

iWATERMAP: Water Technology Innovation Roadmaps

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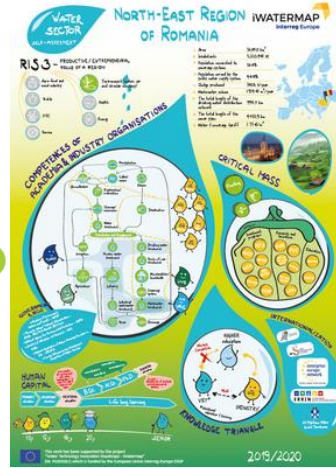
Challenges that wanted to be solved at the project level: Environment / Water (2018)

Talent retention	Innovative technologies	Cooperation	Association	Sludge control	Know-how & exchange BPs
<p>The need to retain talents in the region</p> <ul style="list-style-type: none"> • brain drain • lack of qualified staff • poorly developed entrepreneurial culture at the regional level 	<p>Need for innovative technologies and management tools</p> <ul style="list-style-type: none"> • Limited capacity to absorb innovation in companies • Outdated infrastructure and high operating costs 	<p>The need to have more competitive and interlinked companies that cooperate with RDI facilities</p> <ul style="list-style-type: none"> • Low rate of technology and knowledge transfer activities • reduced cooperation between SMEs and RDI facilities • SMEs are more interested in capacity building than in research and innovation 	<p>Need for thematic clusterization in the Environment field</p> <ul style="list-style-type: none"> • Lack of regional collaborative projects • Lack of international funds absorption • Lack of trust 	<p>Need of sludge valorization</p> <ul style="list-style-type: none"> • The sludge from the wastewater treatment plants is treated as waste and not processed, treated and valorized 	<p>The need to implement interventions with a focus on rational water use</p> <ul style="list-style-type: none"> • Continuous increase in the competition for water due to increased consumption model • Low rate of water recycling, recovery, and reuse in different industries and agriculture, providing the transition to a circular economy model etc.

Results & Impact Phase 1 & Phase 2 (year 1)

7 interregional learning and experience exchange processes - 3 on-site, 3 online and 1 hybrid

Assessment of the critical mass of the innovation ecosystem for water technologies



North-East Regional Action Plan



**IWATERMAP
 WATER TECHNOLOGY
 INNOVATION ROADMAPS**

Regional Action Plan for practical measures, in support of increasing the critical mass of the water innovation ecosystem in the North-East Region of Romania

ADRI North-East Regional Development Agency

Policy instrument addressed: POR 2021-2027
 Priority 1. North-East - A more competitive, more innovative region

12 regional meetings with stakeholders
 • 186 stakeholders involved
 • 2 Identified good practices
 • 3 Action groups: “Green Infrastructure”, “Digitization of Water Services”, “Circular economy in the water sector”

3 Roadmaps:
 (1) Critical Mass;
 (2) Human Resources;
 (3) Internationalization



Open call for the RIS3 NE project portfolio (2020):
 • 2 project proposals dedicated to the implementation of innovative solutions in the water sector



Advancing Sustainability of Process Industries through Digital and Circular Water Use Innovations

AquaSPICE

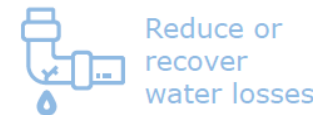
Objectives



Development and validation of water efficiency management and optimization methodologies, technologies, and tools that will carry process industries forward to a near-zero water footprint target with minimum freshwater consumption and water-borne emissions.

This is pursued through a set of scientific and technical objectives, motivated by real industrial needs analyzed through six case studies and a set of impact-related objectives.

