





**50% uit  
grondwater**

# De rol van landschapsdepressies in de context van klimaatadaptatie

**Annelies Broeckx**

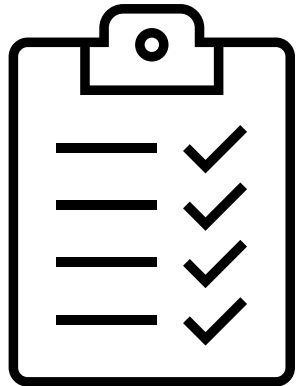
**ANKONA ontmoetingsdag  
11 februari 2023**



Universiteit  
Antwerpen



University of Antwerp  
**ECOSPHERE**



1. **Wat zijn bovenstroomse landschapsdepressies?**
2. **Hoe onderzoek je hun potentieel om meer water te infiltreren?**
3. **Hoe zie je dat op grote schaal?**

A landscape photograph of a wetland or marsh. In the foreground, there are several clumps of tall, thin, green and brown grasses. In the middle ground, there is a calm body of water that reflects the sky and the surrounding vegetation. The background shows a flat expanse of land with more vegetation and a line of trees on the horizon under a cloudy sky. The overall scene is peaceful and natural.

**Wat zijn bovenstroomse  
landschapsdepressies?**

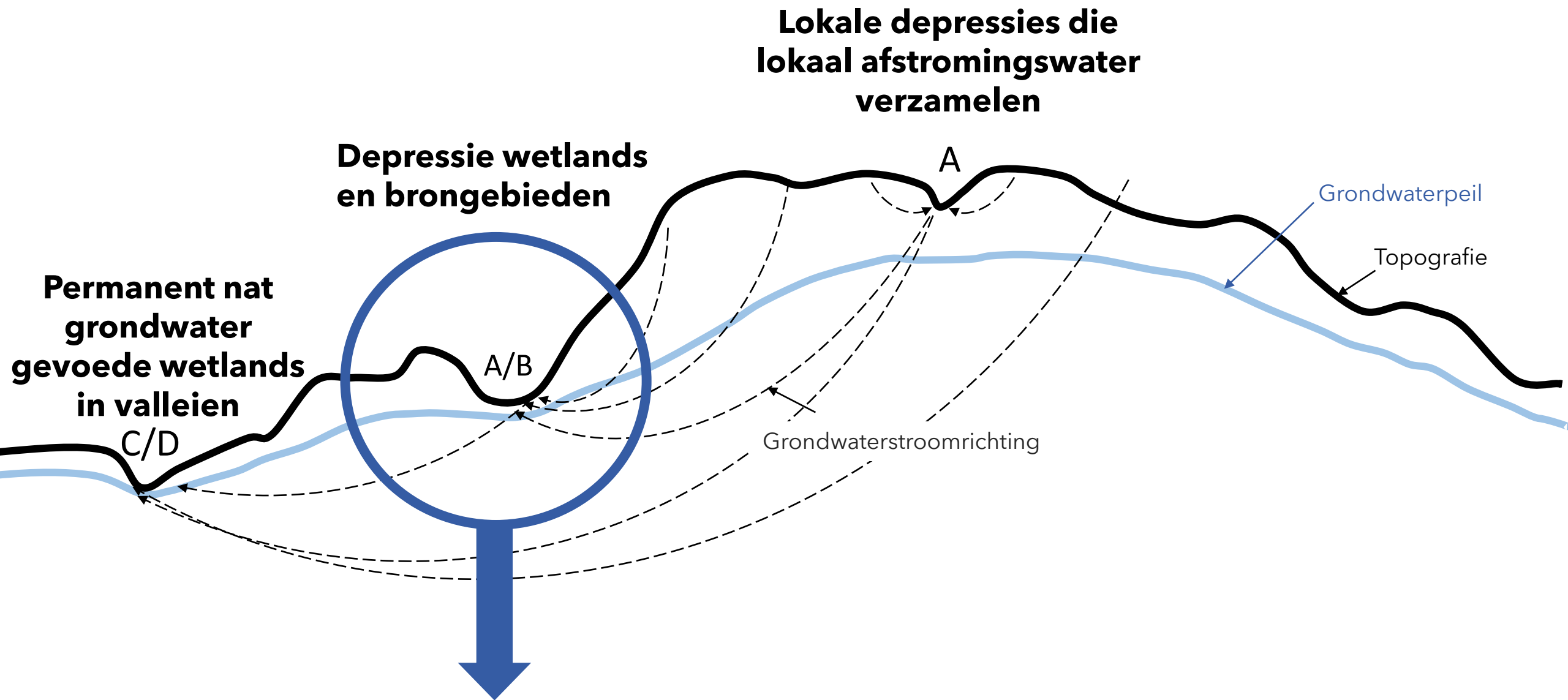


Oppervlakte

**Ondiep grondwater**

Harde kleilaag

Diep grondwater

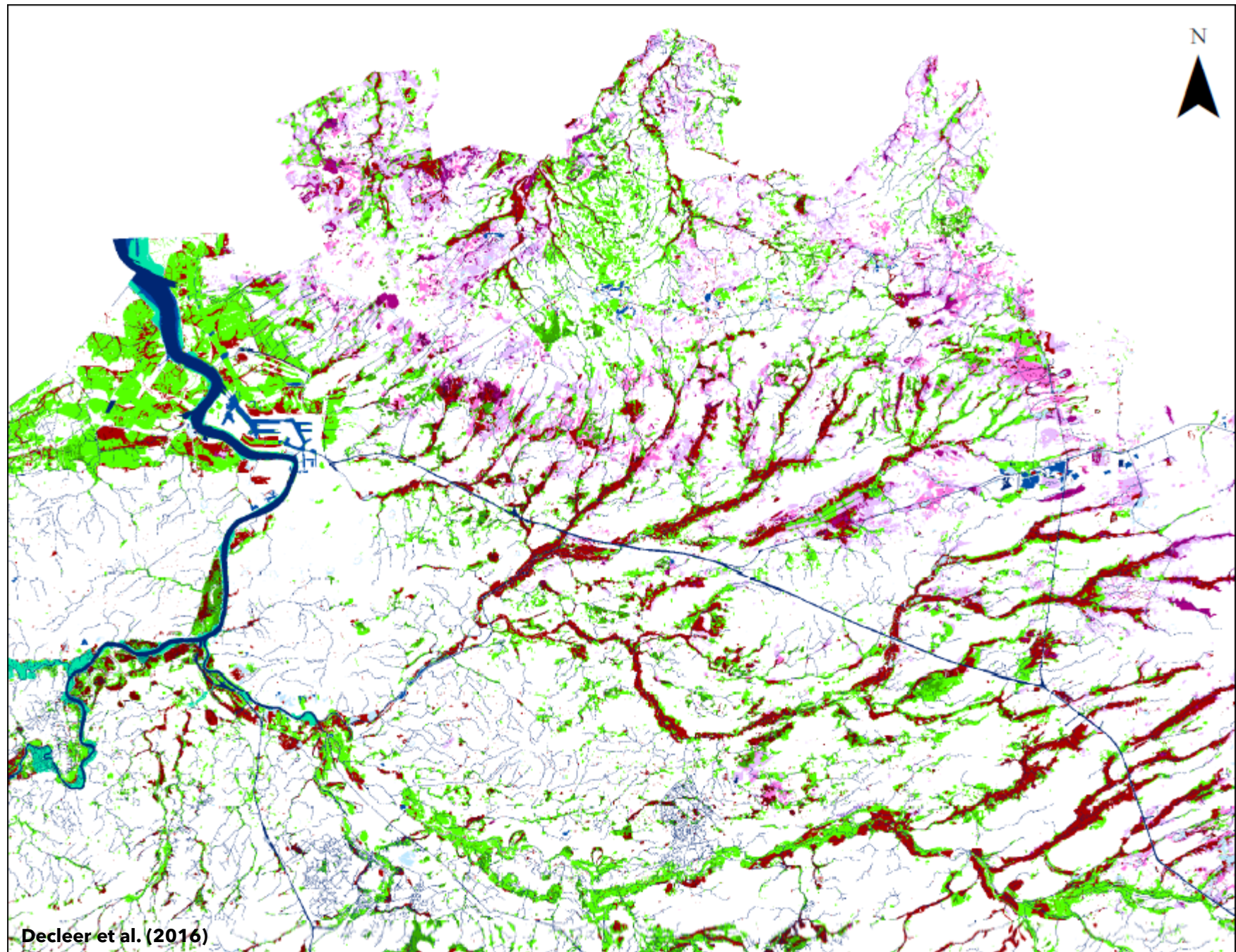


# Bovenstroomse landschapsdepressies

Potentieel om water vast te houden en te laten infiltreren om zo het grondwater aan te vullen

**Historische wetlands**

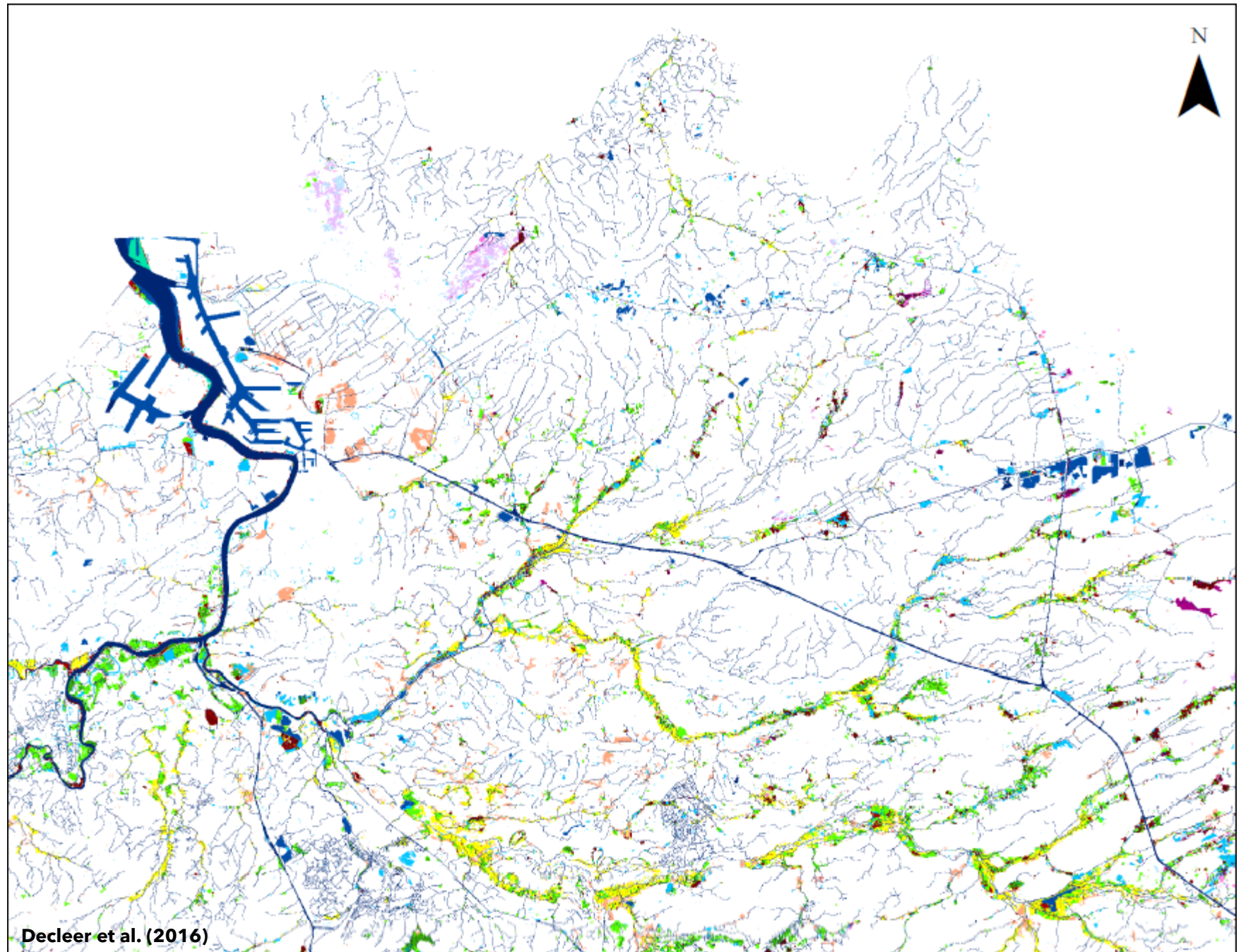
**VI: 250 000 ha**





**Actuele wetlands**

**VI: 70 000 ha**



Decler et al. (2016)

