

Water Footprint Compensation

(KIN project collective water management in East North Brabant)

Water
Footprint
Implementation

We count water,
because water counts!

All products require water















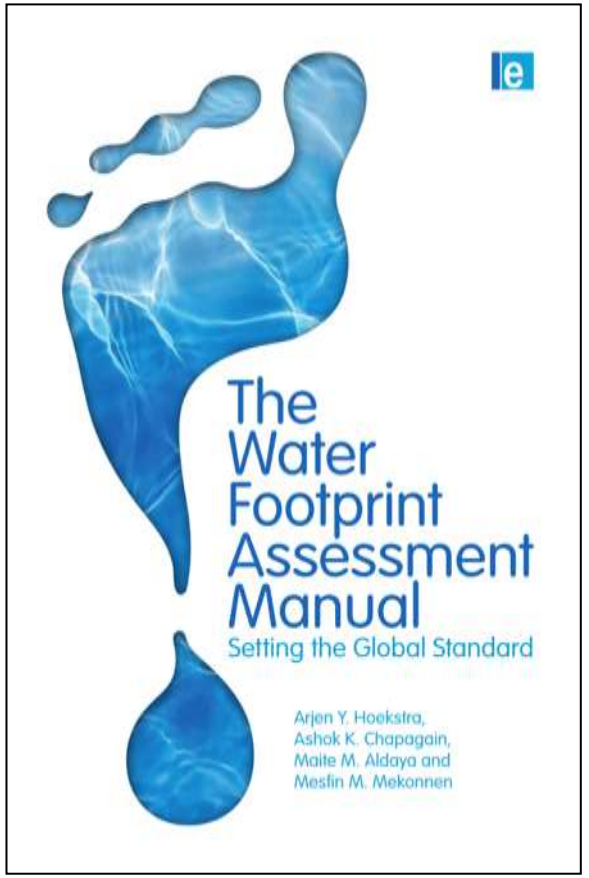


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Introduction to the Water Footprint Concept

water footprint network

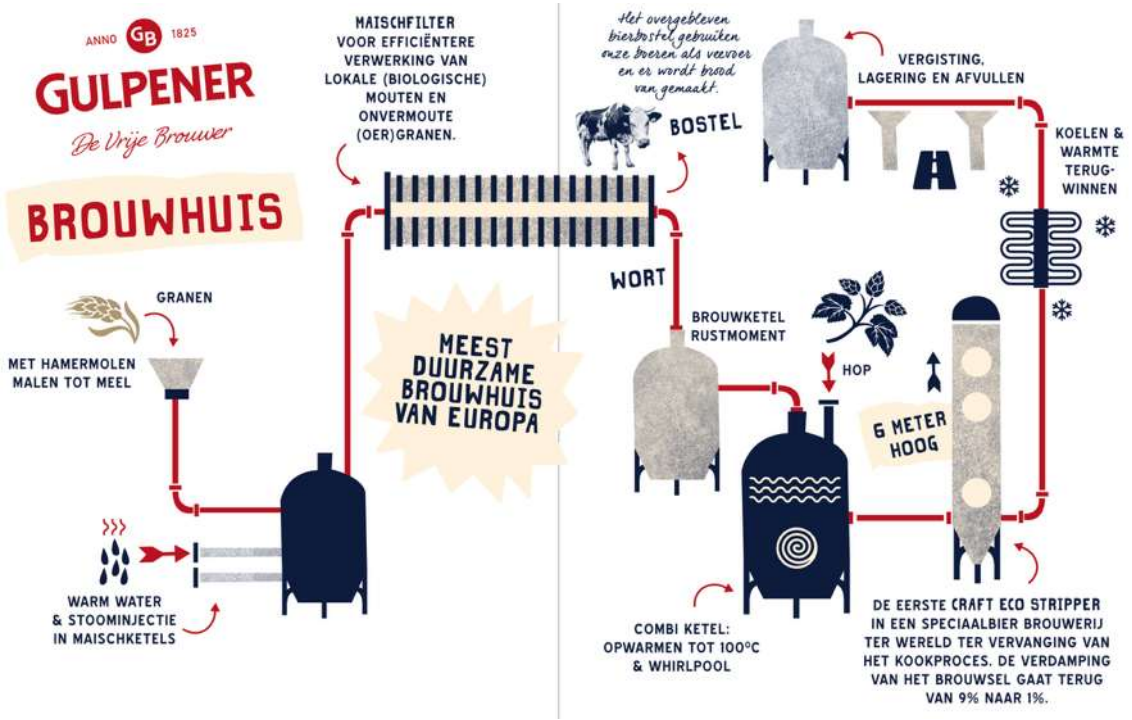
Water Footprint is the **total volume of freshwater** used to produce goods or services. It quantifies humanity's appropriation of freshwater in terms of water consumed and/or polluted.



