



Together for sustainable irrigation

Irrigation Forum Spring 2022

11 March, 2022

THE HOUSEKEEPING RULES FOR A SMOOTH FORUM

- The event is recorded and will be shared
- Please remain muted during the meeting, turn on microphone only when you are speaking
- Make sure your full name and organisation is properly displayed
- Please announce questions or comments that via the chat box. The President will open the floor for questions at each agenda point
- The questions will be managed by Anne Claire. Questions will be read loudly from the chat box, or participants will be given the floor
- If you can, turn on your camera on so we can see each other

THE HOUSEKEEPING RULES EIA CODE OF CONDUCT

- EIA believes it is important that its activities are at all times carried out in accordance with the applicable law, especially competition law.
- EIA believes that business shall be conducted in an atmosphere of free competition, i.e. on the basis of price and quality.
- The Code of Conduct aims at providing clear rules to EIA's members, thus reducing the risk of improper conduct and consequently of fines being imposed.
- This Code of Conduct shall be binding on all members as well as on other participants when taking part in activities of EIA.

Agenda 11 March 2022

14:00-14:15	Opening	Moshi Berenstein/ EIA President
14:15 -14:20	Welcome to New Members	Fleur Martin/ EIA Communication Officer Javier Juárez, Azud
14:20-14:35	Introduction to Wastewater Reuse	Bruno Molle / EIA Executive Advisor
14:35-15:10	Guest speaker: “ Wastewater Reuse : focus on the Poseidon tool”	Dr Christoph Hugi, FHNW Basel
15:10-15:20	Innovation and Technology by our members: Responsive Drip Irrigation	Jan Gould, CEO, RDI
15:25 – 15:30	Closing session / Q&A	





Sustainability in agriculture



Urban Landscape



Standardization

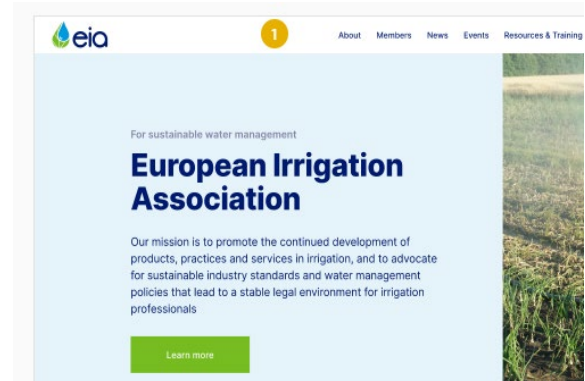
EIA Working Groups - updates



Training



Wastewater Reuse



Communication





Sustainability



Urban Landscape



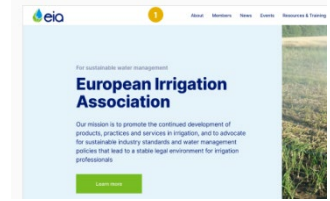
Standardization



Training



Wastewater Reuse



Communication

We invite you to join our Working Groups

Please contact Fleur Martin:

