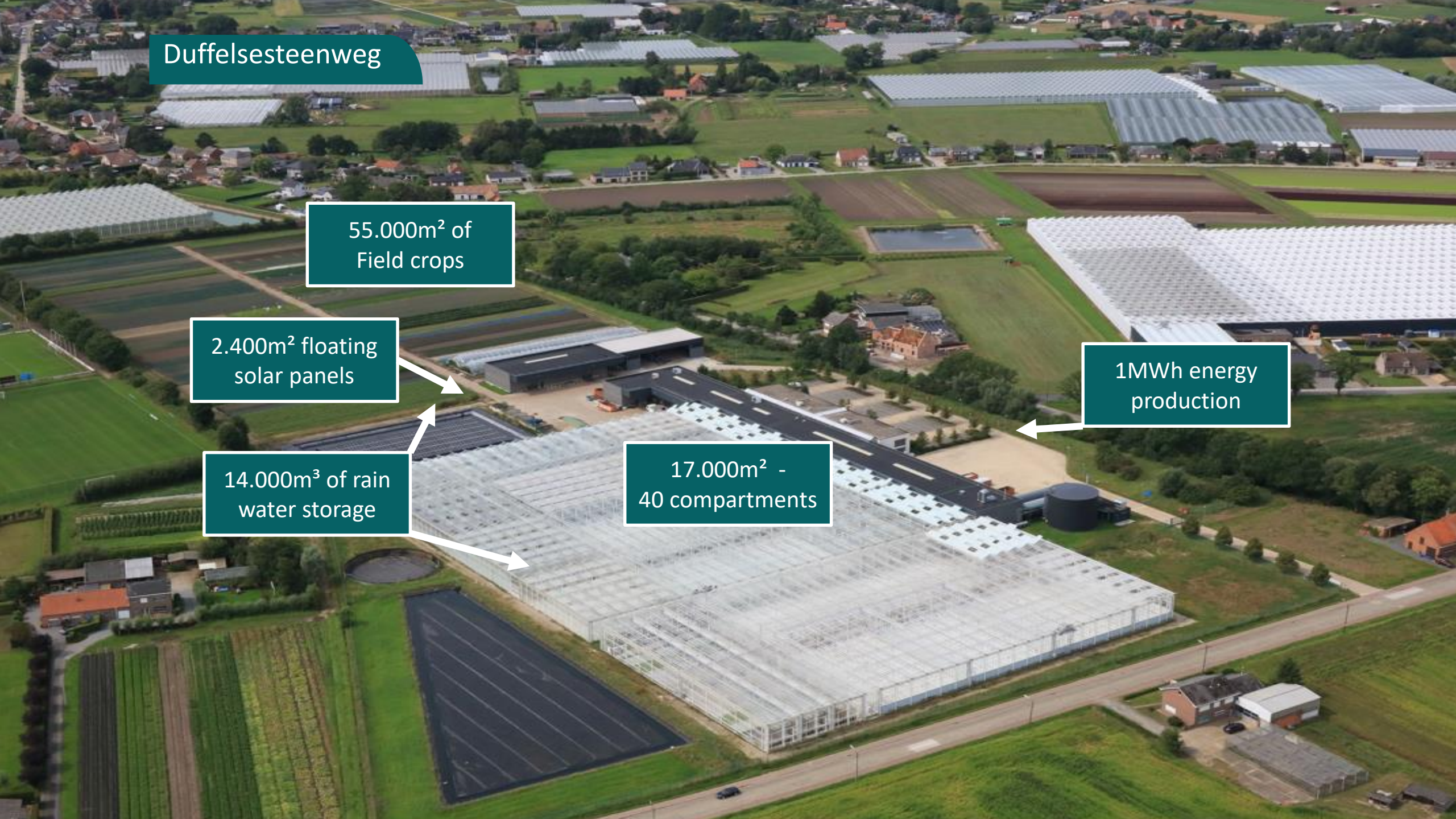

PROEFSTATION
VOOR DE GROENTETEELT

Sharing knowledge …
our mission since 1963!


Duffelsesteenweg
55.000m² of Field crops
2.400m² floating solar panels
14.000m³ of rain water storage
17.000m² - 40 compartments
1MWh energy production


Muilshoek
1.000m² of greenhouse
5.000m³ of (drainage)water storage
8.000m² of organic crops
42.500m² of conventional vegetable crops crops

Variety trials

- Production, new cultures
- Quality (harvest & post-harvest)
- Sensitivity drought, pests, diseases, …