- Indicator of water use and pollution
- Consumption (net)
- Indirect (chain) & Direct (operations)
- Three color components: **blue**, **green** and **grey**
- Time and place specific
- Linked to human activity/process
- For: Awareness raising, analysis, indicator for decision making, valuing water, proof
- Various target groups: governments, civil society, businesses, investors, consultants, international agencies, academia

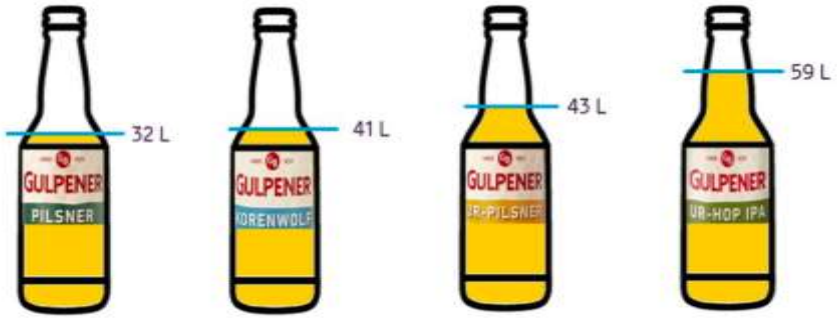
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Example: Water Footprint of various types of beer









water footprint implementation

Water Footprint Concept

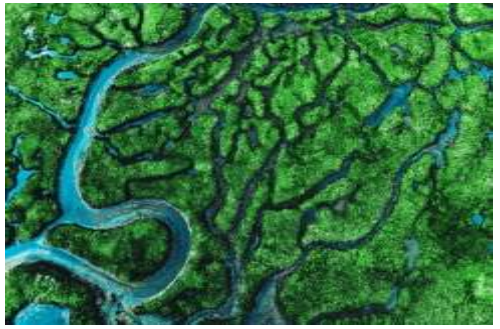
It can be measured at different levels:



A single process (e.g., growing wheat)



A product (e.g., a pair of jeans)



A country, river basin, or aquifer



A company
(e.g., a multinational's total water use)

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Corporate-backed stewardship

Drivers

- Regulatory and Disclosure Pressure
- Operational Water Risks
- Reputation: Investor and Stakeholder Expectations

Opportunities

- Leadership and Market Differentiation
- Enhanced Basin-Level Resilience
- Collaboration and Innovation Platforms

