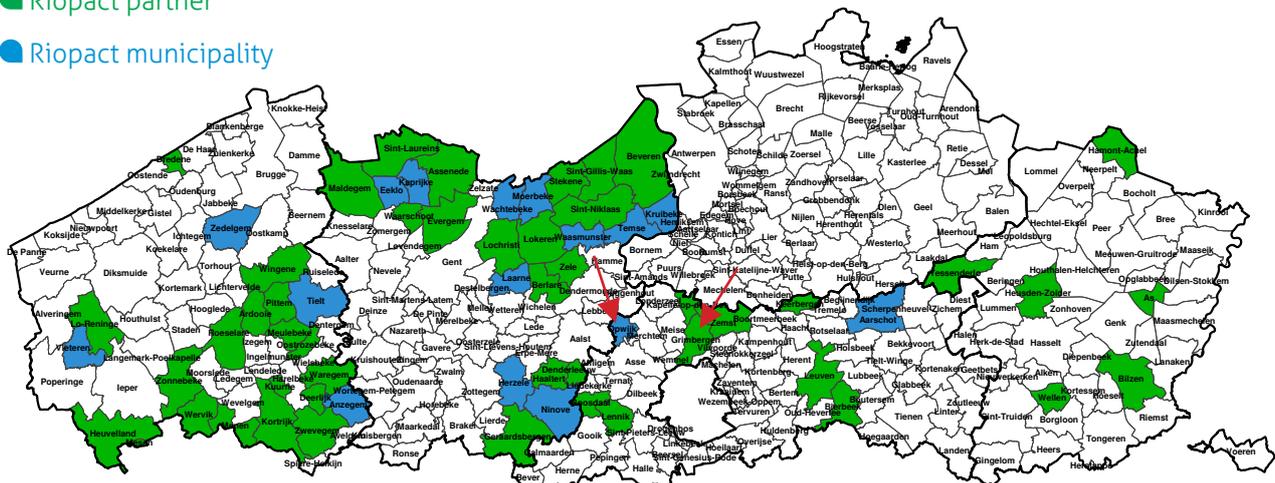
When a municipality joins the Riopact partnership, Riopact assumes all of the municipal sewerage duties. Riopact also sees to the financing of the investment projects, and applies for the necessary subsidies. This membership formula was set up to enable municipalities to achieve the Flemish waste water objectives in a timely manner. These objectives are in turn the result of the European Framework Directive on Water. In 2016, **Opwijk** joined as a member of Riopact, bringing the total number of Riopact members to 16.

Individual accounts for each municipality. All the resources that a municipality receives or makes available for sewerage works are used only for that municipality. As remuneration for the contribution of their sewerage system, the municipalities are given the opportunity to receive a percentage of the economic value of their sewerage in cash, with the remainder being paid out in shares.

→ Grimbergen becomes a Riopact municipality

In 2016, the municipality of **Grimbergen** signed an agreement with Riopact, bringing the total number of Riopact municipalities to 48. Riopact municipalities choose for customised sewerage development and sewerage management. The municipality remains the owner of the infrastructure and determines itself the objectives and priorities of the partnership.

- Riopact partner
- Riopact municipality



Riopact municipalities and partners

→ Rainwater plans: an important step towards a sustainable water policy

The changing climate causes the groundwater level to rise in winter. The rising groundwater level causes watercourses to overtop their banks. In summer, there are increasingly heavy showers leading to increased flooding of streets. This makes waste water management much more complex. Municipalities cannot confine themselves to draining rainwater, they need concrete rainwater plans. Riopact has all the expertise in house to assist municipalities in the preparation of their rainwater plan. We can simulate the impact of showers of different intensities to propose the right solutions for an appropriate rainwater plan to be drawn up for the municipality. Each municipality has its own building density, relief and watercourses, which means that such a rainwater plan calls for a truly customised approach. Riopact has extensive knowledge of the area, allowing us to look beyond municipal boundaries. This is necessary, because an

intervention in one municipality may have an impact on the water management in another municipality.

In 2016, Riopact started on the preparation of a rainwater plan for the following municipalities:

- ❖ Aarschot
- ❖ Geraardsbergen
- ❖ Kortrijk
- ❖ Leuven
- ❖ Lochristi
- ❖ Lokeren
- ❖ Opwijk
- ❖ Stekene
- ❖ Tessenderlo
- ❖ Zemst.



