Royal Heijmans N.V.

2024

Water impact document
('WATER RAAKT!')

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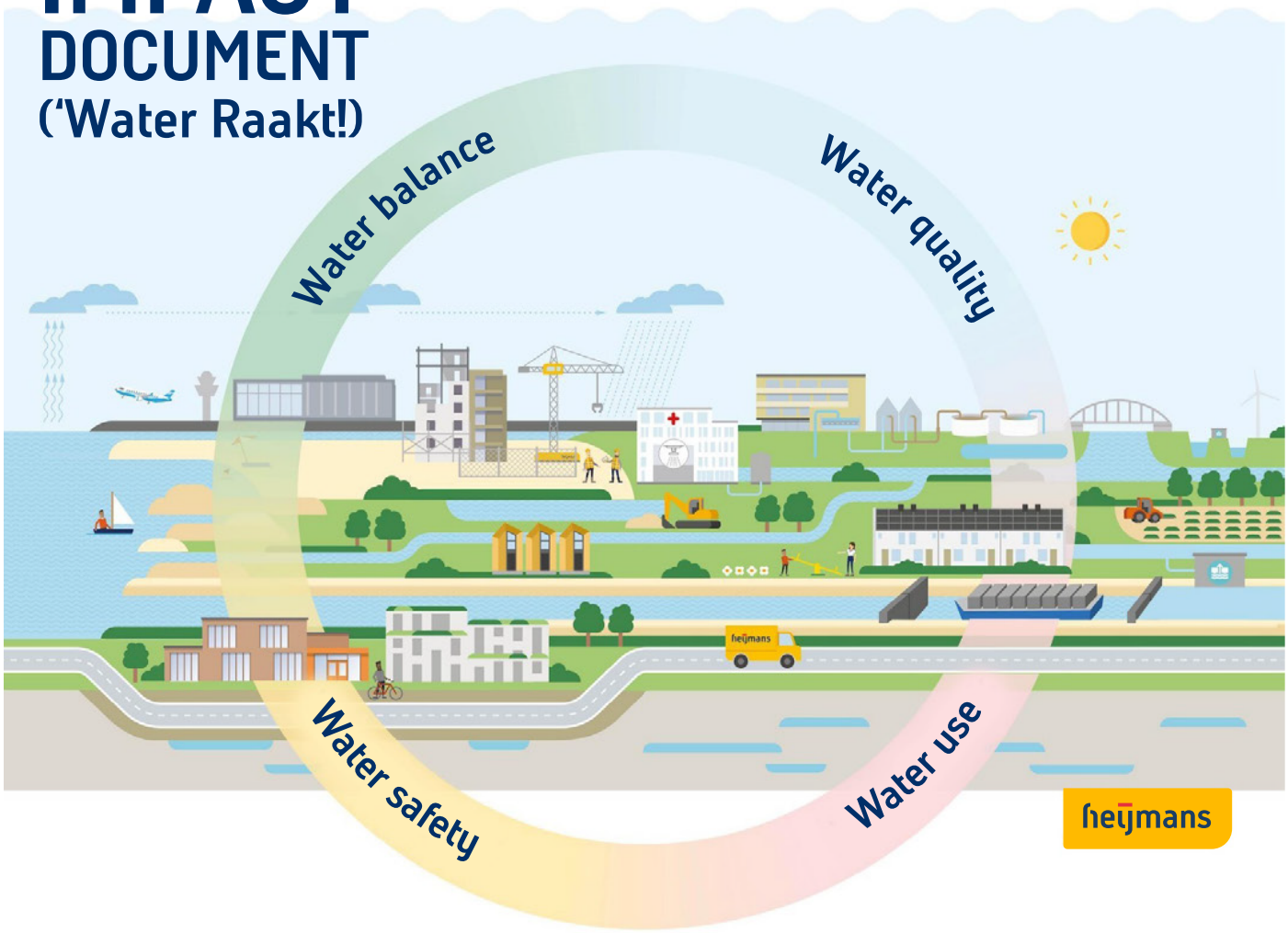
WATER IMPACT DOCUMENT ('Water Raakt!)

We come into contact with water in almost all our work. Heijmans can only handle water carefully by considering the entire water circulation process.

We are the creators of a healthy living environment. We ensure sufficient, clean and safe water for people, plants and animals.



Balance

Sustainable, local & customised

- Usage and savings
- Retention and infiltration
- Storage and discharge

Quality

Natural & healthy

- Contamination prevention
- Biological and chemical improvement

Use

Clean & protected

- Protection of the freshwater supply
- Use of drinking water

Safety

Resilient & together

- High water resilience

"What if water had a voice in our projects? Would it mention disruption or flooding?"

We focus on:

- **Water and soil as a guide** System analysis in projects
- **Water quality improvement** Taking source measures, resilient natural system
- **Water footprint** Water use for production, use of drinking water
- **Safe organisation of the living environment** Considering impact in ground positioning, Delta Technology

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1 Water Impact introduction

1.1 The Netherlands, land of water

The Water theme includes a wide range of subjects. It is about the quality and quantity of surface water, groundwater, drinking water and wastewater. Subaqueous soils are also an important link. The different components influence each other directly. Each subject also has its own specialisation (hydrology, geohydrology, ecohydrology, sewage technology, wastewater technology, environmental science, soil science, geoengineering, permits, etc.).

The Netherlands is inseparably connected with water, so we take a look at 'the Netherlands, land of water', the changes in recent years and the challenges of the future.

Almost a third of the Netherlands is below sea level. Without dikes, more than half the country could be submerged. Fortunately, the Netherlands has a long tradition of dealing with water. It is deeply rooted in Dutch culture. The Dutch have learned to keep water out by trial and error. The Dutch people have also learned to make optimal use of water to increase their food production and prosperity. Water quality is also important in this context. Since the 1970s of the previous century, when the law on surface water pollution came into force, the quality of surface water has improved considerably. An important part of this was reducing industrial and urban wastewater discharges. Since the beginning of this century, the Netherlands has been working on the next step towards water quality improvement with the Water Framework Directive. The Water Framework Directive aims to further improve the chemical and biological quality of groundwater and surface water.