communication@irrigationeurope.eu

Welcome new members

**We are very pleased to welcome
Azud in the association**

The Culture of Water

for a

New Agriculture



AZUD

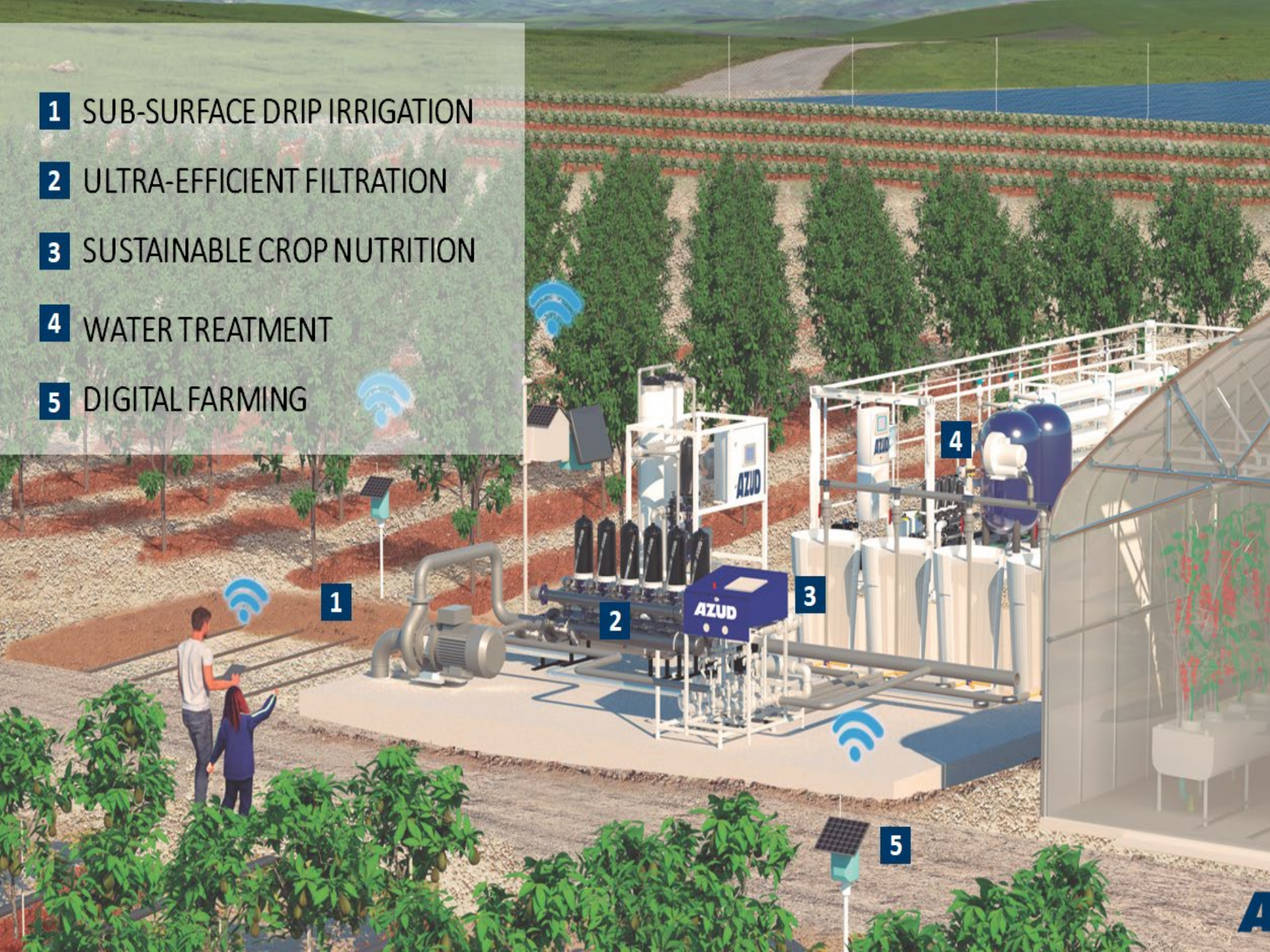
1 SUB-SURFACE DRIP IRRIGATION

2 ULTRA-EFFICIENT FILTRATION

3 SUSTAINABLE CROP NUTRITION

4 WATER TREATMENT

5 DIGITAL FARMING



40 years

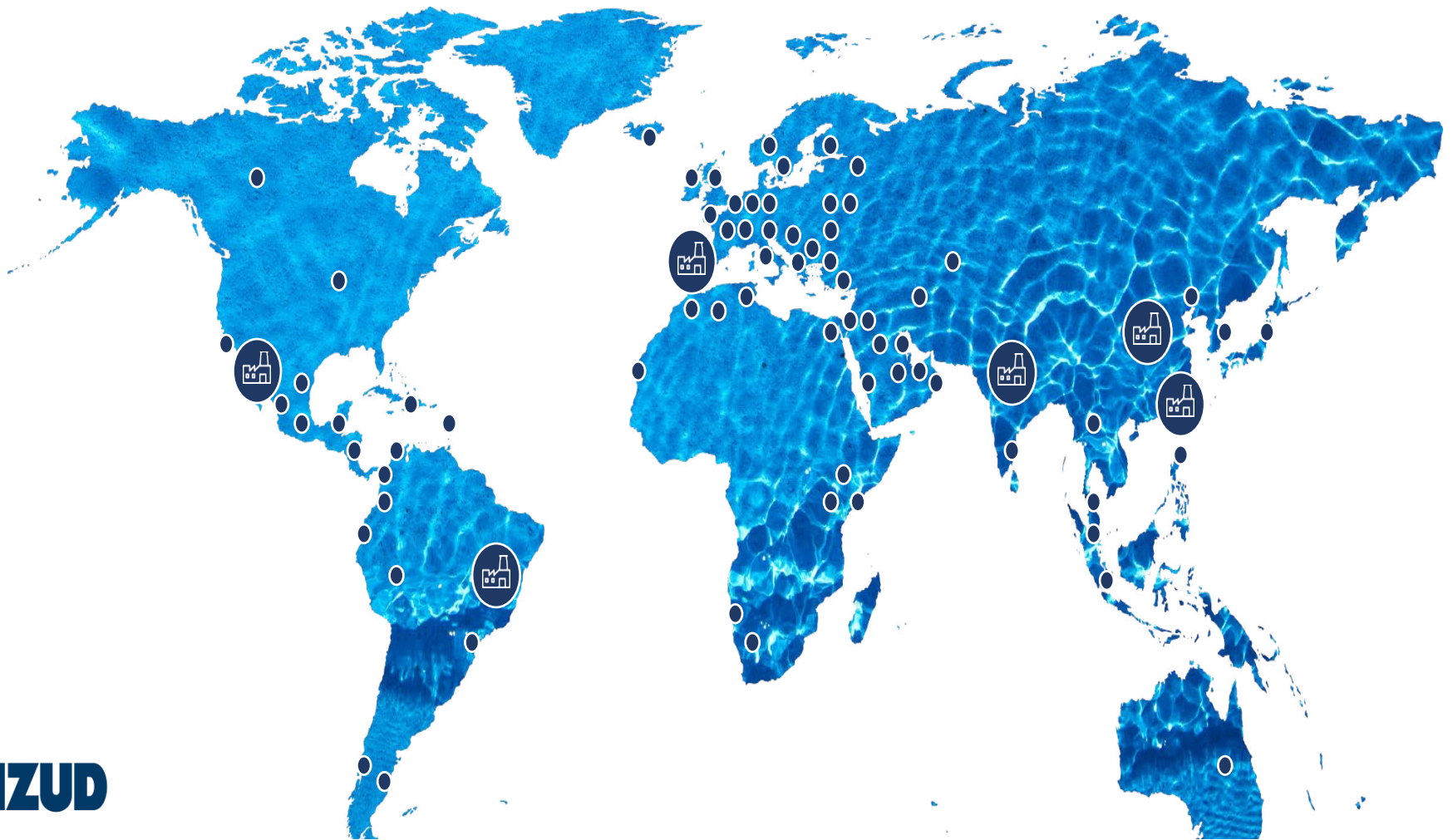
450 employees

9 factories

7 subsidiaries

65 patents

3% R&D



AZUD
La Cultura del Agua

AFEIDI



Hunter



Challenge Agriculture
L'eau et les minéraux maîtrisés

INAQUA

emrgy



sateam



Van den Borne
Kracht in water



irritec
don't wait for rain™

IRRITEC
IRRIGATION TECHNOLOGY

Irrigazette

ecofilae
GIVING VALUE
TO WASTEWATER



CLEVER°
FARM'