Integrated pest management

Pepino Mosaic Virus
Research lead to commercial vaccin

Alerting system for pests in outdoor crops

Trials for external companies

Energy

1 MWh

Input 2,5m³ of gas per MWh

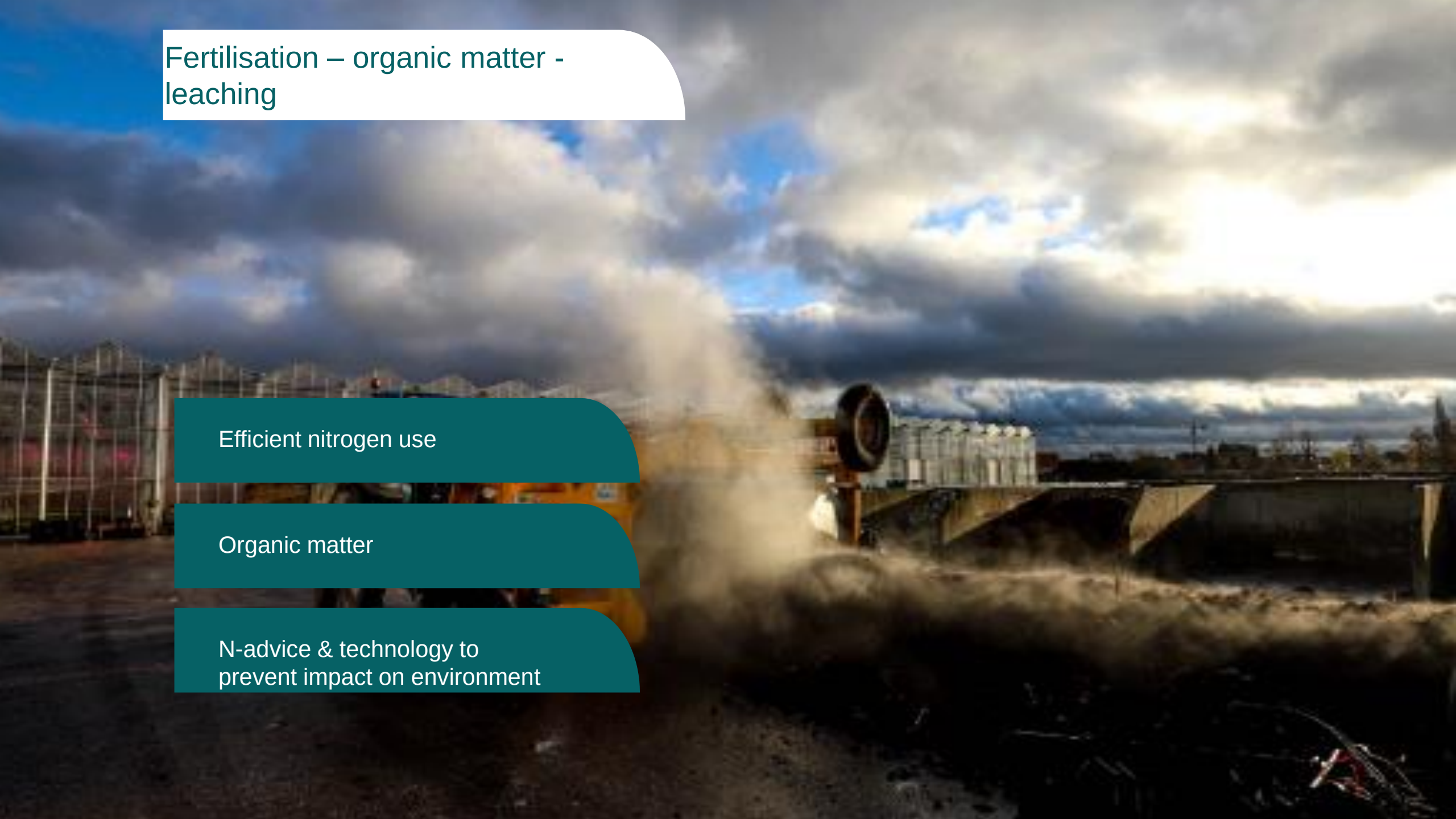
Producing hot water for greenhouse heating – aspergus - offices

CO2 used in greenhouse for increased production

GLITCH
www.glitch-innovatie.eu

Interreg
Vlaanderen-Nederland
Europees Fonds voor Regionale Ontwikkeling

Fertilisation – organic matter - leaching



- Efficient nitrogen use
- Organic matter
- N-advice & technology to prevent impact on environment

Sustainable water use

- Efficient water use
- Using less vulnerable water sources
- Moving towards more regional approaches

The ACLIMA-project has received funding from the LIFE Programme of the European Union under contract number LIFE 20 CCA_BE_001720

Life ACLIMA

Visit Life C2C, 6 may 2022

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Life ACLIMA Assuring water Availability in Agriculture under changing CLIMAte conditions

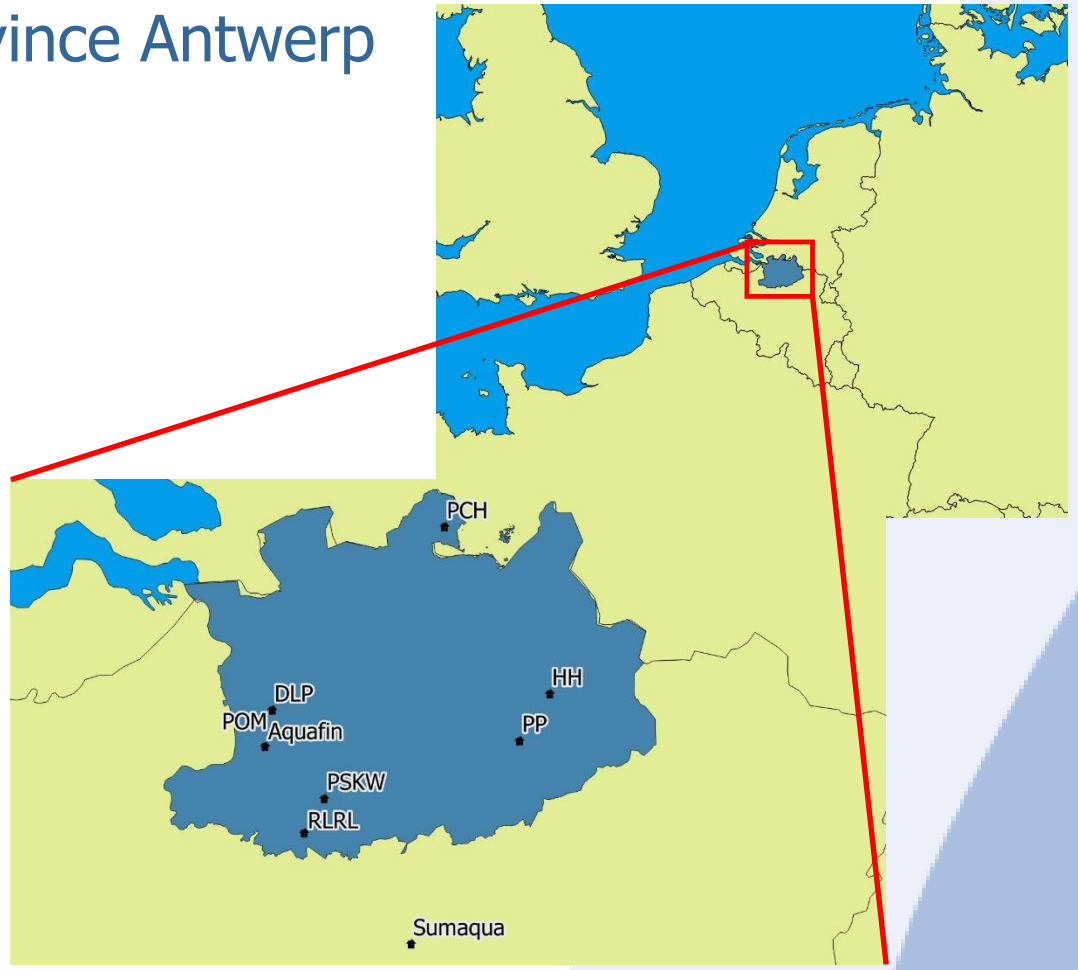
PROJECT LOCATION: BELGIUM, province Antwerp