16 Riopact members (+1)

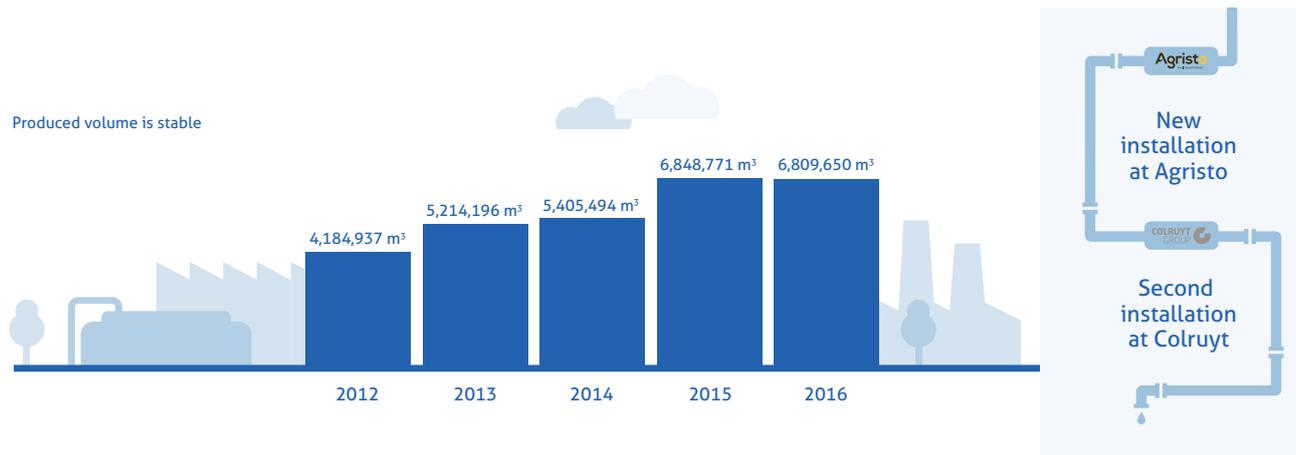
48 Riopact municipalities (=)



10
municipalities
with rainwater
plans

Industrial Water

Many companies are large water users who choose to entrust the management of their water resources to a specialised partner. They increasingly call upon the expertise of De Watergroep to optimise their internal water flows or to customise the supply of process water for their production processes. Within De Watergroep, the Industry & Services business unit guarantees the proper implementation of these industrial projects. In 2016, too, they gathered up some impressive references. The annual volume of produced industrial water remained unchanged at 6.8 million m³.



→ New installation at Agristo

Since it was established in 1986, the family-owned Agristo has developed into a powerful Flemish player in the market of frozen French fries, croquettes and potato dishes. Alongside sites in Harelbeke, Nazareth and Tilburg (Netherlands), Agristo is currently developing an entirely new production site in Wielsbeke. Potato processing requires large amounts of high-quality water for such operations as washing, peeling, cutting and blanching. A considerable amount of water is also needed to generate process steam. Agristo consumes more water every year and has entrusted the management of all its water flows to De Watergroep.

We are currently building an installation for the supply of low mineralised water, due to be completed in autumn 2017. For this purpose, water from the Leie is used, which arrives at Agristo via a 1,600 m raw water pipe, to which also other companies can eventually be connected.

→ Second installation at Colruyt

In 2016, the Industry & Services business unit built a plant for the reuse of rainwater for the new site of Colruyt Group Fine Food Meat 2 in Halle. 70% of the rainwater is converted to drinking water quality through ultrafiltration, activated carbon filtration and post disinfection. De Watergroep is also responsible for operations and maintenance. This new site in Halle will be used for the production, cutting and packaging of cold meats, catering dishes and vegetarian products and is set to become the largest cold meat producer in Belgium. Previously, De Watergroep built a process water installation for Colruyt's meat processing division.