Over the centuries, our handling of water has changed the landscape dramatically and delivered many ingenious buildings. New techniques and materials are constantly invented and used on a larger scale than ever before. Dutch water knowledge has even become an export product that is helping other countries to gain new land and prevent flooding. The idea that everything is malleable has also had a negative effect on groundwater and surface water. There is a lot of flooding and water quality is poor in many areas. In recent decades, there has been a growing awareness that "water" cannot be curtailed, and people are actively looking for ways to co-exist with water, for example by giving rivers more space and by taking water into account more in projects.

For a more detailed overview of the role of water in the Netherlands and its various functions, visit the website of the Dutch Environment Information Point (***Informatiepunt Leefomgeving*** or ***IPLO***), which offer information on soil, construction, water, the environment and Dutch environmental law: https://IPLO.nl/thema/water/. The figure below shows the water circulation process and water value chain.

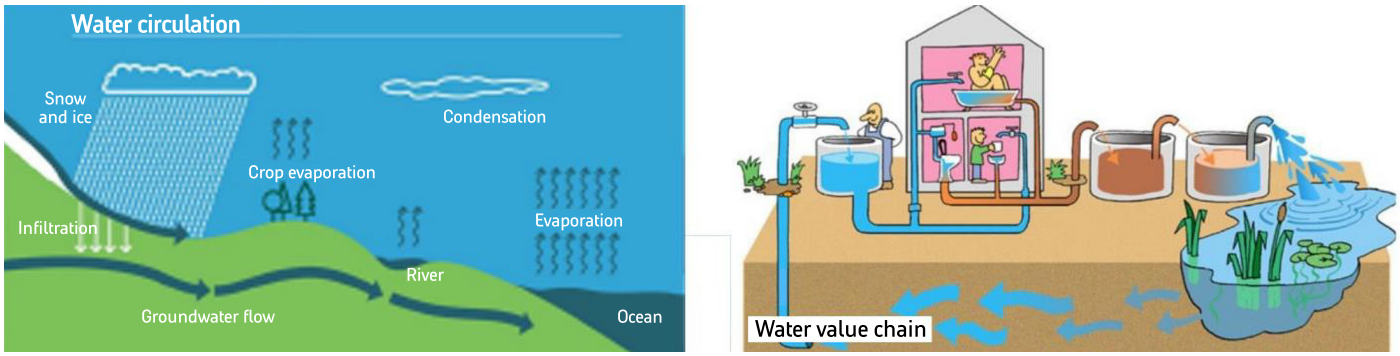


Figure 1: Water circulation process and water value chain

1.2 Climate change

If greenhouse gas emissions continue at the same pace, the planet will keep getting warmer, with major consequences for people, nature and the environment. The Earth's average temperature has risen by 1°C over the past 130 years. In the Netherlands, it has gone up by as much as 1.7°C even. There will be more heavy rain, more severe storms and longer periods of drought and heat. The Netherlands is particularly vulnerable to flooding, as it is largely below sea level. And building higher embankments is very costly. Climate change can also lead to shortages of drinking water or food. Scientists expect the Netherlands to face (temporarily) higher water levels in rivers and a higher sea level. In the western part of the country, the surface of the soil will sink even further. Other areas will get drier due to global warming, with negative consequences for nature and agriculture. Climate change is making the Dutch weather more extreme. This mainly means that the risk of drought, heat, flooding and excessive rainfall increases:

- Excessive precipitation can cause flooding. Downpours can make roads inaccessible and allow rainwater to enter buildings. Prolonged precipitation will saturate the soil with water. This may result in groundwater flooding or flooded agricultural land.
- Long periods of dry or hot weather can result in water shortages. Drought can cause harvests to fail and make land subsidence more likely. Areas of natural beauty may get extremely dry, which also increases the risk of wildfires.
- Heat can cause heat stress, which can lead to health problems. Heat can also reduce productivity at work, for example due to poor sleep. In addition, heat can hinder or damage infrastructure. For example, it can melt asphalt and stop moveable bridges from opening.
- Heat, drought and extreme precipitation all affect water quality. Heavy precipitation causes a lot of pollution to run off, resulting in poor water quality. Heat increases the temperature of surface water, which often causes an explosive growth of certain substances such as cyanobacteria. Drought can make surface waters more shallow and even cause ditches to dry out. This also has a wide range of adverse effects on the chemical and biological condition of groundwater and surface water.

- Flooding rivers and seas can damage buildings and infrastructure, and can even cause injury and death. Essential utilities, such as drinking water, electricity and telecommunications, can also get damaged and fail.
- Our public (and private) infrastructure needs to be redesigned to mitigate the effects of climate change. Recent examples of the impacts of the changing climate in the Netherlands include extreme drought, heat and heatwaves in 2018, floods in Limburg in 2021, 2023, which started as the driest year ever recorded and ended as the wettest year ever recorded, drinking water companies ringing the alarm bell in 2023 as they can no longer provide security of supply in certain areas.

1.3 Water impact

Our activities in the public spaces, in our offices and on our construction sites have an impact on the water system. In addition, the production of the materials we use also affect the value chain. These effects have a direct and indirect effect on nature, agriculture, the water supply and climate in urban areas.

No impact assessment has yet been carried out for water. However, we do have a global view of the impact of our activities and the impact in the water value chain. Below we explain the impacts we have identified so far. Our intention is to quantify our impact in the coming years. In 2024, we started to quantify the water footprint of our own operations (scope 1). We have started with an estimate based on the water usage costs, which we are going to make more accurate by improving the data quality. The impact on water of energy use (scope 2) and of our supply and delivery chain is planned in the coming years.

Water use

We use drinking water in our offices, on our construction sites and at our own production sites. We also use rainwater to produce our own hemp fibre. In addition, we extract groundwater for dewatering and, in rare cases, as a replacement for drinking water.