FRUITION
SCIENCES
CULTIVATE KNOWLEDGE

Irritrol

ARVALIS
Institut du végétal



B.J. Lamy
International
OEM Irrigati

AZUD

Senninger
AGRICULTURAL IRRIGATION | A Hunter Industries Company



SOLEM

Sentek

FERRIPLASTIC
GROUP
AGRICOLTURA e INNOVAZIONE

NAANDANJAIN
A JAIN IRRIGATION COMPANY

Senninger
AGRICULTURAL IRRIGATION | A Hunter Industries Company

LINDSAY™

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CENTRO NACIONAL DE
TECNOLOGÍA DE REGADÍOS

RL
Green

AQUAMATIC S.A.
SISTEMAS DE REGA AUTOMÁTICA



irrigazione
smart water project



Mazzei



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PROMOSNASTKA

RAIN BIRD

AQUA4D
IRRIGATION

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RAIN

RDI
RESPONSIVE
DRIP
IRRIGATION

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INRAE
la science pour la vie, l'humain, la terre

Regaber
matholding group

Rivulis

Rimopemar

ITC
DOSING PUMPS

Majed Sabbarini

EIA - Wastewater Reuse workshop

Introduction : Several figures and challenges

Dr Bruno Molle, EIA Executive Advisor

Presentation : **Poseidon Decision Support Tool**

Dr Christoph Hugi, FHNW Basel

Reusing Wastewater: What do we speak about?

- Water bodies cover 72% of the surface of the earth, 3% of the volume available for drinking and food production
- Across Europe drought events are no more limited to Mediterranean and Central Europe
- At least 11% of EU population and 17% of the area are affected today
- 20% of EU-Med population lives under constant water stress
- Over 50% have been temporarily affected
- In 2020 in EU
 - More than 40,000 Million m³ of WW are treated yearly...
 - 964 Million m³ were reused

Reusing Wastewater: What do we speak about?



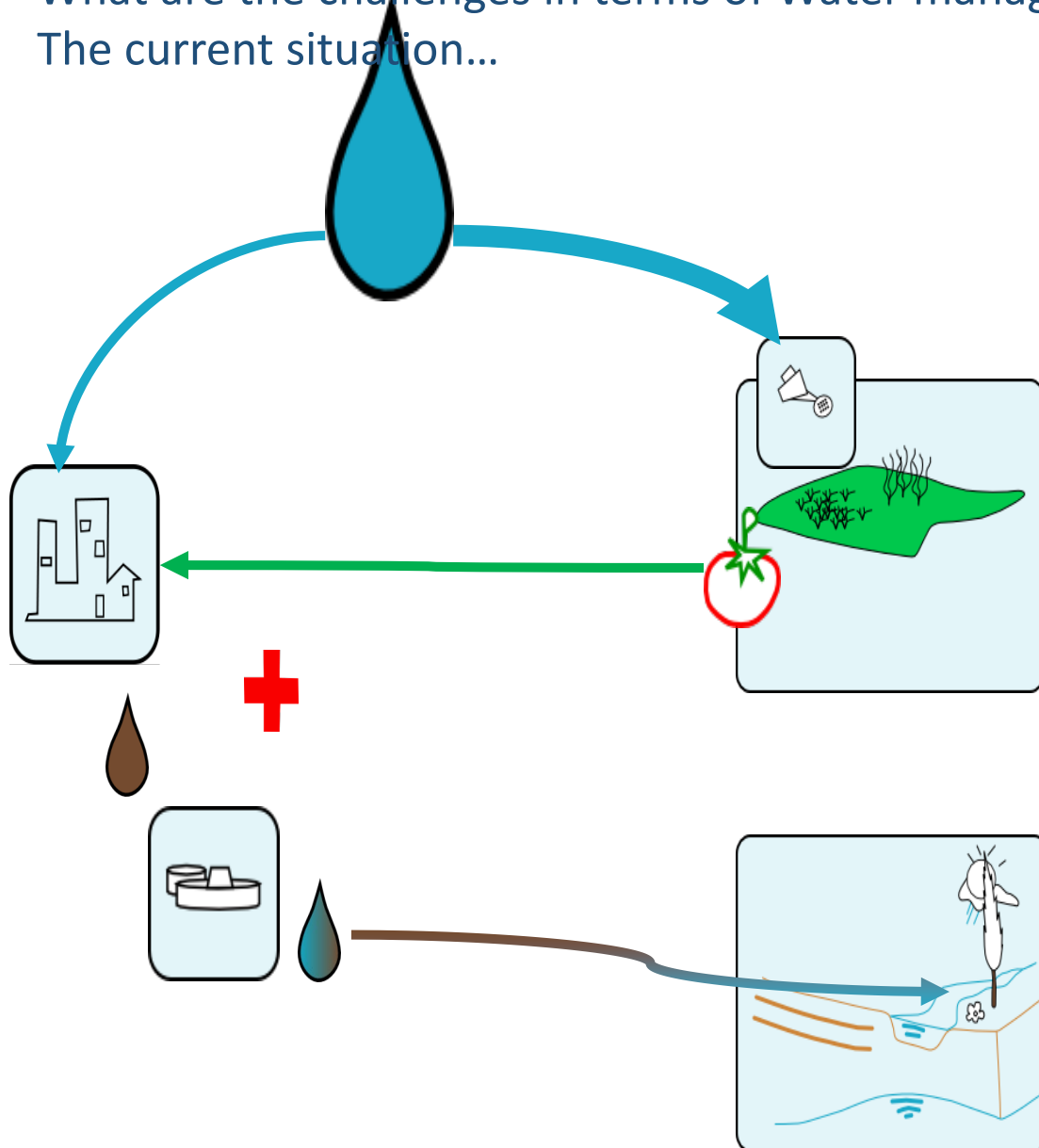
- In Europe
 - Wastewater **Reuse potential** is estimated **6,000 Million m³** by 2025
 - Water Market is growing 20% yearly
 - 9,000 water business oriented companies in Europe
 - 500,000 jobs...
- Worldwide
 - Depending on countries 30 to 92% of WW are not passing through a wastewater treatment plant
 - Target in 2030 : 15 to 46%
 - Strong growth of Nature Based Treatment Solutions
 - Large potential of recycling from source separated effluents