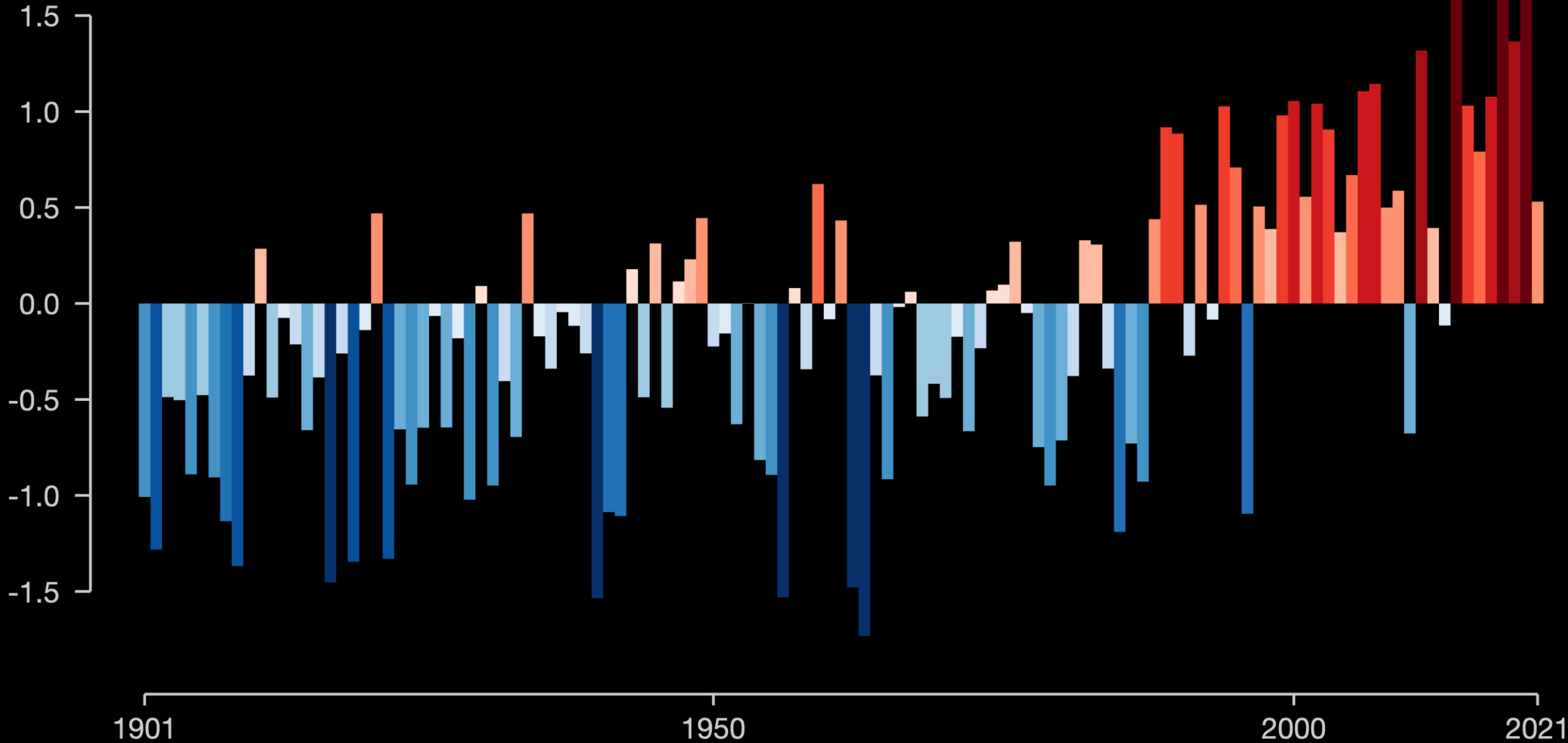


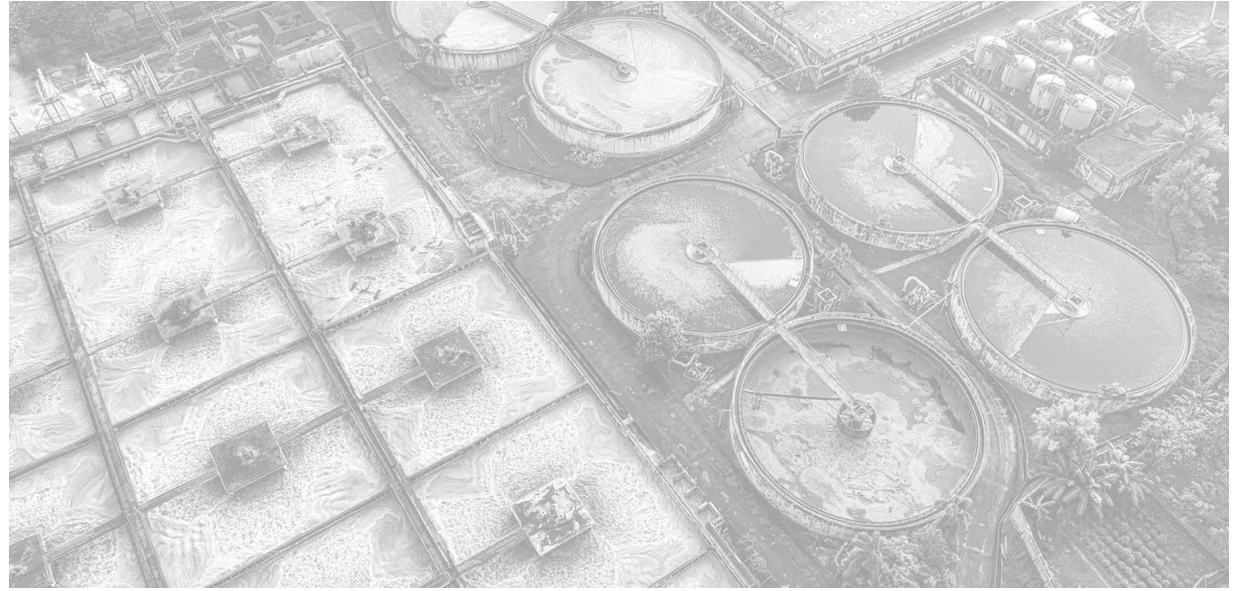
# 'Zo snel mogelijk afvoeren' - beleid

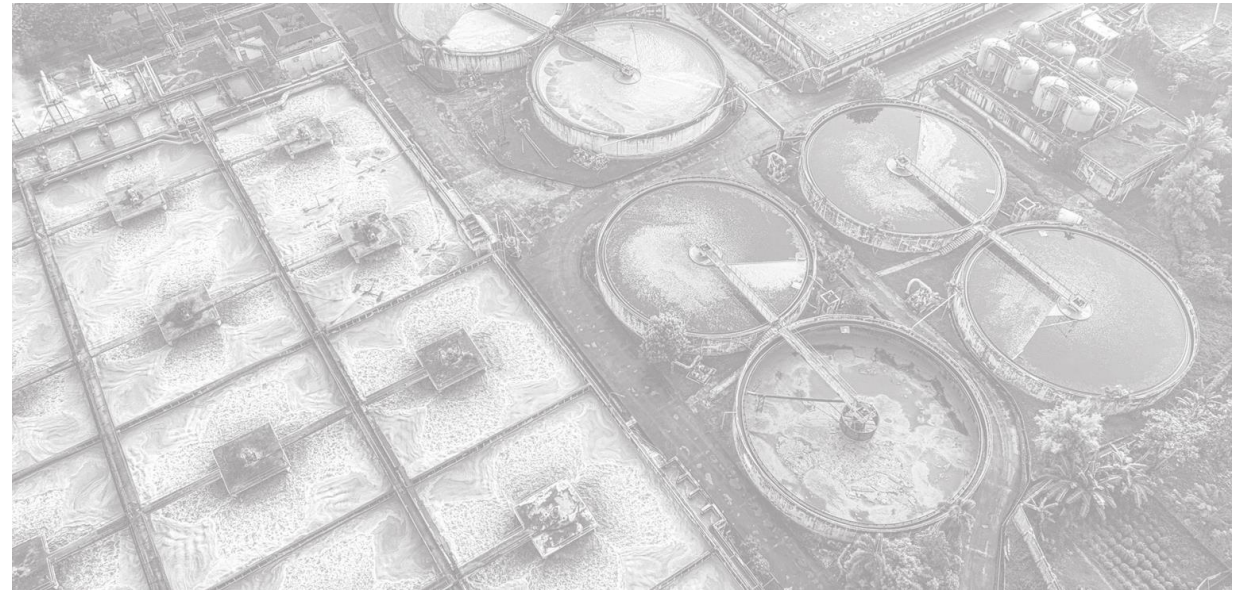
**Drainagegrachten  
Verharding  