Besides during our own operations, water is also used in the supply chain to produce the materials we use. The materials that require thermal production processes have a particuarly high water footprint. Biogenic building materials will also have a high water footprint for the material's growth. Materials expected to have a high water footprint include, in no specific order: asphalt, bricks, paving bricks, glass, steel, cement and concrete.

However, water use does not stop when the building work is complete. Heijmans is also indirectly responsible for the water that is used in residential and non-residential buildings. This only concerns drinking water use.

Water balance

When dewatering, we discharge the groundwater elsewhere into the ground or surface water. This has a direct impact on the balance between the groundwater and surface water levels. Our use of rainwater and construction activities also affect the water balance. Our construction work often requires the use of heavy equipment, which results in soil compaction. Excavation work disrupts the soil's structure and composition. Both construction and excavation affect the soil's water permeability and therefore the flow of rainwater to groundwater.

We can also look at the impact of our purchased materials in the supply chain on the water balance. The impact on the water balance is expected to be higher for biogenic materials than for non-biogenic materials.

In addition to the impact our own operations and procured materials have on the water balance, we also influence the water balance with the construction projects we deliver. The dikes, locks and rainwater drains' water-regulating function affects the water balance. We also install rainwater drains exactly in areas where we have added non-permeable objects such as buildings and roads. Non-permeable objects largely block infiltration and the discharge of rainwater to groundwater. Rainwater therefore has to follow a different path to infiltrate the ground. This may result in flooding. Rainwater drainage solutions are used to mitigate this.

Water quality

Heijmans also has an impact on water quality. Its construction work can lead to pollution, turbidity and disruption of the ecosystem in surface water. Pollutants such as oils can also enter the soil and contaminate the groundwater. Finally, we can influence the composition and therefore the water quality of a body of water by discharging groundwater into surface water or groundwater after dewatering.

The production of materials uses water but also contaminates a lot of water. This means we also have an impact on water quality in the value chain with the materials we procure in the supply chain.

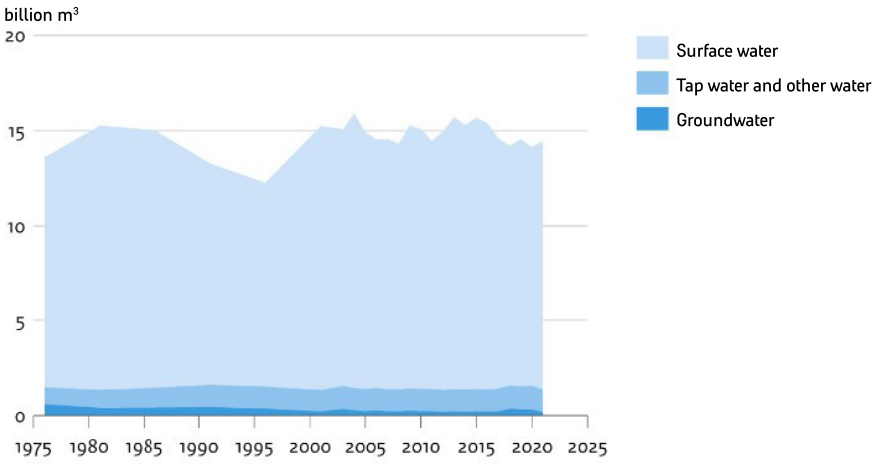
The buildings we construct can also affect surface water quality by casting a shadow on the water. Residential and non-residential buildings use drinking water for sanitary purposes that is then discharged for treatment. This means the water quality of the used drinking water almost inevitably deteriorates. Heijmans also bears indirect responsibility for this impact on water quality.

1.4 Water risk

Our operations and those of our supply and delivery chain have an impact on various water aspects. Depending on these impacts, water also poses risks to the environment. The environment includes our living environment and the natural environment.

Sufficient clean and safe water is no longer a matter of course. Events such as industrial discharges, land runoff and infiltration put the quality of surface and groundwater under pressure. Climate change clearly shows that the water balance is experiencing increasing extremes in terms of precipitation and groundwater and surface water levels. This has resulted in greater periodic differences with a deficit or surplus. These extremes in the water balance can jeopardise the safety of the environment with flooding or water damage. Finally, we use water to live and produce. Based on data from Statistics Netherlands, water use in the Netherlands appears to have remained stable from 1975 to 2021. However, the Dutch National Institute for Public Health and the Environment [1] warns that without measures, there will be drinking water shortages throughout the Netherlands. A combination of rising demand, climate change and pollution is leading to less available and usable water.

Water use in the Netherlands



Source: Statistics Netherlands

Statistics Netherlands/Sep23
www.clo.nl/nl005717

Water use, water balance, water quality and water safety are all interrelated. Water use affects the water balance. High levels of water use in areas where water availability is low causes **water stress**. The amount of water also affects water quality and water safety. And water quality affects water safety in terms of environmental health. We therefore define **water risks** as the physical properties of water that have an adverse effect on the environment. These physical properties of water include quantity (for water use and balance), quality and the associated safety for the environment.

We therefore assess our impact on the indicators of the physical risks in terms of quantity and quality according to the Aqueduct Water Risk Atlas. Regulatory and reputational risks include the level of connection to clean drinking water and responsible wastewater disposal. This does not apply to the Netherlands and therefore not to Heijmans N.V., as both these aspects are organised above the required level in the Netherlands.

The southeast of the Netherlands is exposed to a high overall quantitative water risk, even though the overall qualitative water risk for the whole of the Netherlands is low. A low overall qualitative water risk is unexpected for the Netherlands, but can be explained by the fact that the Netherlands's high risk of coastal eutrophication is offset by the low risk of untreated wastewater discharge. High quantitative water risks are water stress (southeast of the Netherlands), river flooding (southern part of Zealand) and coastal flooding (small part in South Holland south of Rotterdam).