BUDGET INFO:

Total amount: 3.610.236 €

% EC Co-funding: 55% 1.985.627 €

DURATION: 01/07/21 - 30/06/26



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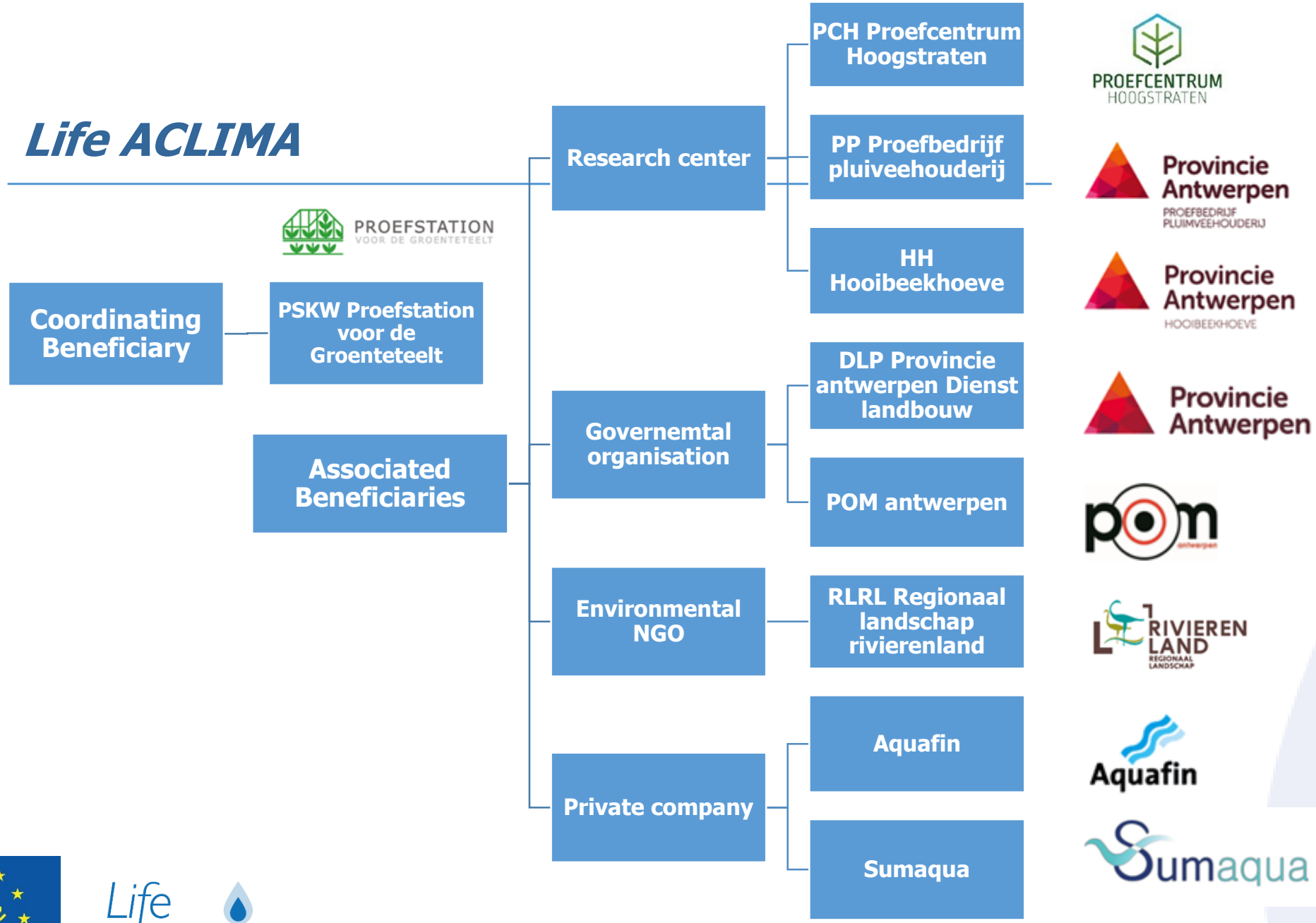

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OBJECTIVES & SCOPE

Provide an answer to the increasing water demand and decreasing water availability in agriculture due to climate change

by demonstrating and guiding technologies and "good practices" to agricultural and horticultural companies

for a future-oriented and sustainable way of farming in respect with environment and society