Bodemverdichting**

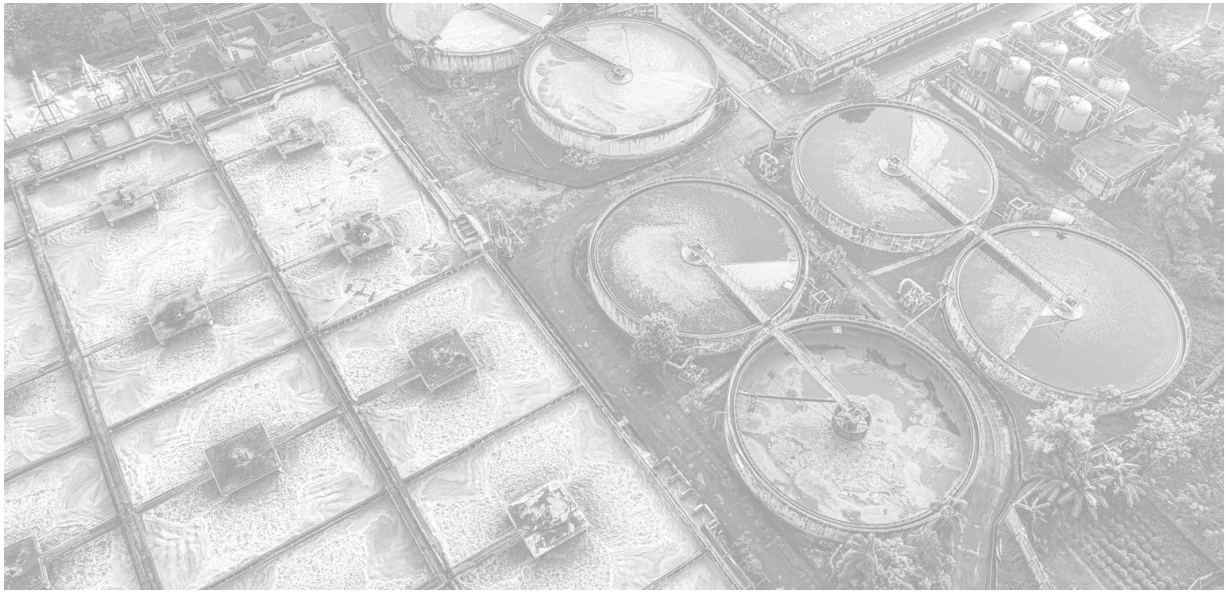
# Temperature change in Belgium

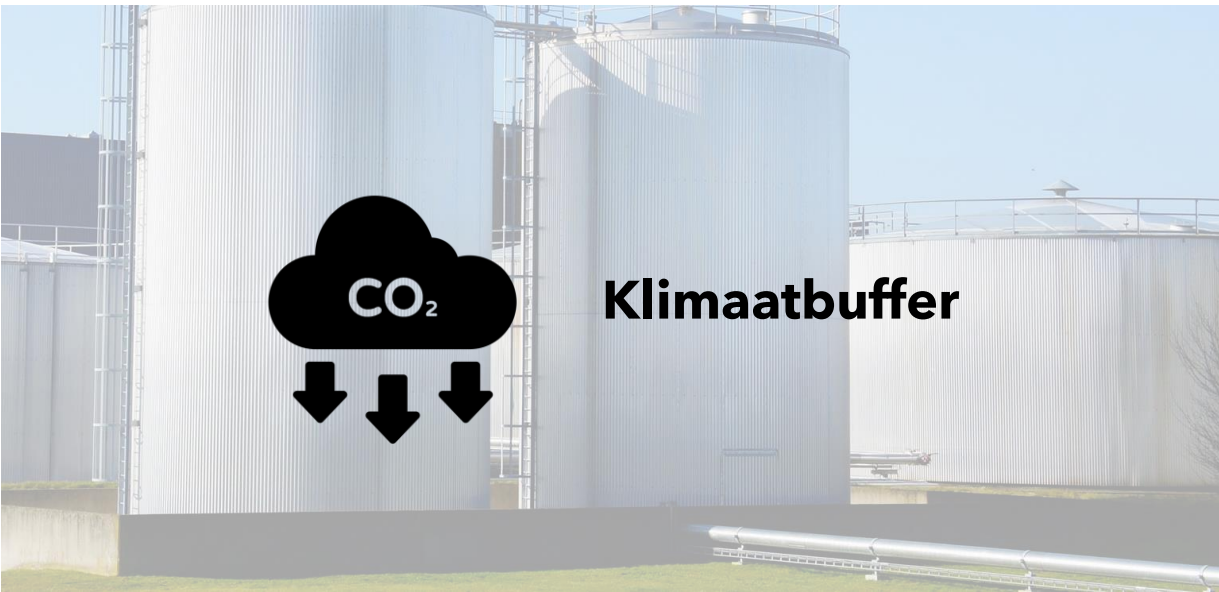
Relative to average of 1971-2000 [°C]