Physical water risks result in material risks for Heijmans. For example, the high risk of eutrophication has adverse consequences for future projects in connection with the legal requirements of the Water Framework Directive. The high level of water stress also puts homes and non-residential buildings at risk of no longer being connected to drinking water from the water companies.

1 Urgent action needed to prevent drinking water shortages in 2030 | Dutch National Institute for Public Health and the Environment

1.5 Water opportunities

The water risks also create opportunities for Heijmans' operations. In areas where we have an impact on water use, we can innovate in order to use alternative water sources such as rainwater rather than drinking water. We can also implement innovations in terms of water recycling, water reuse and water storage. We may even be able to introduce water treatment innovations. Shifts in the water balance and climate change are increasing the risks of high water levels, which offers Heijmans the opportunity to take on more work as part of the Dutch high water protection partnership (***Hoogwaterbeschermingsprogramma*** or ***HWBP***).

1.6 Social responsibility

Society is an important stakeholder for us. Clients specify the design requirements. This helps to determine the impact. We have meetings with (potential) clients about future social developments. These potential clients include water boards, the Dutch high water protection partnership and companies in the drinking water market. The results of these stakeholder discussions with our water value chain partners are recorded in minutes. This allows us to anticipate new needs, new developments using different design, implementation and management methods and new sustainable innovations well in advance.

During our projects, we talk to the stakeholders regularly about the work, the verification of requirements and the granting of permits (direct impact on the environment). We also have discussions with the end users of our projects through participation programmes and information sessions (possibly on the client's behalf (demand-driven)). We often need to apply for a water permit in order to do the work. This permit includes preconditions for the impact of our activities on the water balance, water quality and water use. The permit is actively enforced.

We are also involved in initiatives to discuss the impact of our water consumption. These are:

- **Waterbank (public – private)**
  An initiative by De Dommel water board and various other public and private parties to connect supply and demand between various sources
- **Bouwtafel Waterzuinige Wijken (public – private)**
  An initiative by the province of Gelderland and drinking water company Vitens to save drinking water in residential buildings
- **Community of Practice (COP) on Water Quality (public – private)**
  STOWA investigates the impact of the changing climate on water quality.
  The COP further specifies governance and implementation.

1.7 Controlling our impacts

We described our impact in the previous paragraphs. In 2025/2026, we want to carry out in-depth screening on the impact in the (upstream and downstream) value chain (impact analysis). Depending on the results of this in-depth impact analysis, we draw up and implement the appropriate control measures.

In our own operations, we are currently not yet taking any measures to reduce our water use and no resources have been reserved for this. We used 2024 to formulate our policy and assess our water footprint. We have gained initial insights to determine the right actions. The dashboard gives us an overview of our own water use (scope 1). The next step is to assess scopes 2 and 3 upstream and downstream. From 2025 onwards, the annual report will show the top 5 specific measures we have implemented in our own operations in projects in water risk areas, including those with high water stress (if we have worked in these areas).

The in-depth analysis that we are starting in 2025 will enable us to further identify and manage risks: we can establish which risks, which measures and in what locations in the field. Based on the analysis, we will concretise the targets for the other three water themes per business area from 2025 onwards (organise the water balance, ensure good water quality and guarantee water safety). We will also go into more detail on controlling the risks to and impact on our own employees. We will use the year 2026 to further develop monitoring, evaluation and adjustment. The implementation of these may lead to an adapted policy.

Some of the actions we can take to control and restore our impact on the environment are:

- Guide on the use of different types of water (for example rainwater, surface water, groundwater or drinking water)
- Raising awareness
- Applying our integral Ecology, Soil and Water scan
- Gain insight into the water risk areas (water and soil guide map)
- Apply sustainable design principles and sustainable asset management principles
- Use the Nature Ladder and NL Greenlabel

A more fundamental control measure may be whether or not to accept a contract based on its sustainability impact.

The water theme is knowledge-intensive because of legislation and the breadth of the technical content. The Heijmans Water Knowledge Network has been set up to assess and keep track of all developments. Knowledge becomes valuable when it can be applied in practice. The knowledge network ensures that this knowledge is secured and applied correctly within Heijmans.

1.8 Vision, purpose and ambition

Heijmans has drawn up a strategy for 2030, which includes the theme of water as one of the three sustainability priorities, in addition to climate and biodiversity. Heijmans has already taken many initiatives around water quality, water regulation and water management in recent years. However, in the coming years, we will need a specific strategy for this theme based on four angles:

- Social commitments
- Sustainability targets
- (EU) regulations
- Sales opportunities

In 2030, we will be the sustainable innovator. We give more than we take. We leave the environment in a better state than we found it. We use water as a guiding principle in all our projects. In this way, we contribute to restoring water quality, improving the water balance, ensuring water safety and eliminating any unnecessary use of (drinking) water. We know the areas with **high water risks** and how to minimise our negative impact and increase our positive impact there.

In our projects, we take control of the water and soil, also referred to as "the malleability of the landscape". However, we are increasingly reaching the limits of the water and soil system. Think land subsidence, low water levels, drinking water shortages and loss of biodiversity. However, the changing climate with rising sea levels, flooding, drought and heat are also bringing things to a head. The quality and availability of water and soil have a major impact on our shipping, agriculture, energy supply, industry and nature.

This has recently led to seeing water and soil as a guiding principle. The government wants to make this approach standard for all developments in Construction and Infra. This will result in a future-proof environment with a healthy soil and enough clean water.