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OBJECTIVES & SCOPE

Quantifying and modelling impact on water-ecosystem

Improve (rain)water infiltration

Maximal use of rainwater

Use of alternatieve watersources from farmlevel

Reducing irrigation and drinking water

Multiplication: Climate adaptation pathway for companies

Use of external alternatieve watersources

Dairy cattle - vegetables - soft fruit - poultry

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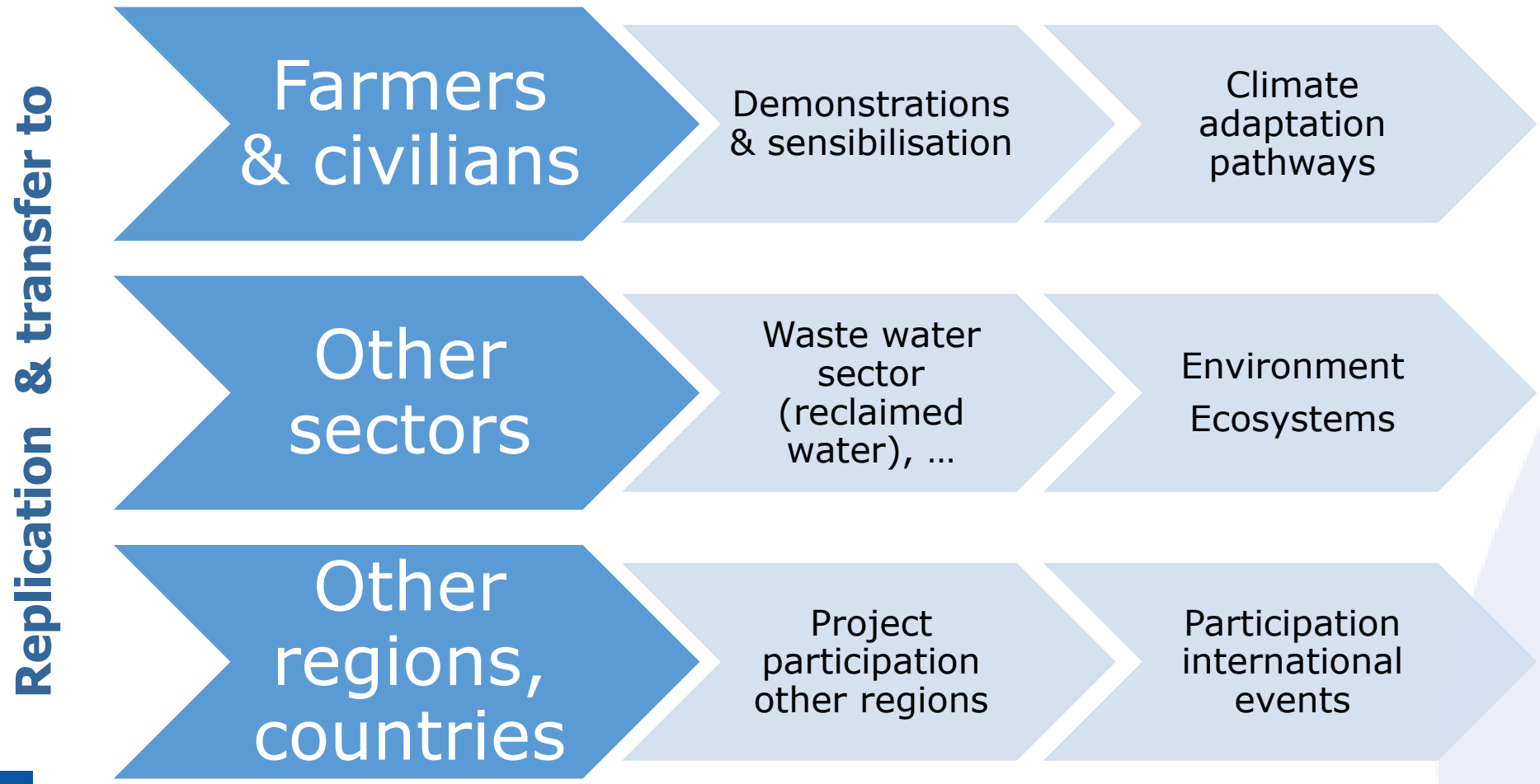
CONTINUATION (REPLICATION, TRANSFER, MARKET UPTAKE)