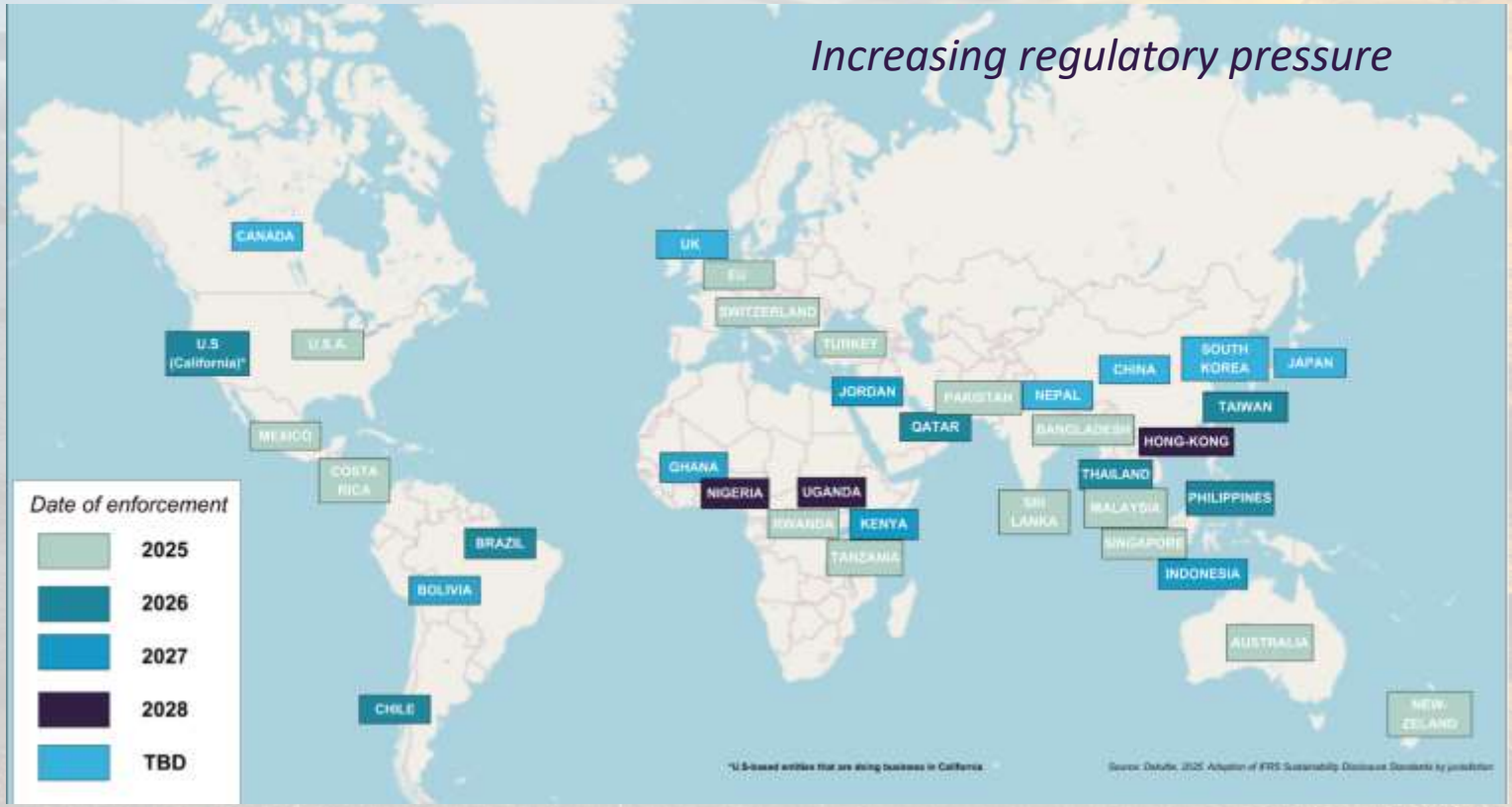
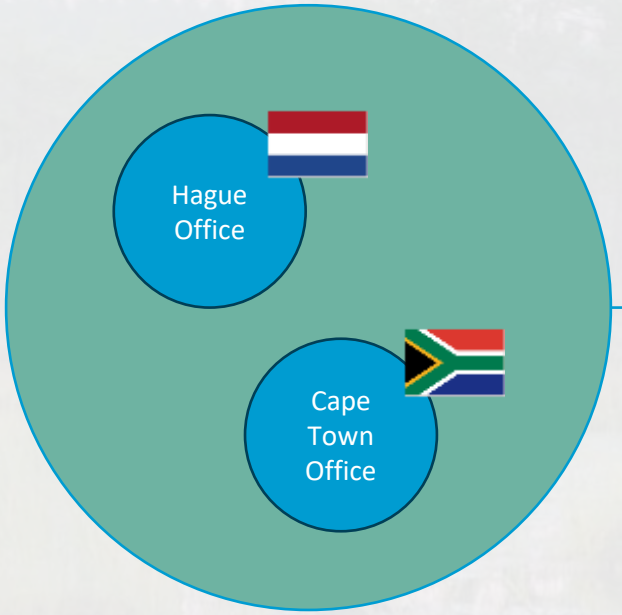