**Reductie overstromingsrisico**



**Betere waterkwaliteit**



**Klimaatbuffer**

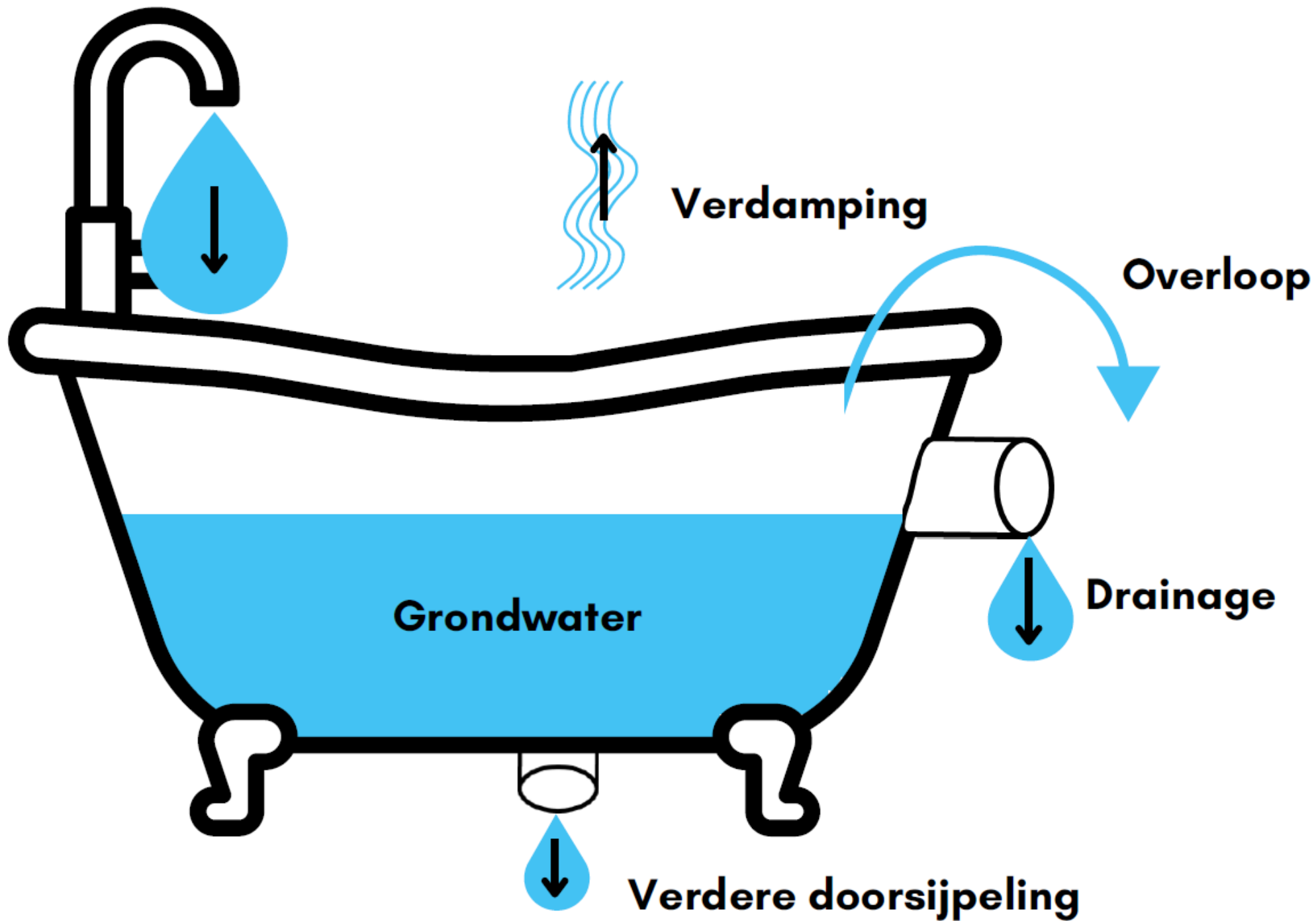


**Versterken biodiversiteit**

A landscape photograph featuring tall, thin grasses in the foreground and a body of water in the middle ground. The water reflects the sky and the surrounding vegetation. The sky is a mix of light blue and white, suggesting a clear or slightly overcast day. The overall scene is serene and natural.