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Actions

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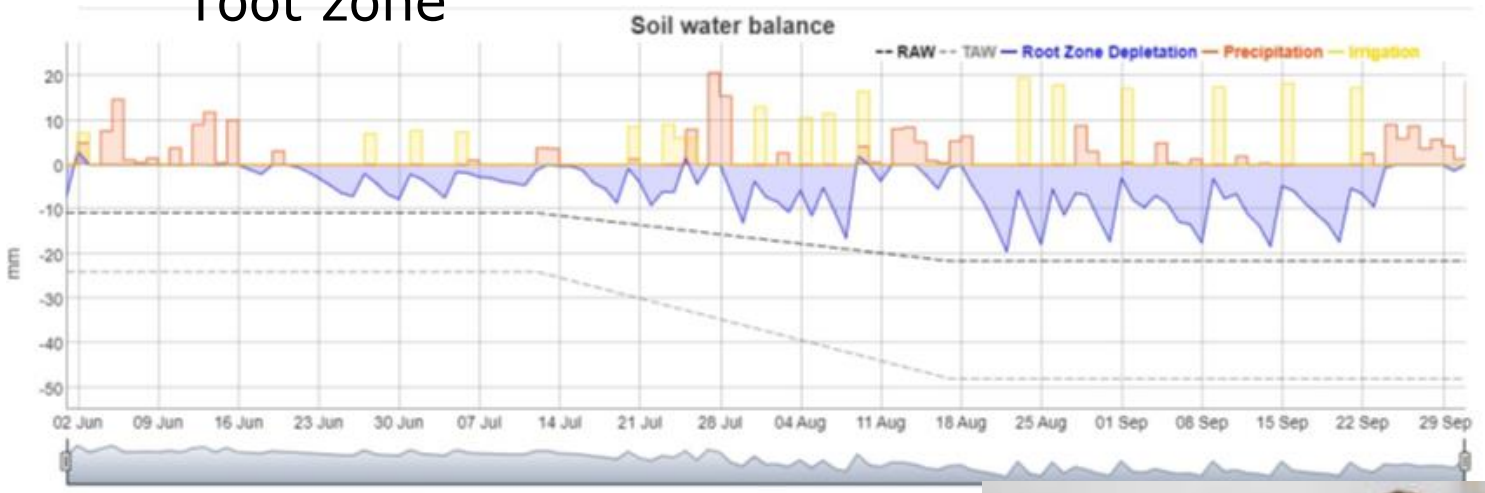
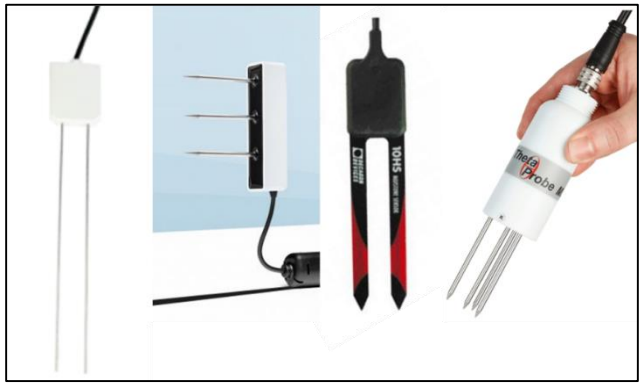
Optimization of irrigation in soil vegetables (C1.3)

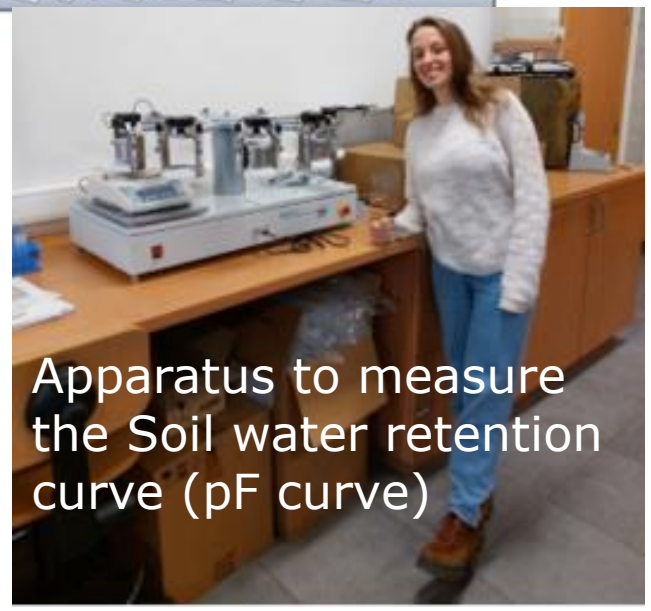
Irrigation advice based on:

- Realtime modelling of water availability in root zone

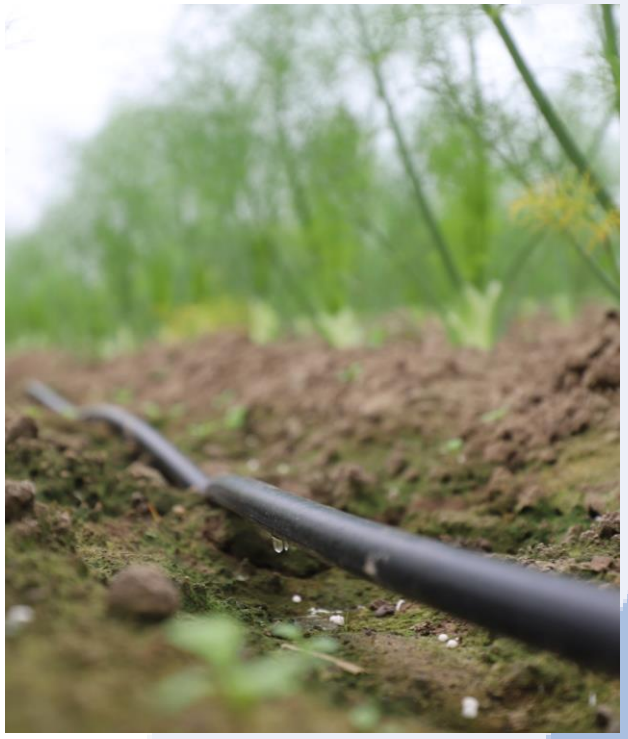


- Soil water sensors



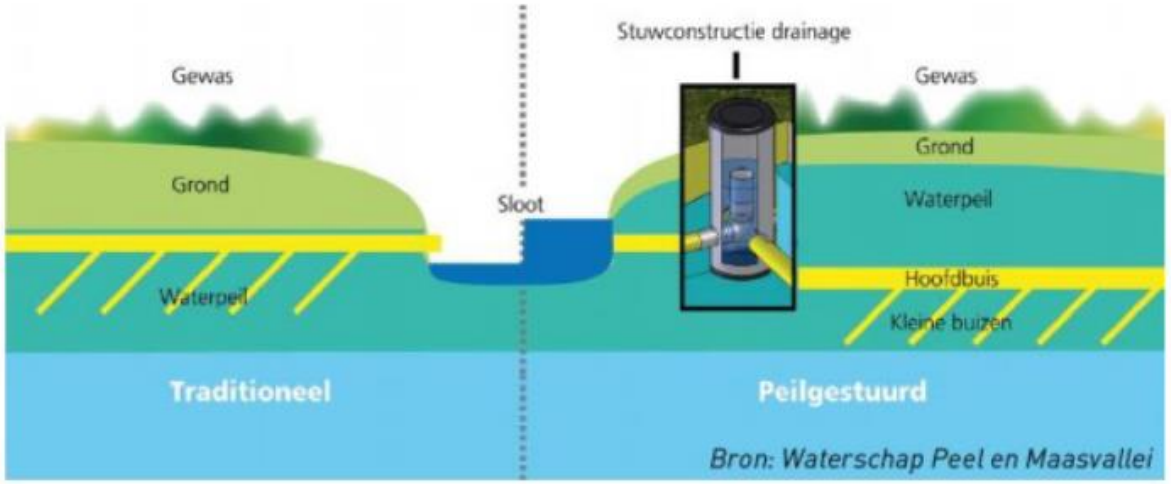

Apparatus to measure the Soil water retention curve (pF curve)

Drip irrigation

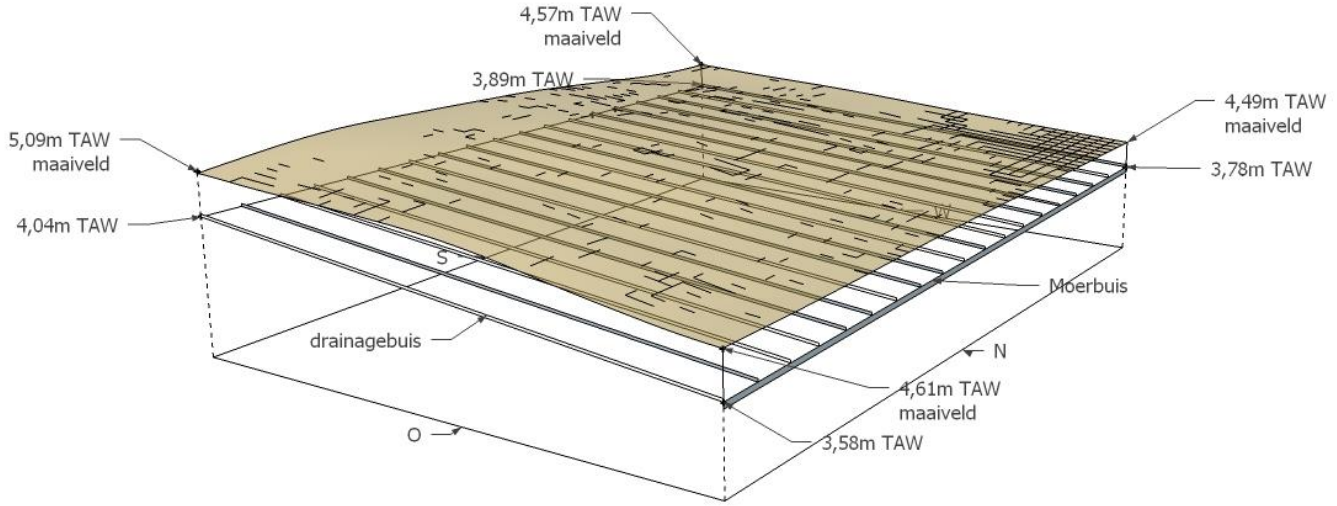


Climate adaptive drainage (action C3.2)

- Level controlled drainage



- Support farmers for transformat classical drainage to level contro
- Subirrigation
- Monitorring (ground) water level



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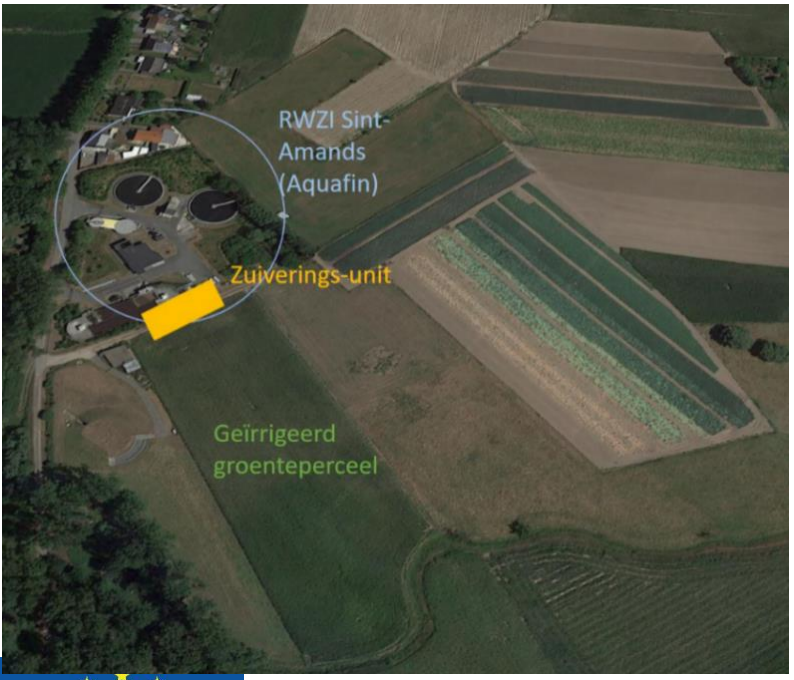
Reuse water from WWTP to irrigate soil-bound vegetable production via drip irrigation (C5.2)

- Soil-bound vegetable production in Sint-Amands
- Treatment through the 'demonstration'container
- Focus on micropollutants