Reusing Wastewater: What are the challenges in terms of Water management? The current situation...

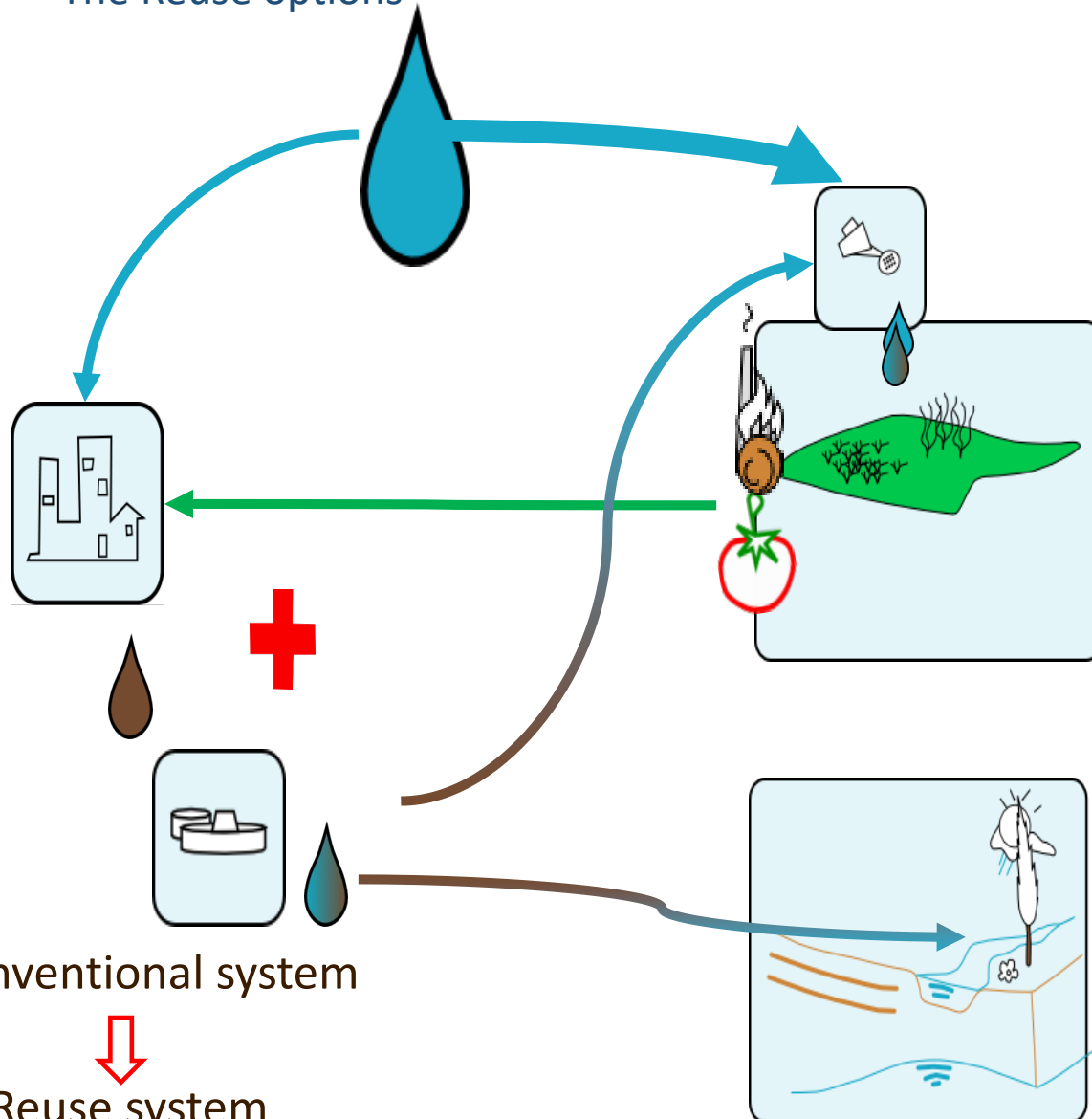
Sharing resources between
Cities and Agriculture
➔ Feeding populations