The new installation in facts and figures

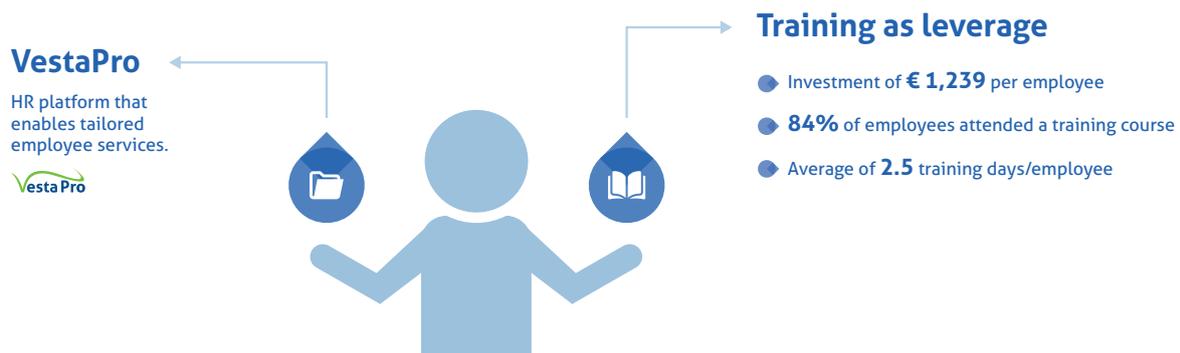
- ❖ Peak production: 10 m³/hour
- ❖ Purification = average annual water consumption of 120 households
- ❖ Treatment: ultrafiltration + activated carbon filtration + post disinfection
- ❖ 70% of rainwater converted to drinking water quality
- ❖ Only 1% rainwater ends up in the sewerage system.

For more information visit www.dewatergroep.be/colruyt



For And By People

In the digital era, too, organisations live and grow thanks to the talent and commitment of their employees. That is why De Watergroep focuses not only on better electronic processes, but also on advanced training and development projects for its employees. We are resolutely committed to establishing a long-term relationship with colleagues, customers and members.



→ New HR platform provides room for tailored services

VestaPro, the HR platform that we prepared in 2016, allows employees of De Watergroep to view and edit all information relating to their personnel records online. They can also submit all kinds of applications online to the HR department. VestaPro will eventually also be used

for other HR tasks such as recruitment and selection, functioning, evaluation and career guidance. This digitisation provides the HR department with more room to offer tailored services to employees, for example in the areas of training, career guidance and knowledge sharing.

→ More than eight in ten employees attend training programmes

Employees of De Watergroep can choose from a **wide range of training programmes**. Some are generic, but most are custom-made. In 2016, special attention was paid to our 55-plus employees and to the development of a **leadership culture** as a lever for creativity, result orientation, and continual improvement. The three-day training course "Leadership and Communication for Managers" was completed in 2016 and will be reviewed annually. In 2016, 84% of our employees attended training programmes.

Work processes are increasingly being digitised. We want to support our employees in this area by offering training that benefits them both within and outside De Watergroep. In autumn 2016, the focus was on customised MS Office training for staff who regularly work with a computer, alongside training in basic PC skills for digi-starters. The latter can also contact digi-experts on the work floor. This in-house knowledge sharing and collaboration aptly reflects our corporate values of team spirit, care and commitment.

To safeguard our technological lead, all managers, in consultation with their team members, determine what **technical training courses** are most relevant in this respect. However, our HR policy also pays special attention to the development of **personal skills**.

For its training courses, De Watergroep mainly relies on external training centres. Technical training courses are provided by our in-house experts.

Some key figures:

❖ In 2016, De Watergroep invested over €1.8 million in training, i.e. €1,239 per employee.

❖ 84% of all employees took part in a training activity, representing a total of 25,303 training hours or 2.5 training days per employee.

→ A new water bill and the first tariff plan

De Watergroep used different channels to communicate and clarify the **new tariff structure**, and the calculation of the new water bill from 1 January 2016 in particular. This was done in part in collaboration with our umbrella organisation AquaFlanders. The new structure was also explained to the stakeholders. The provincial water service of West Flanders organised info sessions for its public social welfare services to clarify the new tariff structure and the operation of the Local Advisory Committee.

In 2016, all Flemish drinking water companies for the first time submitted a **tariff plan** with tariff path for the next 6 years to the Water Regulator, VMM. The plan clarifies

the expected price for production and delivery of drinking water. It takes into account the will to safeguard the quality and quantity of raw water as a raw material and to improve the service. The latter is possible by supplying soft water, but also through a better customer contact experience and less inconvenience during works. The tariff plan also takes into account the additional resources that are needed to draw up water security plans, the increase in peak consumption, and the fact that large parts of the water distribution network are in need of replacement. The 2017 tariff was determined on the basis of the tariff plan.