Photo by v2osk on Unsplash

About Water Footprint Implementation



Water Footprint Assessment and Reporting

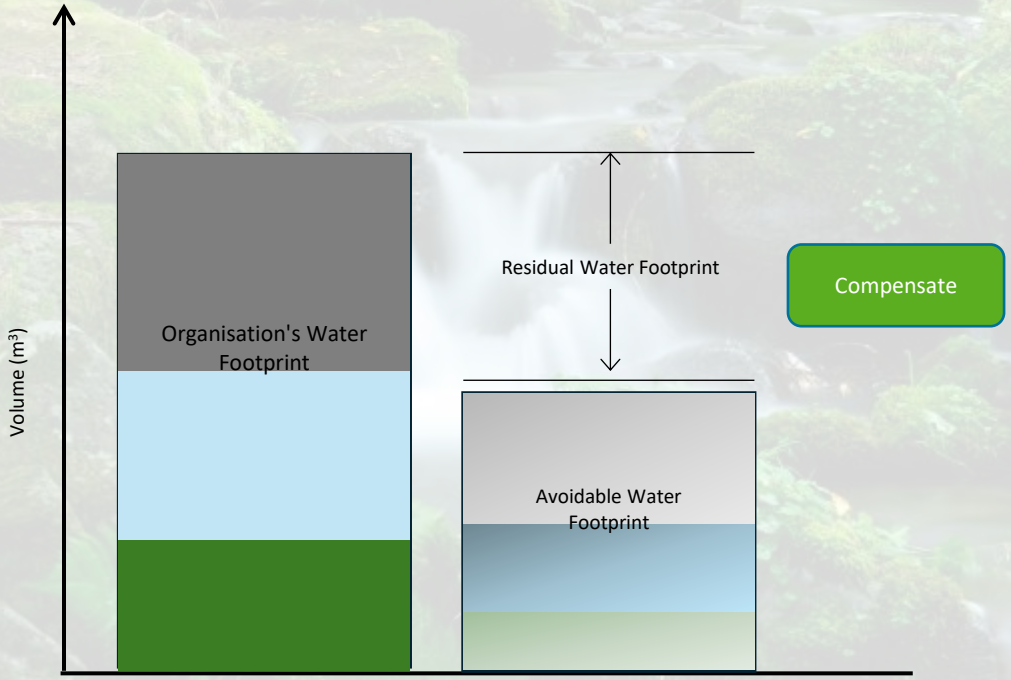
1. Provision of Water Data For ESG and Water Risk Assessments
2. Water Footprint Assessment at Product, Farm, and Site Level
3. Double Materiality Assessments
4. Science-based Targets Setting

Water Footprint Compensation

1. Water Stewardship Assessments via Act4Water Methodology and VWBA
2. Water Footprint-linked Basin Action
3. Stewardship Project Certification

Water Footprint Implementation

Water Footprint Compensation





- Even after avoiding, reducing, and reusing, a residual footprint remains, and it must be responsibly managed.
- Voluntary compensation, also called replenishment, balancing or positive water action, helps restore local water resources.
- Effective water stewardship projects require a robust, credible accounting of their benefits. Traditional methods focus solely on volumetric water savings. A dual methodology is recommended which captures both volumetric benefits and water-related impacts.

About Act4Water & the Standard

- Act4Water is a collaborative initiative involving water experts and corporate water footprint efforts to foster freshwater conservation. They created the Positive Water Credits and a Standard, linking initiatives that positively impact water with organisations dedicated to water care and regeneration.

- Act4Water certification marks help companies dedicated to sustainable water management to showcase their progress in reducing their water footprint, which includes both direct and indirect impacts on water resources.

Water Committed

ACT4WATER
WATER COMMITTED

Organisations that have measured and reduced their corporate water footprint

Water Active

ACT4WATER
WATER ACTIVE

Organisations addressing their non-reducible water footprint by investing in Water Credits

