



# Decentralised Water Technologies

## *Focus on...* Community Matters



The Decentralised Water Technologies programme aims to deliver a step-change in water provision and wastewater management. The programme is developing new and improved systems that are fit for purpose and are low carbon. The research is a response to the pressures of climate change and the desire for sustainable communities, as well as to address the limitations of current systems.

Research for the communities theme within the programme will investigate how to ensure that both the decision-making processes about new systems and the new systems themselves are fair,

equitable, and the best fit for the places they will be used. The research will be led by experts in socio-technical transitions, social and environmental justice, and community ([Jen Roberts](#) and [Rebecca Ford](#), with the research led by [Laura Major](#)) and involve island community partners on the Isles of Iona, Arran, Jura, Barra & Vatersay.

We know that each island community wants to see improvements in systems and for changes to tap into ambitions to increase sustainability, achieve net-zero, and find routes to climate resilience. We've heard from the island community partners that some services are not fit for their purpose. There are also tensions and challenges to be explored, including concerns about who will carry the cost or the responsibility for change and how to ensure this is a fair and just transition.

*"Barra plans to become carbon neutral by 2040 as part of the Scottish Government's Carbon Neutral Islands project. The research under this theme for the Decentralised Water Technologies programme will offer helpful insights into how systems change can both support the carbon-neutral project and the key principles of the National Islands Plan including in respect of alignment (with existing efforts), a just transition, and replicability". - Euan Scott, Coimhearsnachd Bharraidh agus Bhatarsaidh (Barra & Vatersay Community) Ltd*

Each island community will have unique stories to tell about their relationships with water and visions for the future in which these new technologies might fit. So, we want to get to know the places and the people where change is anticipated and to understand the *what* and *why* of ideas and actions around community planning and change for those locations.



### **Understanding People and Places is Essential in Planning for Change**

The shift from one set of technologies to another is only one aspect of a transition in the way systems function. Water and waste management systems are socio-technical: they are made up of technologies, infrastructures, tasks, and people. The relationships between these parts of a system are affected by social or cultural values and practices, which will vary from place to place.

Water and waste management systems affect us far beyond the obvious advantages of access to clean drinking water or a well-functioning septic tank. How water is managed can direct our actions in our homes, shape our relationships with each other and the wider environment, and offer opportunities to fulfil community aspirations and improve wellbeing in areas not directly related to water.

Researching people's experiences with these systems, now and in the past and understanding how these experiences are related to community-level issues is very important. History tells us that if people and communities are not considered carefully when developing technological solutions and the systems within which they fit, they won't be fit for purpose, and people won't choose to use

them. There may also be unintended consequences – including negative effects, such as the amplification of injustices.

Considering people and communities carefully can also allow a full range of related benefits (known as co-benefits) to accompany solutions, for example, tackling poverty, supporting health and wellbeing, offering more efficient and greener public transport, and other opportunities to improve wellbeing. This is alongside technical or environmental co-benefits such as circular economy, waste reduction, and emissions.

### **Establishing the Best Practices for Community Involvement in Systems Change**

Our work will explore best practices for community engagement and participation in systems change. Historically, change decisions have tended to be top-down and made at a distance from those most directly affected. Even though the value of including people in decision-making is increasingly recognised, that inclusion may not be done in the right way. We want to understand what methods and processes could properly involve people and what routes can be opened to ensure that islanders are listened to by those who have more traditionally held decision-making authority.



### **Next Steps for our Research**

For our initial research, we need to speak with islanders, local and national service providers, community advocacy and management organisations, as well as others working on community planning, climate resilience and transition to net-zero. Being community-based research, we hope to spend time on the islands, exploring opportunities for setting community views and aspirations into a more holistic view of life on the islands.

We are keen to understand values, practices, and aspirations about water, water systems, and broader community issues on our partner islands; and to identify themes around ideas and planning for decentralised water systems in rural Scotland from both local and national community service stakeholder perspectives. This is a flexible project, so our focus can then shift in response to emerging issues and questions from partner communities.

Our longer-term aim will be to focus our research on one or more locations to build an in-depth analysis of the issues we've set out above; as well as to frame activities and discussion sessions involving people from across the islands, and other stakeholders, to build better and more informed dialogue to inform sustainable systems of the future.

We will be sharing insights and outcomes as the research progresses, as well as further routes to involvement, so, stay tuned!

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