→ Improved e-platforms for customers and staff



In mid-2015, De Watergroep commissioned Neptunus, the new company-wide software platform. With this new **ERP system** all business operations run on the same technology standard: Microsoft Dynamics AX. This increases efficiency and accelerates customer processes. It also allows us to better plan and monitor interventions, and run specific procedures digitally and automatically. The Octopus and Horizon programs also run under this platform. The first is a uniform database for work planning and follow-up, the second covers all financial processes, procurement and logistics, project management and asset management.

The upgrade carried out by Neptunus in early 2016, enabled De Watergroep to send out water bills based on the new structure. In 2016, we also did a great deal of preparatory work in order to launch a fully fledged **e-counter as part of our overhauled website** by the end of 2017. This will enable our customers to complete their main transactions fully online. Since early 2017, they can already view, archive and pay all their water bills via **Doccle**. Applications for direct debit can also be submitted through this platform. Registration is possible via www.dewatergroep.be/doccle.

In 2016, we also prepared the transition to the 'mobile office' or **MoKa**. As from 2017, hydrant men, index readers, inspectors and meter replacement men will gradually switch to a tablet for processing their tasks. This will not only provide them with more information in the field, it will also require less administrative post processing.



→ Sectoral service centres will in future work by appointment only

From 1 July 2016, staff of the sectoral service centres of De Watergroep will receive customers by appointment only. This allows us to offer our customers a **better tailored service**.

De Watergroep resolutely opts for **digitisation**, allowing the customer to obtain the necessary information without

any physical travel. Our website contains all information related to water bills, new supply units, relocations, etc. Those who wish to drop by for additional information or to discuss more complex matters, can make an appointment at our service centres or, where appropriate, on site.

→ Product promotion: tap water in the spotlight

As part of its sustainability policy, De Watergroep is fully focused on the promotion of tap water. In the summer of 2016, for instance, we commissioned a third water bar, which is also used at many sports and cultural events. We expanded the Drink Tap Water (drinkraantjeswater) project from Limburg to the entire catchment area of De Watergroep.

Herman Verbruggen is mentor of Drink Tap Water

To firmly promote the budget-friendly and environment-friendly character of tap water and convince our customers of its quality, De Watergroep was able to hire famous actor and TV personality Herman Verbruggen as mentor. On April 22 - Earth Day - he announced the expansion of the Drink Tap Water project and invited everyone to start drinking water from the tap.

The idea was to work with a famous Fleming who not only conveys the message, but also effectively applies it. Herman Verbruggen fits the bill perfectly. "We find it natural to have tasty and healthy water coming out of the tap 24/7, but as many as 660 million people in this world have no access to clean water," he says. Tap water is also the most rigorously controlled food product and is delivered to our home without any packaging. In other words, there is absolutely no reason not to drink it!

Under the motto "Never too young to learn", schools can sign up to a charter whereby they undertake to promote tap water among their pupils. Het Beverbos, a municipal primary school in Lichtervelde, was the first school to join the initiative.

Drinking tap water is a very basic form of waste prevention. Tap water requires no packaging or transport. As a result, CO2 emissions in the production of tap water are 500 times lower than for bottled water. On 1 July 2016, IDM, an East Flemish intermunicipal company, joined the Drink Tap Water project as partner. Limburg.net has been a founding partner of the project since 2009.

To further clarify our attitude towards tap water, Drink Tap Water organised a drinking water survey in autumn 2016. This survey is the basis of future actions.

More information is available at www.drinkraantjeswater.be



→ Complaints are an opportunity for improving services

Sustainable work also means taking comments and complaints very seriously. Of the 1,310 complaints received and declared admissible in 2016, 632 were founded. A solution was found in all cases but seven. These complaints help us identify where we can further improve our services and are at the basis of concrete action plans.



Complaints in 2016

The slight increase of 4% in the number of complaints compared with 2015 is due to the increased activity and the fact that customers know that De Watergroep takes complaints seriously and always tries to solve them. De Watergroep distinguishes complaints related to:

- ❖ customer issues,
- ❖ communication issues,
- ❖ technical issues,
- ❖ water quality issues.

In the first group, the majority of complaints pertained to incorrect billing, late repayments or unprocessed change of address notices. In the second group, the main stumbling blocks were unfriendly staff, insufficient or inaccurate information, and late replies to correspondence. The first and foremost objective is to find solutions to the complaints.