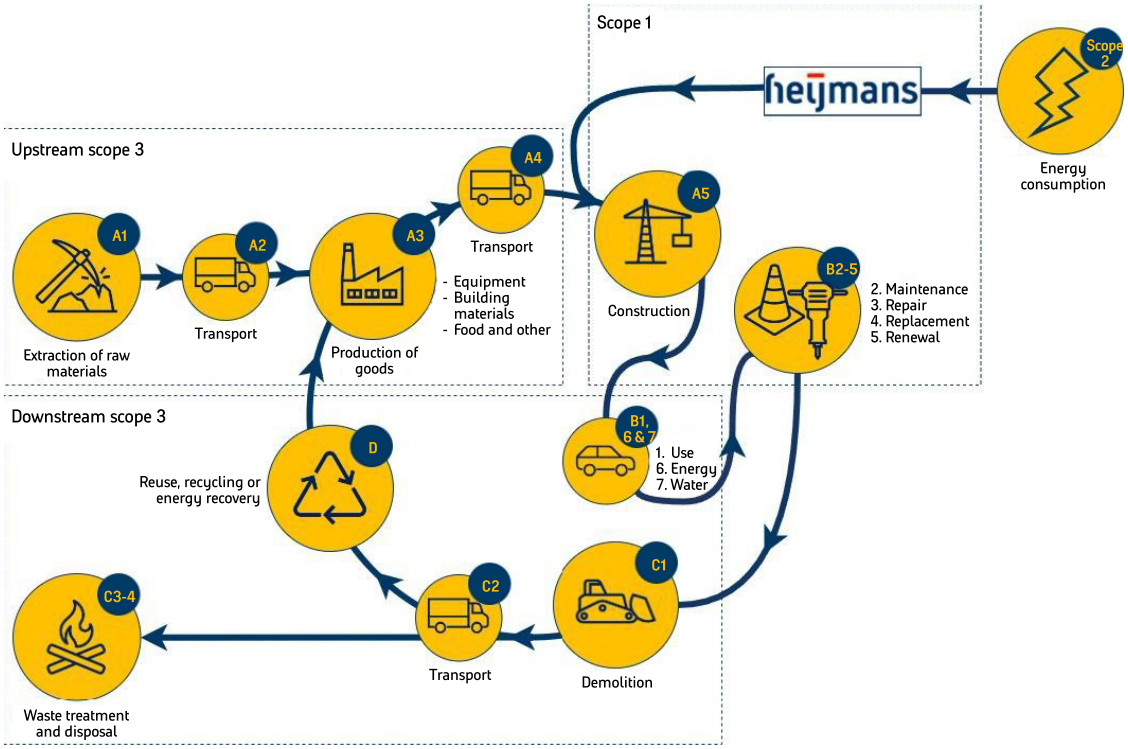
Another water theme that is attracting a lot of attention is water quality. This leaves a lot to be desired in the Netherlands. Bouwend Nederland has conducted a water quality study. The Water Framework Directive is expected to have a major impact on (the planning permission of) our infrastructure and residential construction projects from 2027.

We have translated our negative and positive impact and the described effects into our definition of water and four guiding principles: water balance, water quality, water use and water safety.

We are developing standards for water problems (and preserving marine resources) within Heijmans' various business areas. Examples of these standards and solutions are described in the Heijmans Solutions Platform (Heijmans Oplossingen Platvorm or HOP at Infra), product quality knowledge base, home products standard and our design solutions standard. Developments in the resolution of water problems (and preserving marine resources) are mainly driven by national policies, for example by seeing soil and water as a guiding principle and by adjusting the permit requirements.

2 Scope

The Water Impact policy applies to all of Heijmans in all locations and all projects, now and in the future. The policy follows the standard scope approach also used for greenhouse gas emissions under the GHG Protocol. A distinction is made between scopes 1, 2 and 3:



Scope 1 Direct water use

Scope 1 is Heijmans' direct water use and impact on water quality in offices, in real estate and on project sites. This concerns, for example, the direct impact on water quality due to water consumption in production processes (by our mobile concrete plant for example), water use for sanitary purposes and emissions of pollutants into water. In short, scope 1 includes all products and services that Heijmans supplies and that have an impact on the use and quality of water use.

Scope 2 indirect water use

Scope 2 is Heijmans' indirect water use and impact on water quality due to the energy purchased within the organisation. This is about water use and water quality impact during energy production. In thermal power plants, water is used to produce steam that powers the turbines or cools the processes. The condensed steam can be reused or discharged. Discharge has adverse effects on water quality due to temperature changes. Water use for non-thermal power plants is generally set at 0 water consumption/quality impact [1] . Because we procure our energy (electricity and gas) in a non-thermal way, we exclude scope 2.

Scope 3 Water use in the value chain

Scope 3 is about water use and the water quality impact in the supply chain of goods for Heijmans and water use and the water quality impact arising from Heijmans' activities after delivery and after the end of the maintenance contract (delivery chain).

- Water use and water quality in the extraction of raw materials and production of goods are also part of the supply chain, and so is the deterioration of water quality due to transport over water, causing (sea) water pollution.
- The delivery chain includes water use and water quality for the products Heijmans supplies. In the case of homes, this even includes the water use in the delivered homes. For infra, this is included the water consumption delivered objects require in their maintenance.