**Hoe onderzoek je hun potentieel  
om meer water te infiltreren?**

**Neerslag**



**Verdamping**

**Overloop**

**Grondwater**

**Drainage**

**Verdere doorsijpeling**

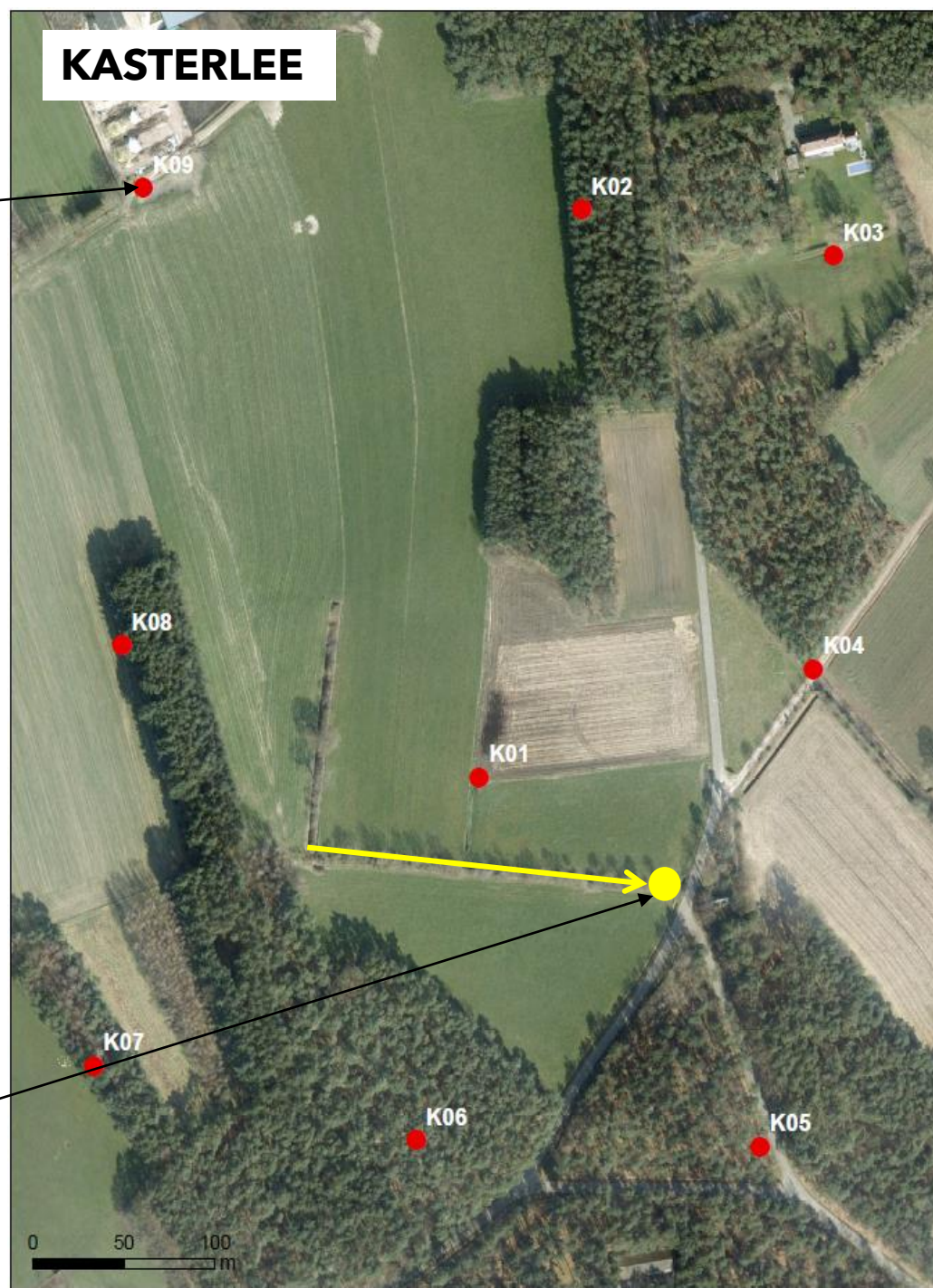
**Grondwaterpeil**

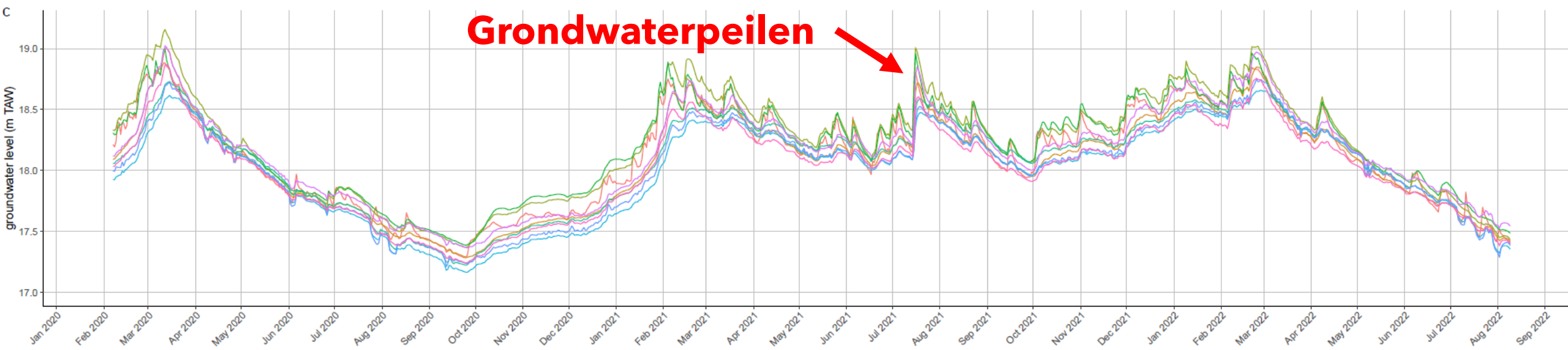
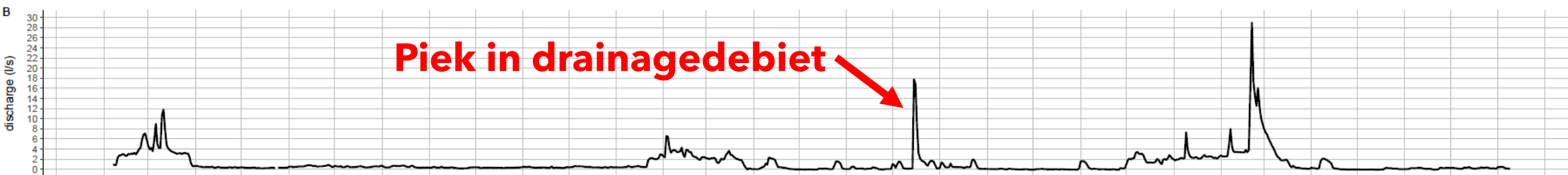
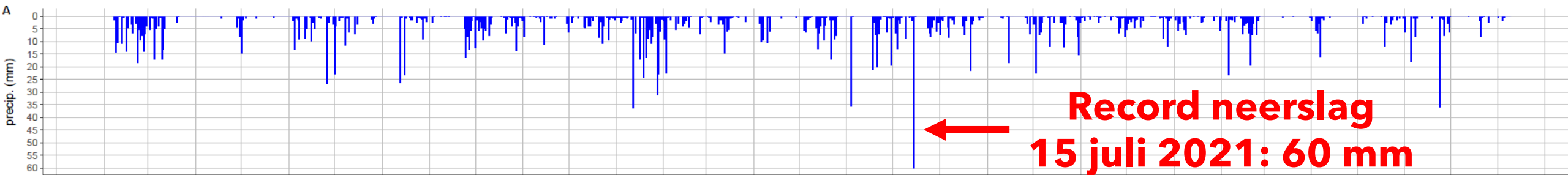