Previous complaints served as the basis for various action points for 2016. Thus, work was started on the

development of a solid e-counter and on the further renovation of the pipe networks in the Wingene region. De Watergroep also performed additional monitoring of the work carried out on private properties by contractors acting on behalf of De Watergroep. The number of complaints in this category could thus be reduced drastically.

Based on the complaints received in 2016, new action points have been formulated for 2017. These include a digital handbook "water sales regulations" and a training for new customer service employees. The e-counter and the revamped website will go online by end 2017. We are also examining what conclusions can be drawn from the results of the customer survey that was conducted at the end of 2016. In addition, together with the public social welfare centres, De Watergroep will actively participate in the development of a Code of Good Practice on the operation of the Local Advisory Committees, as a step towards adopting a customer-oriented approach.

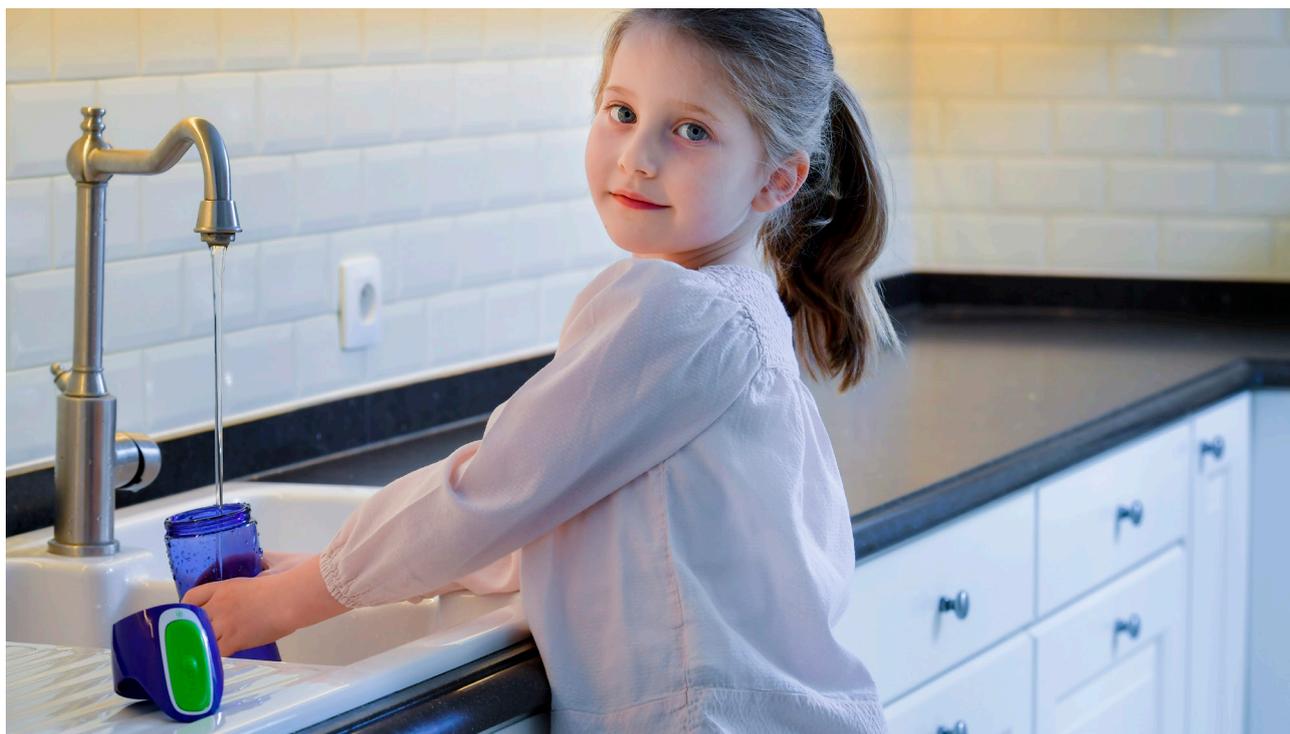
→ IWA: International Water Statistics 2016

De Watergroep is a member of the International Water Association (IWA), a global network of water professionals, where it leads the Statistics working group within the Specialist Group on Statistics and Economics. De Watergroep coordinates the biennial report "International Statistics for Water Services" issued by this working group.

The report summarises the results of a global study on abstraction, consumption, tariff structure and regulation of water services. The focus is on domestic water consumption.