1 The traded water footprint of global energy from 2010 to 2018 | Scientific Data (nature.com)

3 Four guiding principles, our definition

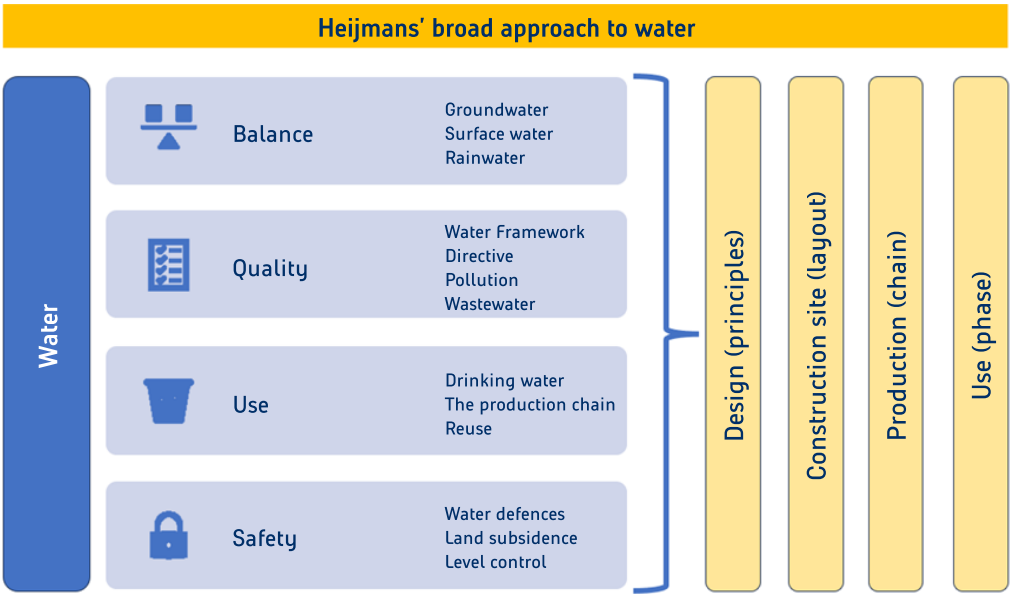
We draw up the vision and strategy for all of Heijmans. In doing so, we apply the following principles:
- We work based on a Heijmans-wide vision
- We use a common language and definitions
- Each business area is responsible for further development, approach and implementation

3.1 Heijmans' definition of water

Water is crucial to creating a healthy living environment. This involves the natural water system and a technical system developed for our human needs and safety. The natural system consists mainly of rainwater, groundwater and surface water. The technical system includes the sewer system, hydraulic engineering objects, well drilling, drinking water and process water facilities.

All of these forms of water are interconnected by different circuits. We can only handle water carefully by considering the impact on the entire water circulation process. In doing so, we look at water quality, water use, water balance and water safety.

The following sections look at the four definitions and discuss the context and (possible) impact on Heijmans' field of work:
- Organise the water balance
- Ensure good water quality
- Reduce water consumption
- Guarantee water safety



3.2 Water balance

Definition/framework

The water balance is the ratio between the amount of water entering and leaving an area. This includes the natural water system consisting of groundwater, surface water and rainwater. A healthy water balance means a balanced ratio without any deficits or surpluses that are harmful to the urban environment, nature, agriculture, industry, the drinking water supply, health or safety.

Context

The water balance has been disrupted in many places in the Netherlands. This is mainly due to human intervention in the water system. We have organised the surface water system to discharge water as quickly as possible, there are not enough opportunities for water buffering and infiltration, we manage the groundwater and surface water levels artificially and we extract groundwater to use as drinking water. The rapidly changing climate is also disrupting the water balance. This leads to problems with water safety, drought, water quality, food production, nature and health.

In 2023, a Dutch national policy seeing water and soil as a guiding principle was adopted as part of spatial planning. This means that the natural water and soil system is taken as a starting point for the (re)design and use of our country. This approach involves large-scale work to restore the (local) water balance.

Seeing water and soil as a guiding principle will primarily be decisive in planning and the choices of where to build or not (both property development and infra). Ultimately, this can have an effect on the lead time of planning and possibly delay projects until they reach the market. The first signs of the effects of seeing water and soil as a guiding principle are particularly apparent in residential buildings, for example in homes on (deep) reclaimed land and peatlands. This positions different areas of government (local council, water board, province and state) directly opposite each other. Ultimately, these new neighbourhoods also need to be opened up. The infra projects resulting from the developments will therefore also be affected by this discussion.

Impact, opportunities and risks

All our activities for living, working and connecting have an impact on the water balance. When we widen a road or build houses, we increase the paved surface area and lead more water is discharged into the water system. When we dewater to be able to work in dry conditions, we extract water from deeper soil layers and then discharge it into surface water.

Our activities impact the different parts of the water system and may eventually disturb the water balance. By looking at the water system as a whole, we can actually have a positive impact on the water balance with natural and technical solutions.

We can restore the water balance at both the construction and area level based on the following principles, preferably in this order:

- **Use and save:** We use the available water – for example rainwater for toilet flushing, gardening, etc. – and we save water by using it sparingly.
- **Retain and infiltrate** We retain water where it falls and allow it to infiltrate locally in the soil, for example by making room for sufficient greenery and water in projects and by taking into account natural drainage in the design.
- **Storage and discharge** We store water that we can't use or allow to infiltrate, and we discharge it to the surrounding water system in a dosed and controlled manner. This creates a resilient water system and prevents flooding.

3.3 Water quality

Definition/framework

Water quality is the suitability of surface water and groundwater for various uses, such as drinking water, water for nature, water for industry, etc. This concerns both chemical and biological quality. This varies by location, time and depth.

Context

Our activities have an impact on water quality during construction and during the use phase, for example through (temporary) dewatering, contamination from road drainage, from effluent sewage water and incorrect connections in homes and from the installation of heating and energy systems in the ground. We want to improve our current impact on water quality by taking measures during our work that have a positive impact on water quality and prevent or combat water pollution. One example is the implementation of innovations in road and residential building. Opportunities arise in decentralised purification systems in buildings and areas. In the Netherlands, the impact on water quality is secured through planning permission, the so-called water permits. The competent authority will only grant a permit for work that does not have a negative impact on water quality.

When we work in coastal areas or build offshore wind turbines, we affect the sea and the life in it. This means that we have an impact on water quality and marine resources. We work with sustainable solutions there and propose nature-based solutions wherever possible.

We improve water quality based on the following principles:
- Water connection
- Varied land-to-water transitions
- Source measures

We achieve this by:
- Taking source measures
- Using a resilient natural system for water, ecology and soil
- Applying technical solutions (including new innovations)

Impact, opportunities and risks

The following consequences apply to a state (Netherlands) and to the construction sector as well:
- The European Commission can impose severe fines for non-compliance with the Water Framework Directive.
- Permits for (construction) projects can be revoked or not granted for as long as there is a possible consequence for the water system.
- Stakeholders (environmental organisations) can submit opinions (objections) when permit applications are open to inspection.
- Stakeholders (environmental organisations, private individuals, local residents) can have projects suspended by an administrative court in the event of potential deterioration in water quality.