Water Positive

ACT4WATER
WATER POSITIVE

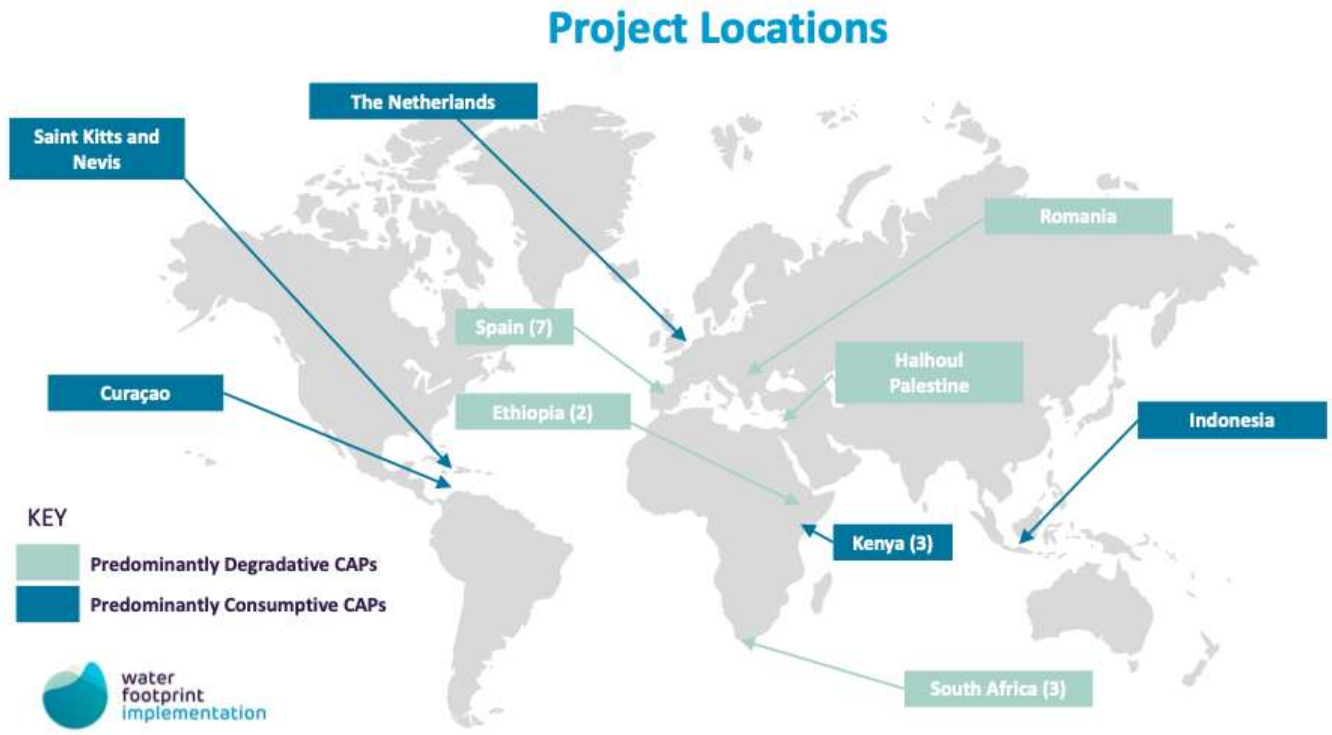
Organisations generating a net positive water impact through the acquisition of Water Credits.



Platform with Compensation Activities

www.waterfootprintcompensation.com

Project Type	Compensation Activity
Water Use Efficiency	Non-revenue water reduction
	Agricultural best management practices
	Water reuse systems
Water Resilience	Managed aquifer recharge
	Desalination
	Rainwater harvesting
Water Quality Improvement	Constructed wetland treatment systems
	Wastewater treatment technologies
Ecosystems and Biodiversity	Wetland rehabilitation
	Invasive species eradication
	Land cover restoration



water footprint implementation

Typical project process

Water Footprint Implementation

Compensator

Corporation, SMME, utility

Has a residual footprint, a science-based target and a budget.

Contract(s)

Project fee →

← **Verified CAPs**

annually, for the life of the agreement

Project owner

NGO, research institute, SME, municipality

Has the intervention, the partners and the community relationship.

Monitoring, Reporting and Verification

Annual monitoring report

The project owner reports actual performance against the agreed baseline, using the method the contract specified.

Review against the standard

WFI and Act4Water check the method, the data and the volume claimed against the Act4Water Standard. A calculation and certification fee applies.

Independent verification

Validation and accreditation are carried out by the independent consultant DNV, which certifies the CAPs for that year.