The Marketing department of De Watergroep collected data from 40 countries (including Belgium) and 170 cities. It is the first time they succeeded in gathering information from all five continents. The end result can for the first time be viewed online via a user-friendly website.

For more information visit the IWA Statistics platform at www.waterstatistics.org.



De Watergroep in dialogue

→ Open days, Visits and Events

❖ Visit by Ethiopian student (25 January 2016)

Bacha Kebede Debela conducted doctoral research at the university of Leuven on the water supply in Oromia (Ethiopia).

❖ Visit 'Thinkers Programme' on water and climate change (9 March 2016)

❖ World Water Day (22 March 2016)

On 22 March, De Watergroep opened the doors of the water tower in Koolskamp to local students. You could also spot our water bar in Leuven and a water tasting event was organised on the Market Square in Hasselt.

❖ Vlarlo Day (22 March 2016)

Central question: "How can a municipality make sewage visible to its citizens?"

❖ Extension Drink Tap Water project (Earth Day, 22 April 2016)

The extension was announced by Herman Verbruggen, project mentor.

❖ Open Day water production centre Eisden (24 April 2016)

With demos on pesticide-free waste management, in collaboration with WMM.

❖ Visit from India (10 May 2016)

❖ Visit from Dutch drinking water company VML (03 June 2016)

They visited the water production centres in Velm and Bree.

❖ Open Gavers Day (28 August 2016)

De Watergroep took part in this event with the water bar and an info stand.

❖ Opening renovated water production centre in Zele (28 September 2016)

❖ Open Company Day (4 October 2016)

De Watergroep opened the doors of its water production centre in Velm to the general public. People could also witness our Drink Tap Water project on the sites of IDM, the waste intermunicipal company.

❖ Thematic week on water in Avelgem (11 & 13 October 2016)

Students from Avelgem were given the opportunity to visit De Watergroep's water catchment area in Waarmaarde.

❖ World Hand Wash Day in Leuven (15 October 2016)

Hands were washed symbolically under a tippy tap, an alternative to a running water tap, which is used in developing countries. In collaboration with Protos and the Hubi & Vinciane Foundation.

❖ Tree Planting Day in Eeklo (11 November 2016)

Employees of De Watergroep planted 6,000 trees at the Aalstgoed water catchment site in Eeklo.



World Water Day



Opening Zele

→ Symposiums, conferences and partnerships

❖ Long-term cooperation with NGO Protos

- * Better drinking water supply for Ituri (DR Congo)
- * Support for sustainable development in Surinam (Galibi)

❖ Riopact continues to expand

- * Opwijk becomes 16th Riopact partner
- * Grimbergen becomes a Riopact municipality

❖ Vlaro Day (22 March 2016)

Central question: "How can a municipality make sewage visible to its citizens?"

❖ Shareholder in AquaMinerals (previously: Reststoffenunie) (since 1 January 2016)

❖ Conference on water security plans in Milan (15 January 2016)

Tom Diez, Water Sources and Environment department, explained De Watergroep's experience with water security plans.

❖ Symposium Becetel (Affligem, end November 2016)

Lecture by Jo Stiers: Sustainable cladding of steel structures.

❖ International Water Week in Singapore (end July 2016)

Some colleagues went to Singapore to give a lecture on the De Watergroep's approach to protecting surface and groundwater from contamination.

❖ IWA Brisbane (World Water Congress)

❖ Accession to the Dutch KWH Water

De Watergroep thus becomes the first foreign shareholder.

❖ KWR (Watercycle Research Institute)

Thematic group on sustainable sources and water systems, working group on business sector research into microbiological analysis methods.

❖ Synductis

Partnership to coordinate infrastructure works of different utilities. The utilities involved are: De Watergroep, Infrac, Eandis, FARYS, IWVA, IWVB, Pidpa and Proximus.

❖ DOC2Cs

With subsidies from the Interreg 2 Seas programme.

❖ Co-operation with water-link

In the future, De Watergroep will purchase water from drinking water company water-link for part of its water supply in Flemish Brabant.