The main risks for Heijmans are:
- Reduction of orders due to a delay or stop of tenders in the market because of uncertainty or a negative impact in terms of water quality
- Withdrawal of permits granted in connection with the potential impact on water quality
- Risk of lack of knowledge about the impact of Heijmans' work on water quality
- Standstill principle (existing situation is the norm)
- Customisation requirements
- Mitigating measures
- Regulations on dewatering processes that reintroduce the groundwater back into the ground elsewhere

The Water Framework Directive offers Heijmans the necessary opportunities in the market. The aim is to:
- **Position ourselves as a partner** for water quality improvement in projects
- **Develop innovative approaches** and **solutions** that make a positive impact on water quality and/or eliminate any negative impact
- Develop a **system approach to the landscape**, respecting the relationship between water, soil, ecology and the work
- Use and where necessary expand the **network** of **trusted partners** to acquire any missing knowledge
- Engage in various expansion projects of wastewater treatment plants, drinking water stations, pumping stations, pressure pipes, the (re)design of surface water systems and so on

Note: Dutch environmental law gives us the opportunity to use our expertise to present measures rather than simply follow the government's imposed regulations. The regulations do not prevail but are there as guidance: the point of view is more "yes, provided that" than "no, unless". By anticipating this, we can ultimately influence any planning permission and customisation regulations ourselves.

3.4 Water use/water footprint

Definition/framework

When using water, we focus on two aspects. The use of drinking water and the use of water for (our) production (food and goods). In doing so, it is important to consider water streams of different quality levels and to recognise that the impact of water consumption varies from site to site.

Context

The impact of water use on the production of goods/food is a complex issue. It also depends on the type of water used and the location (dry/wet areas). A company's water footprint is the total amount of fresh water used to produce all the company's goods and services. Water use is measured in consumed (evaporated) and/or contaminated cubic metres of water per unit of time. It is currently not yet clear what our water footprint is.

The availability of drinking water is limited and in short supply for various reasons. Drinking water companies are no longer able to meet the necessary drinking water demand, which is caused firstly by an increase in use, and secondly by the restricted availability of natural resources (groundwater and fresh surface water). The current consumption of drinking water is contributing to the depletion of this natural resource. The interests of agriculture and nature are taken into account when considering the expansion of water catchment areas. In some cases, drinking water companies even have to reduce the capacity of pumping stations. This naturally has major consequences for the security of supply and means that developments in these areas cannot be supplied with drinking water. Drinking water companies and the government therefore want us all to consume less drinking water per day. In the autumn of 2022, the Dutch Cabinet set a 20% reduction as the target.

Impact, opportunities and risks

Our own activities result in (drinking) water use. We make sure to analyse this consumption based on the water footprint, and we pledge to reduce it in areas with a water risk.

We are reducing our use of (drinking) water in our projects and buildings. We prefer to implement measures across the company where this is possible. However, we prioritise reducing water use in water risk areas. We have set ourselves the following objectives:

- Reduce drinking water use in buildings and projects (by 30% compared to 2019); utilise and save; and
- By 2026, we want to have a good understanding of the use of (drinking) water in our supply chain.

The objectives described here are based on our own intrinsic motivation (voluntary basis). Heijmans wants to give more than we take, and we also want to honour our social responsibility to reduce our water consumption, especially drinking water, which is becoming increasingly scarce.

The water footprint is about direct and indirect water consumption across the entire value chain. A green, blue and grey water footprint can be distinguished [1] . This means:

- Green water comes from precipitation and is stored in rootzone soil, where it evaporates, transpires or is absorbed by plants. This water is particularly relevant for agriculture, horticulture and forestry.
- Blue water is extracted from surface water or groundwater sources and evaporates, is included in a product or is moved from one body of water to another. Some examples are irrigation agriculture, industry and domestic water consumption.
- Grey water is the amount of water needed to assimilate (process) pollution to a specific water quality standard. This involves point source pollution discharged into a freshwater source directly through a pipe or indirectly through drainage or soil leaching, impermeable surfaces or other diffuse sources.

We report on our total water consumption (in cubic metres of water) in risk areas (including areas with high water stress) for all Heijmans offices and project sites. We also present our total water consumption (m3) in relation to our net income in millions of euros.

We do not store water for use in our current processes and operations, nor do we reuse or recycle (process) water for our own operations. If the initial analyses show that we can significantly recover our impact in terms of water use, water extraction for our own operations could be a measure that we take (for example by storing rainwater at project sites or for use in the implementation phase). It is not yet clear whether we need to purify the water recovered in this process. If this is a serious option, the quality requirements set for materials such as concrete will be decisive.

1 What is a water footprint? – Water Footprint Network

3.5 Water safety

Definition/framework

Water safety is about flood protection. This is achieved with water defences such as embankments and dunes, but also giving rivers more space. Managing our waterways, such as rivers and lakes, also ensures our water safety.

Context

In order to ensure basic safety, measures are taken to prevent flooding from large bodies of waters (prevention). In addition, the consequences of possible flooding can be mitigated by making the Netherlands more water resilient. Finally, the state, water boards, security regions and provinces work together to manage flood crises, in case things unexpectedly do go wrong. The combination of prevention, water-resilient construction and crisis management is referred to as multi-layered security.

Impact, opportunities and risks

The consequences of climate change have an impact on the suitability of Infrastructure and area development.

We work for the flood protection programme and we protect our work against floods by integrating water safety into our projects:

- We make the Netherlands more water safe with Delta technology
- Considering the impact of our land holdings
- Water safe design of the living environment

4 Accountability and monitoring process

4.1 Effectiveness of measures

The Water Impact document is Heijmans' water policy. It was established in 2024 as an integral policy across all business streams. This policy has been translated into different programme lines and sundials per business area. Initiatives to implement the policy are formulated on so-called initiative cards and submitted to the management of the business areas or to the Heijmans Group Council for decision-making. Concrete transition plans will follow in 2025 to see how we can embed the formulated vision into our DNA.