Growing tensions
➔ Quantitative
➔ Qualitative

Linear water use system
➔ Treatment cost (E and €)
➔ Impacts



Reusing Wastewater: What are the challenges in terms of Water management? The Reuse options



Deriving resources before disposal in the Environment
➔ Turn Waste into Resource

Alleviates pressure on good quality resources

From linear to circular water system
➔ More Flexible Treatment

Challenges

- Water (Energy
- Food
- Environment
- Health
- Social

The Wastewater Reuse Equation

- How to anticipate the Sustainability of a Project
 - A multidisciplinary process
 - From Bacteria to Social perception

$$\begin{array}{ccccccc}
 \text{Project} & & \text{Safety} & & \text{Profitability} & & \text{Feasibility} & & \text{Acceptability} & & \text{Organisation} \\
 \text{Sustainability} & = & \text{Sanitary} & \times & \text{Economic} & \times & \text{Technique} & \times & \text{Social} & \times & \text{Judiciary} \\
 & & \text{Agronomic} & & \text{Financial} & & \text{(Process)} & & & & \text{Institutional} \\
 & & \text{Environmental} & & & & \text{Regulatory} & & & &
 \end{array}$$

WW Reuse – Safety: EU Regulation (2023)

- Applies only for Ag Reuse
- Minimum quality requirements
- Monitoring and control
- Risk management: QMRA
- Increased transparency
- Regulation full text: <https://data.consilium.europa.eu/doc/document/ST-15301-2019-REV-1/en/pdf>
- Risk Management Guidance
 - Guidance I: Agricultural irrigation
 - Guidance II:(Managed) aquifer recharge
- Regulations in Perspective:
 - Water reuse in industrial activities
 - Water reuse for other purposes: e.g. urban practices and landscape irrigation

WW Reuse – Safety: limits of the EU approach

- Very stringent regulation
 - The price for safety and confidence
 - Levels of quality required may be difficult to reach at acceptable cost and on long term
 - Removes all nutrients
 - Questions on MP (micro-pollutant) is pending
 - All responsibility is on the treatment train
- Need to change perspective for more flexibility
 - Shift to fit for purpose treatment
 - The chain of responsibilities could be revised to better include end user
 - Shift to separated effluents for better nutrient recycling
 - Research needs to progress on MP on Nutrient recycling
 - Inform and communicate more