**Weerparameters  
(waaronder  
neerslag)**

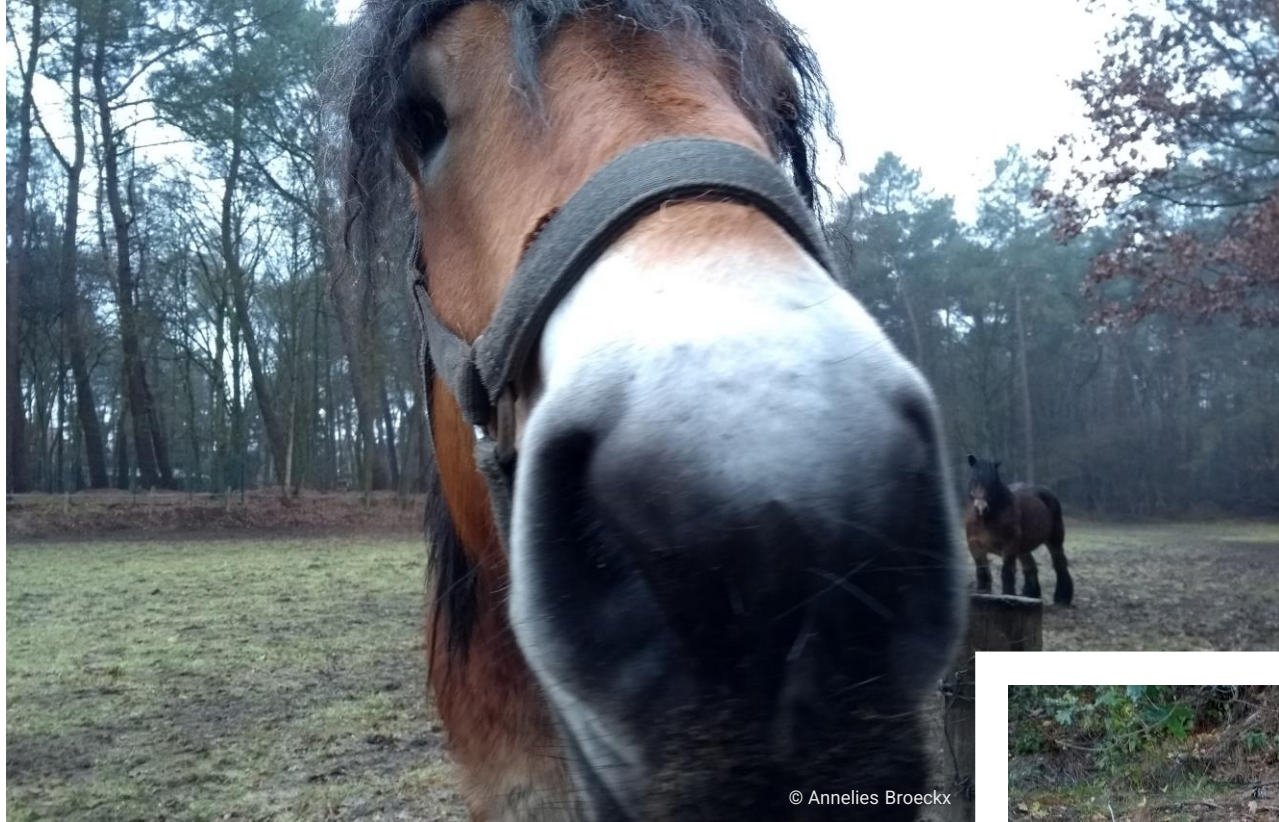


**Afstromend  
drainagedebiet**









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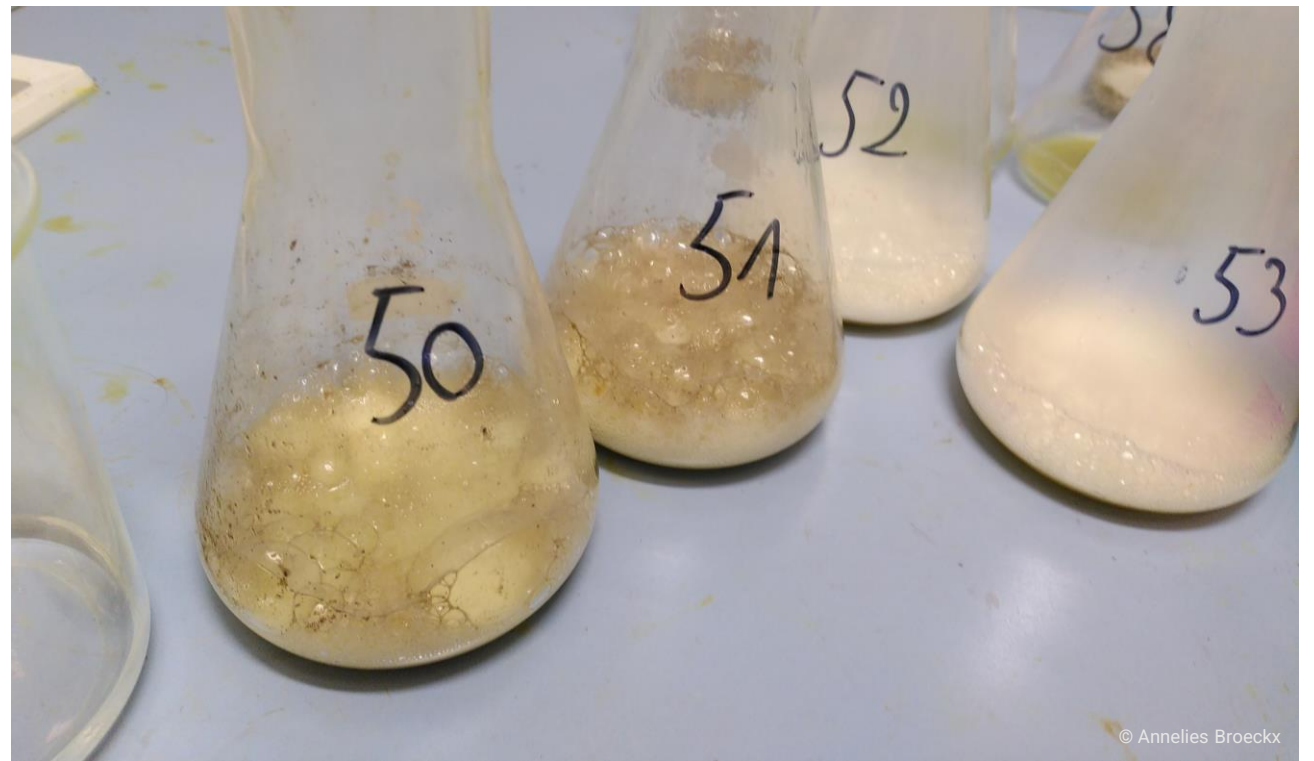
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## Bodemstalen