2019 is the base year for our targets, which we aim to achieve by 2030. We will initially focus on scope 1 and work towards scope 3 upstream from 2026. As these ambitions are relatively new to us, we can't yet monitor the effectiveness of the individual measures. Once we have identified the right measures based on the in-depth analysis, we will continue to shape our monitoring and evaluation.

Progress on the programme lines is monitored quarterly and included in the quarterly reports with the objectives, goals, strategies and measures (OGSM) and the initiative cards. Progress on the Water Measurable Ambition is included in the external quarterly reports and annual report. The responsible management members within the business areas report on the progress to the responsible board member.

Heijmans actively shares the Water Impact document with its stakeholders and strategic partners to involve them in the joint task and, above all, to stay in touch with them to talk about how Heijmans can further improve its impact (where necessary).

4.2 Water consumption monitoring

Water use is not monitored by Heijmans as standard, nor is it measured using smart water meters. Only the invoiced amounts of drinking water invoices received as PDF documents are processed in SAP. As a result, there is no indication of the cubic metres (m3) of water consumption stated on the invoices and another method must be used to gain insight into this.

We initially estimated our water consumption based on the amounts charged to drinking water companies. However, there are still too many inaccuracies, as this also includes invoices for courses, workshops, connections and invoices for additional expenses. Eventually it was decided to go through the invoices for 2024 once and copy the water consumption data from the period statements into an Excel file. We then linked these (address) details in ArcGIS Pro with the Water Risk Areas and Water Stress Areas from Aqueduct to find out the water consumption of our sites in these areas. We report annual water consumption in our annual report, both in terms of cubic metres and geographical representation. See appendix for a full description.

We will do this intensive manual exercise for 2024 and the base year 2019 (2019 will follow in 2025). As of 1 January 2025, we will switch to an automated method that records the water consumption and periods from the invoices in a separate general ledger account (already present) in SAP.

Appendix A: Glossary of terms and abbreviations

Term	Definition
Water Framework Directive	The Water Framework Directive is a European directive on the quality of surface water and groundwater. It was established in 2000 and aims to ensure that all water in the Netherlands will be an appropriate habitat for plants and animals by 2027. In addition, it should be reasonably easy to turn it into drinking water.
Scope 1	Water consumption and impact of own sources (offices and construction sites).
Scope 2	Water consumption and impact of procured energy such as electricity, gas or other fuels.
Scope 3	Water consumption and the impact in the supply and delivery chain of everything we procure to do and deliver our work.
Water balance	The water balance is the ratio between the amount of water entering and leaving an area.
Water use	When using water, we focus on two aspects. The use of drinking water and the use of water for (our) production (food and goods). In doing so, it is important to consider water streams of different quality levels and to recognise that the impact of water consumption varies from site to site.
Water quality	Water quality is the suitability of surface water and groundwater for various uses, such as drinking water, water for nature, water for industry, etc. This concerns both chemical and biological quality.
Water risk	The physical properties of water that adversely affect the environment. These physical properties of water include quantity (for water use and water balance), quality and the associated safety for the environment.
Water safety	Water safety is about flood protection. This is achieved with water defences such as embankments and dunes, but also giving rivers more space. Managing our waterways such as rivers and lakes also ensures our water safety.
Supply chain	The chain of parties and activities responsible for the supply of products and services to Heijmans.
Delivery chain	The chain of parties and activities delivered by Heijmans.
Water reuse	Heijmans considers water recycling and water reuse as the same thing. We use the term water reuse as that is the term also used by the Common Implementation Strategy for the Water Framework Directive and the Floods Directive. We define water reuse in line with the EU Water Directors*[1]* as the use of water from wastewater (streams), either treated or untreated, with a level of quality that is suitable for its intended use. We distinguish between direct and indirect reuse of water: • Direct reuse is part of a process with a direct link between source and end use. • Indirect reuse uses water again after it has been discharged into a body of water.
Water storage	Water of a desired quality that is collected and stored for later use within a business process.

1 Guidelines on Integrating Water Reuse into Water Planning and Management in the context of the WFD (2016)

Appendix B: References

Related regulations, legislation or external standards	Related internal documentation
Corporate Sustainability Reporting Directive (CSRD) Seeing water and soil as a guiding principle Water Framework Directive Drinking Water Directive Groundwater Directive Urban Wastewater Directive Environmental Impact Assessment (***MilieuEffectRapportage*** or ***MER***) Dutch Water Act Dutch Water Board Act Coastal laws and regulations and the Dutch Sea Shipping Act Substances of Very High Concern (SVHC) and Wastewater Dutch Environment Law Delta programme Drinking water policy document	

Management of water systems is not a matter for one party to deal with. It requires collaboration between all levels of governance in the Netherlands. It is a shared responsibility. Under the Environmental Act, the responsibilities are generally divided as follows:

Key players

- The national government is responsible for the national policy framework and strategic objectives as defined in the National Environmental Vision (NOVI) for water management in the Netherlands.
- The provinces are responsible for translating this into a regional policy framework and strategic goals at a regional level.
- The water authorities (the State for the main water system and the water boards for the regional water systems) are responsible for operational water management.
- The local councils have only a few tasks to manage water systems.

Other relevant parties

- Delta Commissioner
- Administrative Consultation on Water
- Directors' Consultation on Water and the Water Programme Team

1. https://www.rijksoverheid.nl/onderwerpen/water/waterbeheer-in-nederland
2. https://iplo.nl/thema/water
3. https://iplo.nl/thema/water/oppervlaktewater/kaderrichtlijn-water/
4. https://www.denationaleomgevingsvisie.nl/samenwerking+en+uitvoering/nationale+programmas/nationaal+water+programma+2022-2027/default.aspx
5. https://www.cultureelerfgoed.nl/onderwerpen/water-en-klimaat
6. https://www.drinkwaterplatform.nl/themas/klimaatverandering/klimaatadaptatie/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