Case Study 5:
 Sustainable water use in meat production in the circular economy at AGRICOLA



Impact & Results

Significant reduction of the current use of freshwater resources	Significant steps towards near-zero discharge using closed-loop systems in industrial processes	Significant increase of the recovery of water, energy and/or substances and materials
Increase of resource and water efficiency by 30% compared to the state-of-the-art	Effective dissemination of major innovation outcomes to the current and next generation of employees	Replication potential of the AquaSPICE solutions

General Details

Duration:
 01/12/20- 31/05/24
 (3.5 years)

Total amount:
 €11,055,248

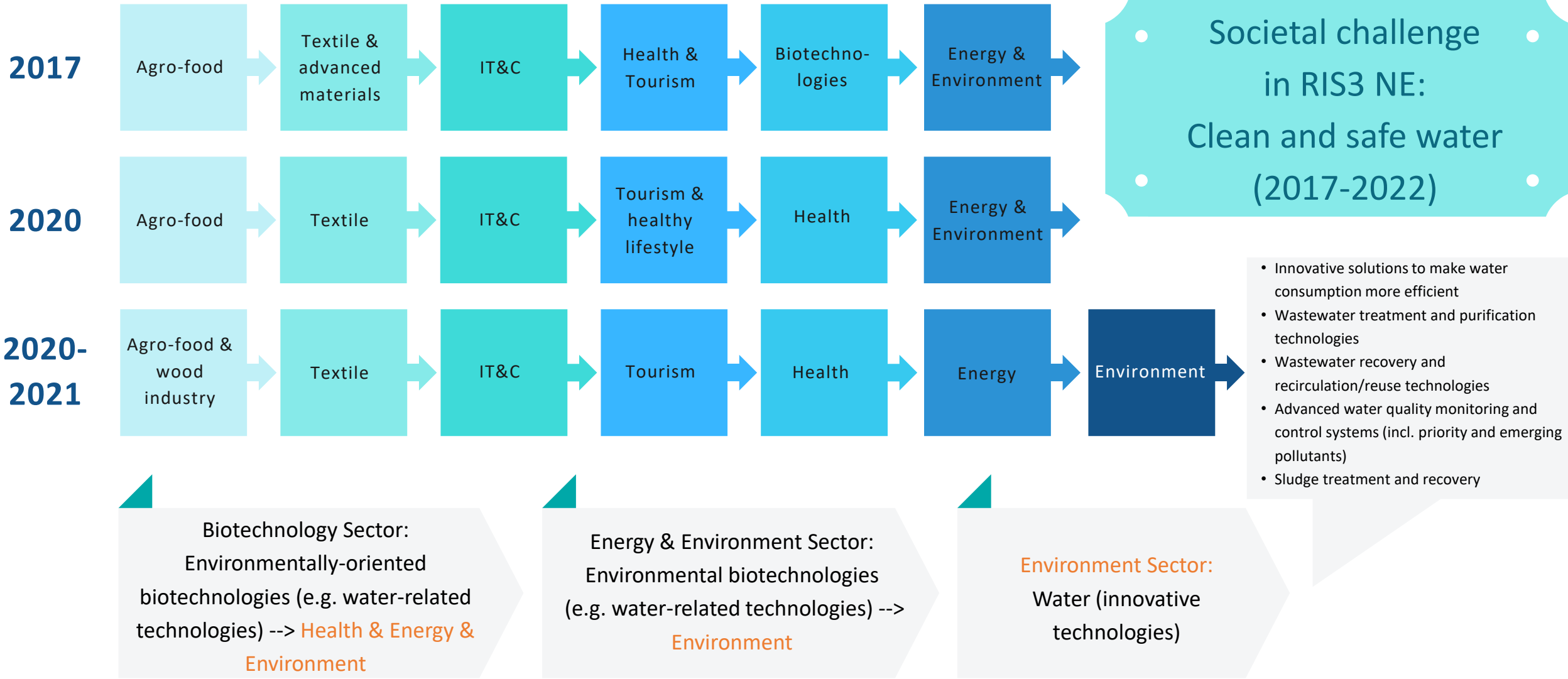
Funding Programme:
 Horizon 2020

Consortium:
 29 partners, 12 countries

Coordinator:
 RWTH Aachen Univ. (DE)



Changes in RIS 3 North-East 2017-2022



The next steps?

*Implementation of North-East RAP and its actions:
 Monitor, Stimulate, and Support the growth of the critical mass of the innovation ecosystem in the field of water*

The Regional Action Plan (RAP) aims to have a positive impact on:

- Increasing the number of companies and regional organizations involved / interested in innovation,
- Increasing the number of jobs and attracting experts in the water sector and other areas associated with the water sector (energy, agriculture and food industry, digitalization, climate change, etc.),
- Transnational and interregional cooperation,
- Regional development in the field of smart water resources management.