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Findings of previous project AWAIR:

- Testing of different treatments for desinfection

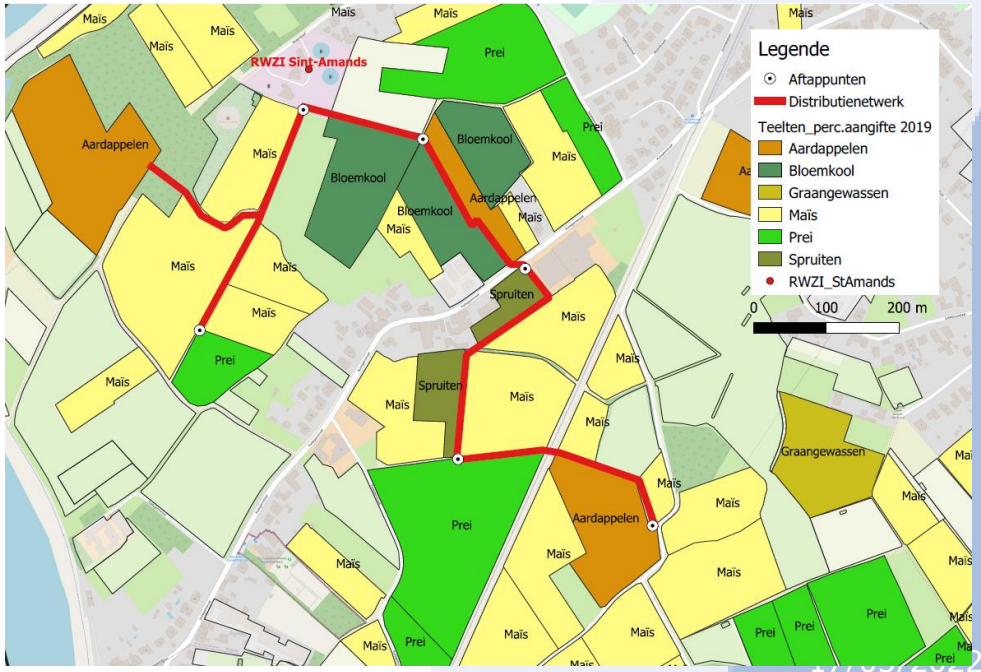
→ Focus was mainly on the bacterial reduction (E.coli)

2020 Sand filter- Active coal – H202

2021 Evaluation of following techniques:

- ClO2
- H202
- Ultrasoon

- First plan and economic feasability to deploy a distribution network



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Actions

Greenhouse experiments

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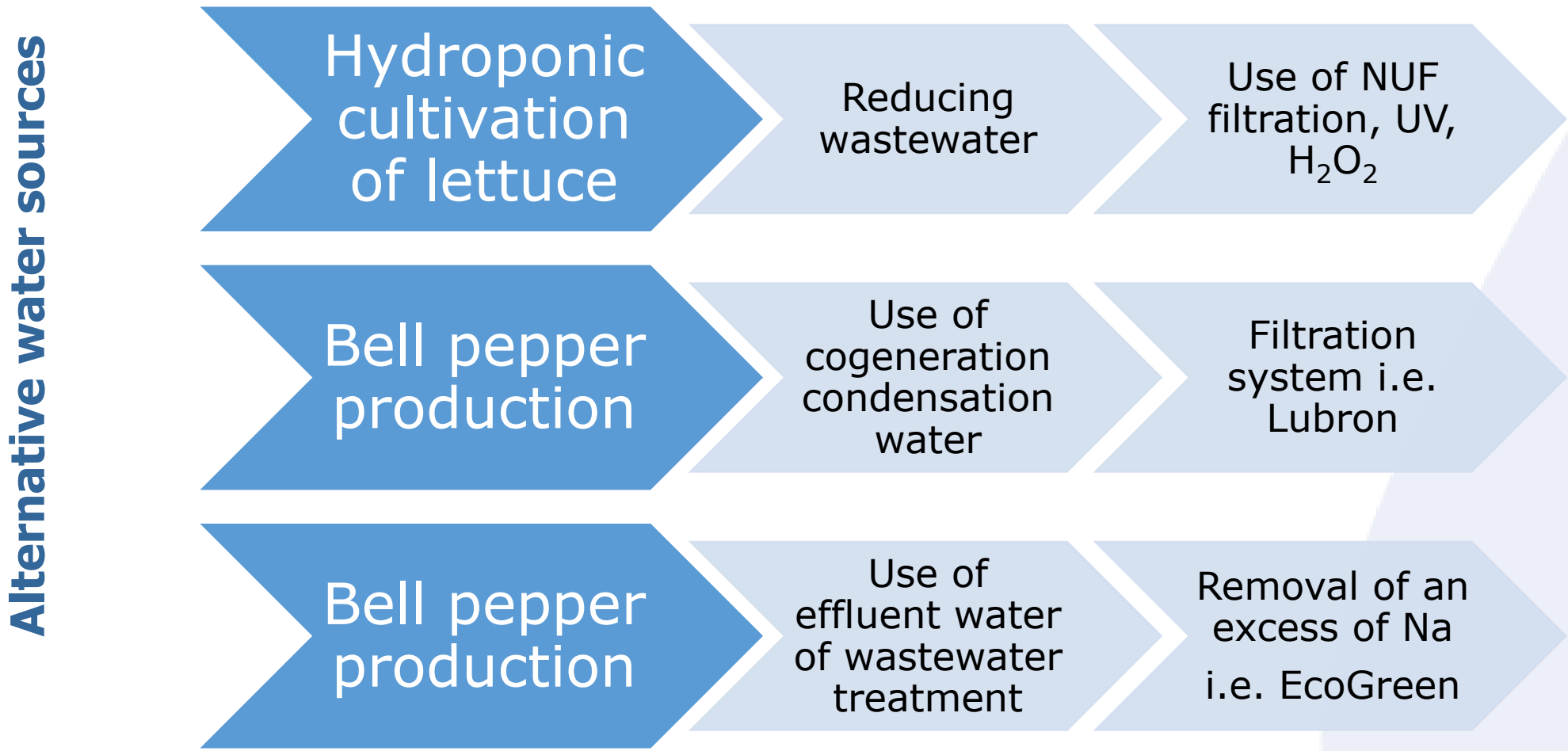
Use of alternative water sources and re-use of drain water