❖ Flemish Knowledge Centre Water (Vlakwa)

❖ Contact group filtration (with Pidpa and Dutch drinking water companies)

❖ Thematic groups KWR research institute

❖ KIWA Gastec

❖ Ceocor

❖ Technology Approval Group TAG, link with young innovative companies

❖ Wireless Community (secretariat: IMEC Leuven)

❖ Water supply & sanitation Technology Platform, WssTP: link with EU

❖ IWA and Belgian arm B-IWA

❖ AquaFlanders

Intense collaboration within the umbrella organisation of the Flemish water sector.

❖ Belgaqua

Including the Hydrocheck working group (inspection of materials that come into contact with drinking water).

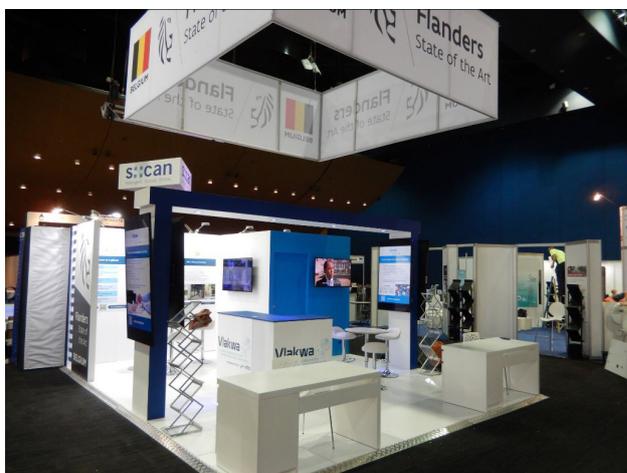
❖ Aqua Publica Europa

❖ EBC (European Benchmarking Co-operation)

Benchmark for drinking water distribution and waste water sanitation, collaboration launched with SWDE to analyse the common results.



Vlaro Day



IWA Brisbane

- ❖ **FITA (Flanders International Technical Agency)**
Frederik Looten sits on the Board of Directors
- ❖ **GIPOD & KLIP**
De Watergroep participates in the development of GIPOD (Generic Information Platform Public Domain) to exchange digital information on works in the public domain. More information at www.agiv.be/producten/gipod and www.klip.be
- ❖ **Aqua Publica Europea**
De Watergroep is a member of Aqua Publica Europea, an association founded to promote public water management at European level. De Watergroep is the initiator of the R&D working group. The members of Aqua Publica Europea provide drinking water and sanitation services to 50 million citizens in Europe.
www.aquapublica.eu
- ❖ **Knowledge exchange contacts with foreign drinking water companies**
e.g. Vitens and WML (NL) and Sedif (F).
- ❖ **BCM network of the Flemish government**
De Watergroep joined the knowledge sharing network BCM (business continuity management) of the Flemish government. This network focuses on good business continuity plans against the backdrop of a possible electricity shortage.
- ❖ **Biotreat**
European project for the development and evaluation of microbiological treatment techniques for the removal of low concentrations of pesticides from groundwater.
- ❖ **TAPES (Transnational Action Programme on Emerging Substances)**
European project for new contaminants.
- ❖ **Various specialised working groups on water analysis**
For the introduction of new analysis methods as part of the recognition procedure (preparation of method specifications in VITO's Water Compendium).
- ❖ **NORMAN network**
Advising the European Commission on new problem substances in water.
- ❖ **Contact group wells**
Exchange with Dutch drinking water companies
- ❖ **International Scheldt Commission**
Within the Scheldt Commission, De Watergroep participates in different working groups (water quality, water quantity, etc.) and is part of the Flemish delegation.
www.isc-cie.org
- ❖ **CIW (Coordination Commission on Integrated Water Policy)**
Working groups on water assessment, ecological water management, groundwater, surface water, objective and monitoring, water quantity.
- ❖ **CEEP (Central Europe Energy Partners) Working Group on Water**
- ❖ **Technical Working Group Transhennuyère**
- ❖ **Universities** (UGent, KU Leuven, Ulg)
- ❖ **Belgian Committee for Hydrogeologists**
- ❖ **Vlaamse Raad van Netbeheerders (Flemish Council of Network Managers)**
- ❖ **Vlario** (Consulting platform & knowledge centre for sewerage and waste water sanitation professionals in Flanders)
- ❖ **GRB Council** (Large-scale Reference Database)
- ❖ **IAH** (International Association of Hydrogeologists)
- ❖ **Association of Flemish Environmental Professionals**
- ❖ **Kortom** (Association for Government Communication)
- ❖ **BVIC** (Belgian Association for Internal Communication).



De Watergroep

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