Planned Actions

Increase collaboration between regional stakeholders by initiating and activating Action Groups, and stimulate and support them in order to increase the capacity to innovate and successfully apply for funding under future funding schemes, by:



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 for practical measures, in support of increasing the critical mass of the water innovation ecosystem in the North-East Region of Romania

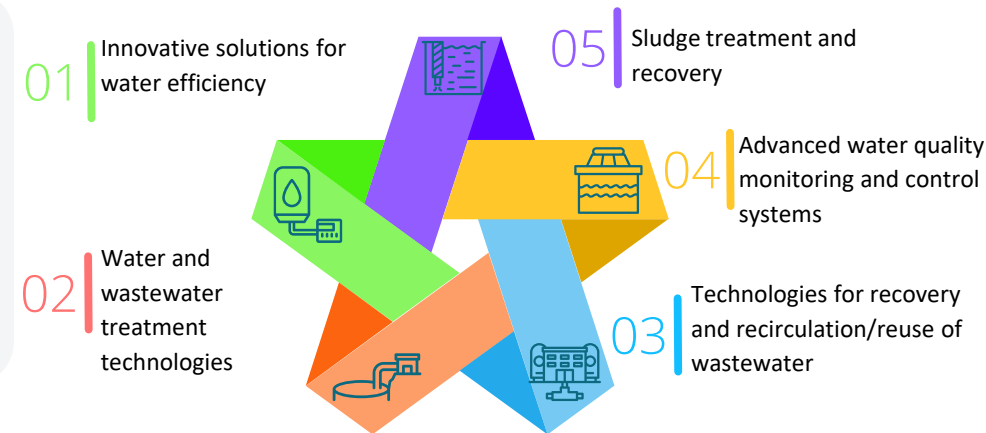
1. Strengthening regional innovation ecosystems



2. Stimulating and supporting regional stakeholders to submit project applications

--> **ROP North-East 2021-2027 (Priority 1 - A more competitive, more innovative region), and others....**

ENVIRONMENT Sector Water (innovative solutions)



Talent retention	Innovative technologies	Cooperation	Association	Sludge control	Know-how & exchange BPs
<p><i>The need to retain talents in the region</i></p> <ul style="list-style-type: none"> • brain drain brain gain (enjoys greater in-migration of skill than out-migration) • lack of More qualified staff • poorly High developed entrepreneurial culture at the regional level 	<p><i>Need for innovative technologies and management tools</i></p> <ul style="list-style-type: none"> • Limited High capacity to absorb innovation in companies • Outdated Smart infrastructure and high Low operating costs 	<p><i>The need to have more competitive and interlinked companies that cooperate with RDI facilities</i></p> <ul style="list-style-type: none"> • Low High rate of technology and knowledge transfer activities • reduced Increased SMEs and RDI cooperation • SMEs are more interested in capacity building than in in capacity building research and innovation 	<p><i>Need for thematic clusterization in the Environment field</i></p> <ul style="list-style-type: none"> • Lack of Increased number of regional collaborative projects • Lack High rate of international funds absorption • Lack of Increased trust 	<p><i>Need of sludge valorization</i></p> <ul style="list-style-type: none"> • The sludge from the wastewater treatment plants is treated as waste and not Increased rate of sludge processed, treated and valorized 	<p><i>The need to implement interventions with a focus on rational water use</i></p> <ul style="list-style-type: none"> • Continuous increase in the competition for water due to increased consumption model Smart consumption model • Low Increased rate of water recycling, recovery, and reuse in different industries and agriculture, providing the transition to a circular economy model etc.

ROP 2021-2027
SO 1.1: Development of research and innovation capacities and adoption of advanced technologies

- RDI activities in collaboration with SMEs
- innovation vouchers
- Seal of Excellence
- Proof-of-concept
- Innovative development of clusters

ROP 2021-2027
SO 1.2: Boosting the growth and competitiveness of SMEs

- facilitating growth and tech. development of (micro) companies
- Implementation of circular economy mechanisms
- Start-up and spin-off projects for the development, validation and launch on the market of a MVP

ROP 2021-2027
SO 1.4: Developing skills for smart specialisation, industrial transition and entrepreneurship



Thank you!



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