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Use of alternative water sources and re-use of drain water

Hydroponic cultivation of Lettuce

Controlling pathogens:

- *Olpidium* / ring necrosis virus
- *Phytophthora cryptogea*

Disinfection techniques

- Nano-ultra filtration (NUF)
- UV disinfection
- Hydrogen peroxide

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Use of alternative water sources and re-use of drain water

Hydroponic cultivation of bell peppers

Controlling water quality:

- Reducing excess of sodium (Na) and salts
- Removing oil and heavy metals

Technologies

- EcoGreen (WaterFuture)
- Lubron filtration system

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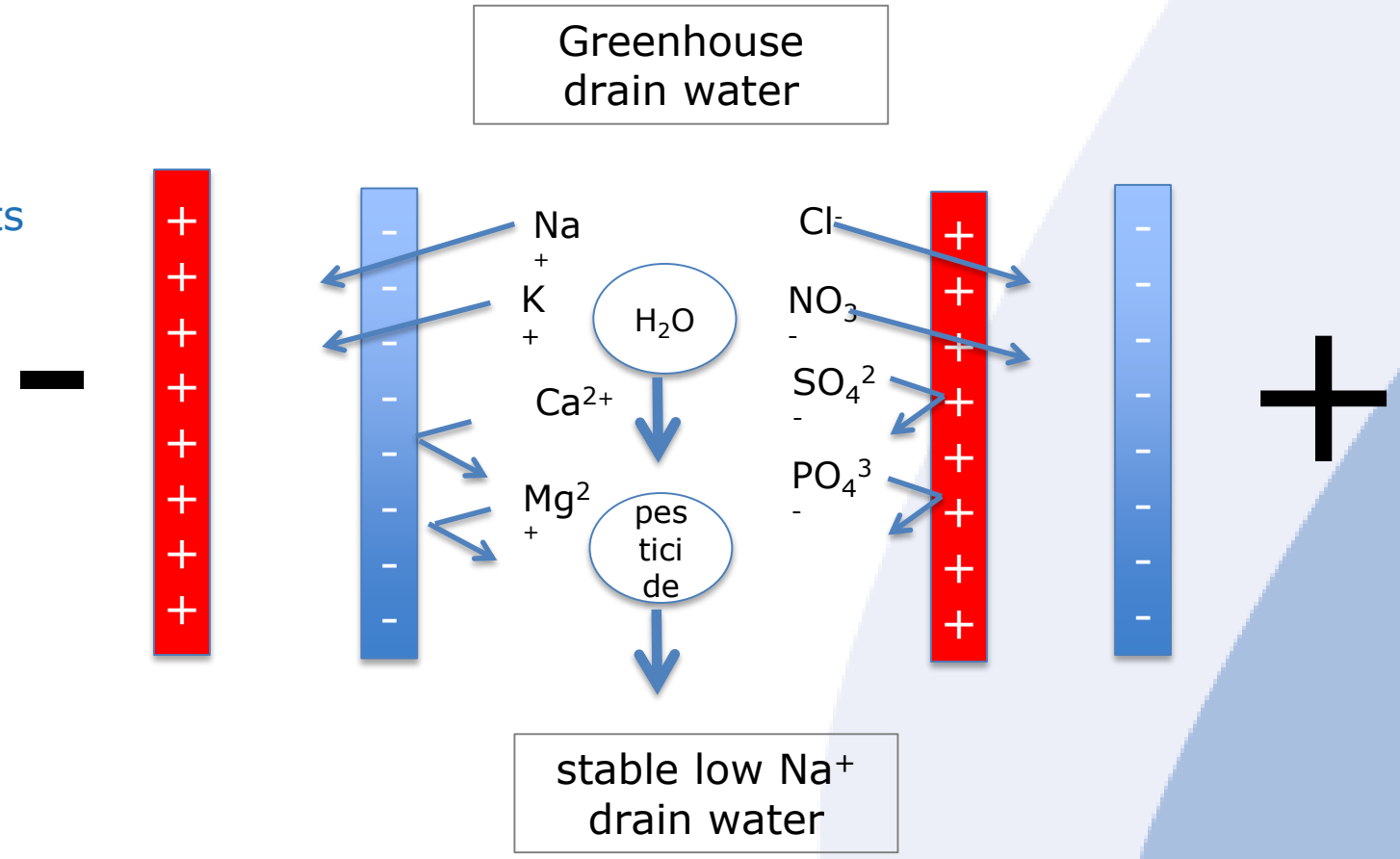

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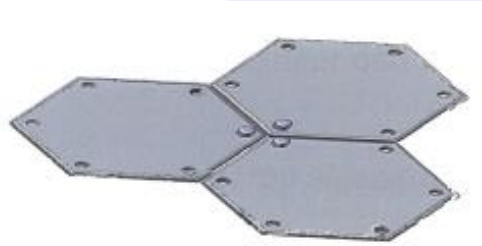
Water evaporation

Different cover materials to reduces water evaporation loses ↓

- Solar panels
- PVC foil
- Hexa-cover
- Watershields
- ICOS



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Life ACLIMA

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