Project Examples in East North Brabant

(under KIN research project)

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Liskes Pond Rehabilitation, Bergeijk, Netherlands

Water Footprint Implementation

Project summary:

The Liskes ponds are a series of historic fishponds located in Bergeijk, Netherlands. They serve as a valuable water buffer and wetland habitat. Because the initial pond system was constructed in the 1950s, the dykes, weirs and other hydraulic structures were in poor condition and in need of refurbishment. In addition, over the last decade the area has suffered greatly from drought, further damaging the pond's ingenious water system. To restore the hydraulic and ecological function of the ponds, Natuurmonumenten rehabilitated the ponds by clearing vegetation and sealing the leaks in the dykes, increasing the dyke height and repairing the weirs and pipes.



Expected impact

- Increased surface water storage and groundwater infiltration within the ponds
- Restored habitat and biodiversity

Project typology: Ecosystems and Biodiversity

Project Cycle: 10 years

Volume replenished: 1,795,965.6 m³

Total Project Cost: €1,618,863.98

1,867.8 CAPs per project cycle	**93.5** CAPs eq per project cycle
€**866.72** per CAP	€**17,314.18** per CAP

Collaborators:

Natuurmonumenten

1 CAP = 1,000 m^3 eq of Water Footprint saved

Pastoorsweijer Pond Rehabilitation, Bergeijk, Netherlands

Water Footprint Implementation

Project summary:

The Pastoorsweijer ponds are restored historic fishponds located in the southeast of Bergeijk in the province of North Brabant, Netherlands. The ponds are made up of 4 basins separated by dykes. Similar to the Liskes ponds, the initial pond system was constructed in the 1950s and the dykes, weirs and pipes were in poor condition leading to loss of water from the ponds. The area has also been affected by droughts which has led to further drying of the ponds. To restore the hydraulic and ecological function of the ponds, Natuurmonumenten rehabilitated the ponds by restoring old inlet and outlet weirs, clearing vegetation, sealing and increasing the height of dykes.



Expected impact

- Increased surface water storage and groundwater infiltration within the ponds
- Restored habitat and biodiversity

682.6 CAPs per project cycle

34.2 CAPs eq per project cycle

€**1,139.63** per CAP

€**22,766.06** per CAP

Project typology: Ecosystems and Biodiversity

Project Cycle: 10 years

Volume replenished: 656,313.7 m³

Total Project Cost: €777,875.02

Collaborators:

Natuurmonumenten

1 CAP = 1,000 m^3 eq of Water Footprint saved

Shared Peel Climate Buffers, North Brabant, Netherlands

Water Footprint Implementation

Project summary:

Mariapeel is one of the surviving remnants of a former raised-bog region in the North Brabant/Limburg provinces. It is surrounded by low-lying agricultural land where farmers drain water from the soil profile to allow for agricultural activities. In dry summers, groundwater is further abstracted for irrigation. The excessive abstraction of water in the low-lying land has resulted in rapid loss of water from the Mariapeel and threatens the already vulnerable system which only depends on rainwater for water supply due to its elevation. To retain more water in Mariapeel while still providing adequate water for agricultural purposes, climate buffers are proposed. Climate buffers will retain water in the low-lying areas and provide counterpressure that prevents excessive loss of water from Mariapeel.



Expected impact

- Reduced loss of water from the Mariapeel raised-bog
- The climate buffers will provide water for irrigation, preventing groundwater abstraction in dry summers

Project typology: Ecosystems and Biodiversity
Project Cycle: 5 years
Volume replenished: 515,914 m³ (net replenishment)
Total Project Cost: €4,876,432.57

2,708.6 CAPs per project cycle	**134.3** CAPs eq per project cycle
€1,800.39 per CAP	**€36,311.50** per CAP

Collaborators:

flux LANDSCAPE ARCHITECTURE

1 CAP = 1,000 m^3 eq of Water Footprint saved

Conclusion and Call to Action

- The ecosystem of water footprint assessments, ESG reporting and finally **compensation** paved the floor for cooperates can be involved in creating a more sustainable water system

- Technical feasibility of Water Credits: we can calculate water projects and link m^3 and €€!
  - Good data and ownership is inevitable
  - **Looking for 2 other projects in East North Brabant area**

- Request from cooperates for water projects is increasing
  - **Potential compensators come on board!**

- Awareness and linking (platfrom): The link between compensator and compensation project owner/promotor is a next step to take.
  - **Request for partners**

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