

Scotland's water reuse potential: between barriers and opportunities

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Acknowledgements

This project is supported by the Hydro Nation Scholar Programme. Special thanks to my supervisors.

1 - Research

3.1 - Scottish context

Current and future challenges

- Future increase in drought risk (notably East and South)
- Population growth and rising domestic water consumption
- Some water consumptive sectors economically growing

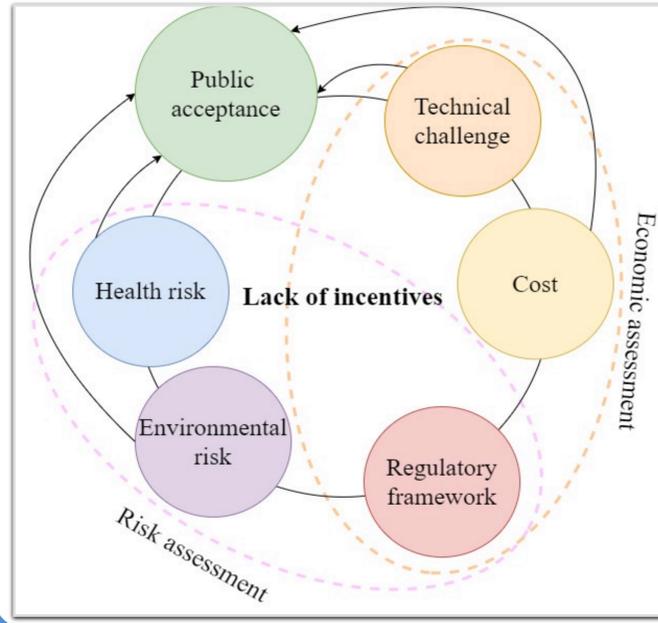
Non-conventional water usage

- High domestic and industrial share
- Low agricultural share due to low level of irrigation

Representation and perceptions

- Less research on scarcity risk
- Scarcity related risks are poorly perceived by the public

Figure 1: Barriers to water reuse ¹



3.2 - Research questions and methods

How to foster the water reuse potential in Scotland?

1. What are the opportunities and barriers to water reuse in Scotland → Literature review
2. How to regulate and enforce this potential? → (Section 2)
3. What, where and how much is this potential? → (Section 3)
4. How is this potential perceived? → (Section 3)
5. How can this potential be implemented? → (Section 4)

2 - Comparative study

Figure 2: Murcia region, Spain ²



- Rationale: region with the biggest volume of water reused in Europe and Spanish water law influenced by EU
- Research undertaken: interviews with academics and water reuse related stakeholders, potential visits and attendance to relevant events
- Objectives: assess the challenges of a water reuse policy and the enforcement of water reuse regulatory framework

3 - Water reuse potential & public perception

3.1 - Geographic Information System (GIS)

- Software: ArcGis
- Objective: Mapping the forms of reuse that have the most potential in the determined area

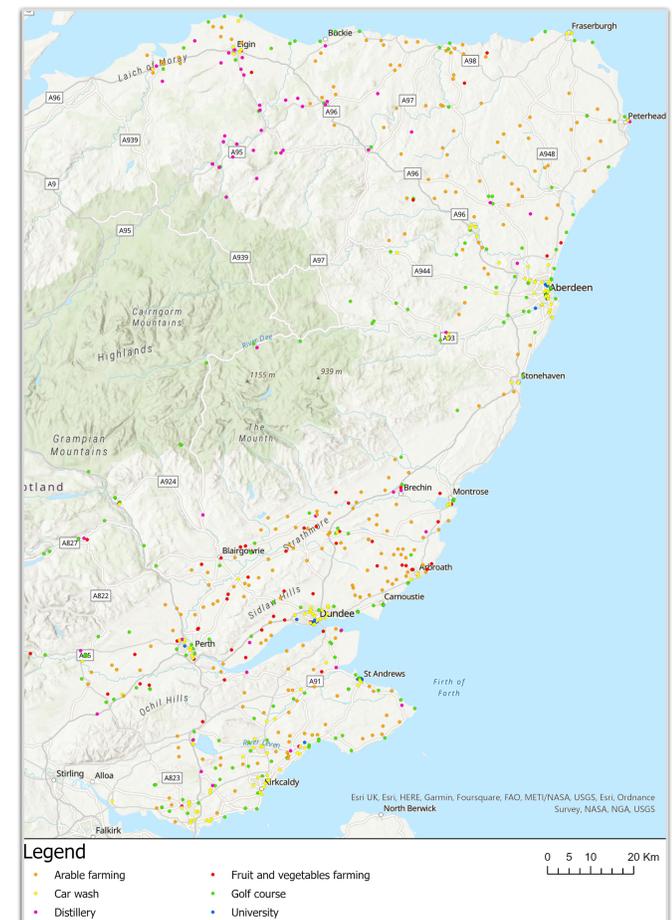
3.2 - Community work

- Audience targeted: communities with interest in water preservation and efficiency or in sustainable practices
- Objective: identifying public perceptions over water reuse
- Methods: participative workshop or focus groups

3.3 - A combined approach

- Mapping and community workshop will take place in **one same** council/region
- Location: Aberdeen City / Aberdeenshire / Angus / Dundee City / Fife / Moray / Perth and Kinross
- The GIS work can help identifying potential end-users or communities for future qualitative research (see Figure 3)

Figure 3: Potential water reuse end-users in eastern Scotland



Hubert Cousin - ArcGis

3.4 - Interviews

- Audience targeted: people currently practicing water reuse **and** potential end-users
- Objectives: identify reasons for engagement in water reuse, the barriers faced **and** potential solutions and identify end-users perceptions over water reuse

4. Policy work

- Audience targeted: water management, environment preservation, policymakers, local authorities, representatives of potential end-users
- Objectives: stakeholders analyse strategies identified along the research and identify an implementation strategy for Scotland
- Method: Participative workshop

Notes: ³ to ¹⁰



Sources

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