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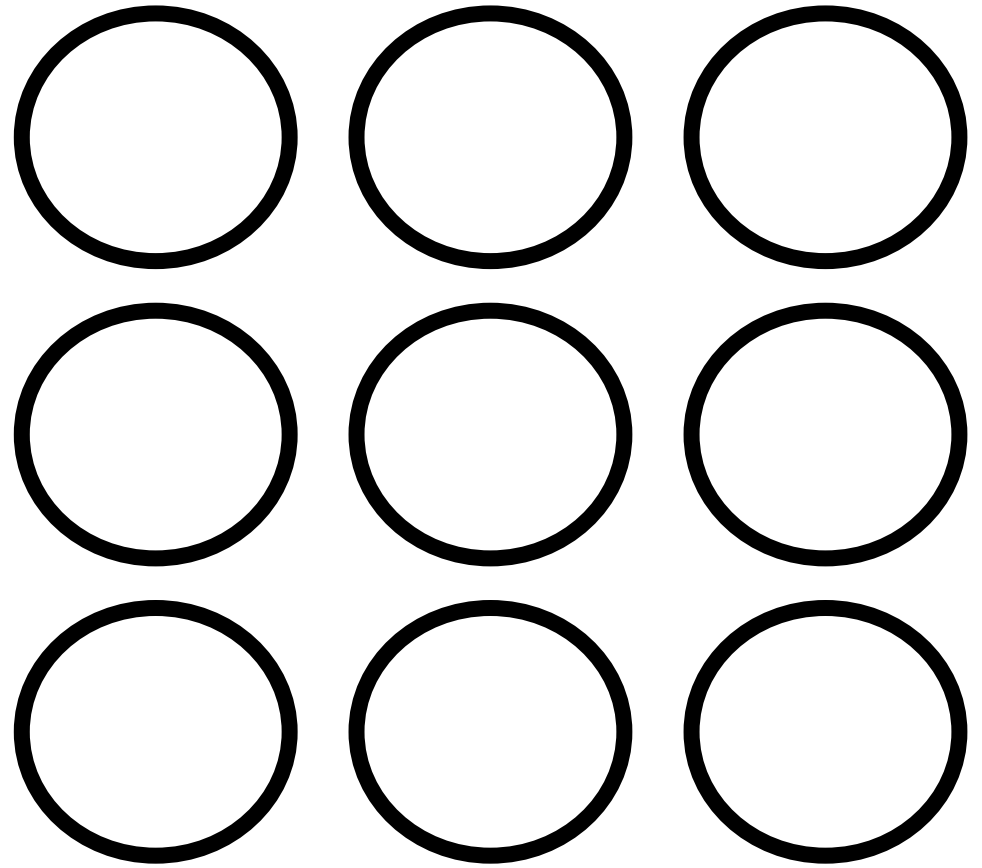
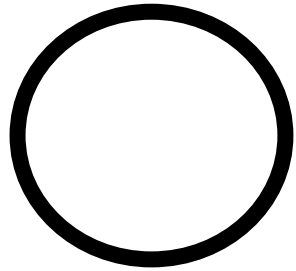


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**Verzadigde doorlaatbaarheid bodem**



**Eentje is geentje!**  
**Hoe zit dat op grote schaal?**



**Data-analyse  
Model**

**Bekkenmodel  
Scenario-analyse**



**Databank van  
landschapsdepressies in de  
Provincie Antwerpen**



© Boerenatuur

# Maatregelen

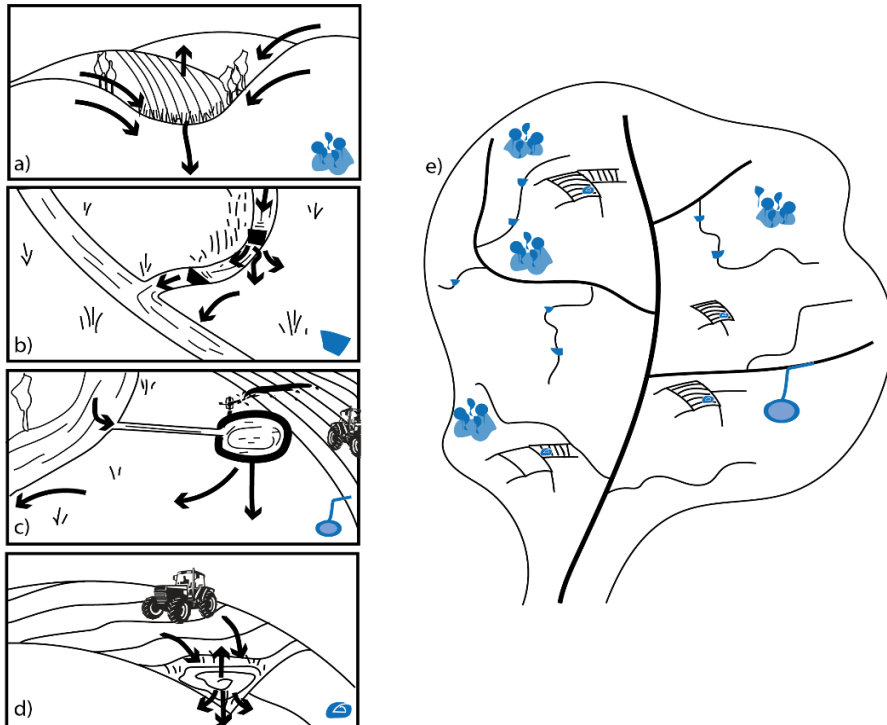
**Drainage minderen**  
**Stuw**

**Drainage stoppen**  
**Compleet vernatten**



# TURQUOISE

## Blauwgroene maatregelen voor klimaatadaptatie



- a) Waterregulerend vermogen van **landschapsdepressies**
- b) Beheer van stuwen en grachten op landschapsschaal
- c) Infiltratiesystemen met actieve inname vanuit rivieren/kanalen (infiltratiebekkens, vloeiveiden)
- d) Kleinschalige retentie/infiltratiezones in het agrarisch landschap
- e) Het vernatten van bovenstroomse valleisystemen (bronmoerassen)

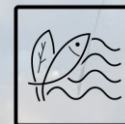


**“De rol van landschapsdepressies in de context van klimaatadaptatie”**

**Annelies Broeckx**  
**Doctoraatsonderzoeker Universiteit Antwerpen**  
***Annelies.Broeckx@uantwerpen.be***



**Universiteit  
Antwerpen**



**University of Antwerp  
ECOSPHERE**