MAKING SUSTAINABILITY SOCIAL

University of East Anglia

SEVEN KEY INSIGHTS TO TRANSFORM SOCIAL ENGAGEMENT WITH SUSTAINABILITY

3S Science, Society & Sustainability

The Science, Society and Sustainability (3S) Research Group is based in the School of Environmental Sciences at the University of East Anglia.

THE 3S INSIGHTS

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Cover image: People visiting the famous sea organ in Zadar, Croatia (Ventura/Shutterstock.com)

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Welcome to our vision for a more sustainable society.

The Science, Society and Sustainability (3S) Research Group is based in the School of Environmental Sciences at the University of East Anglia. We are international leaders in the research and practice of societal engagement with sustainability and innovation. Our work has led to long-term and transformative impacts on science, society, public policy, and industry across a range of sustainability domains, especially energy and climate change.

We hope that the seven insights in this brochure will play a part in inspiring broader change and transformation. They show the importance of efforts to better account for societal values in processes of sustainable innovation and decision-making from the local to the international.

We want these insights to be useful to you in your work, whether you see yourself as a policy-maker, an activist, a researcher, an innovator, a practitioner, a community organiser, an entrepreneur, or simply as an engaged citizen.

Together we can transform the way we do things to create more sustainable ways of living. We do this best – we argue – by paying attention to the role of society.

Here's how.

3Sresearch.org

INSIGHT 1

THE PROBLEM – SOCIETY IS SHUT OUT

Science and technology without society can't make more sustainable ways of living

Too much hope has been placed in science and technology to provide answers for sustainability. And society routinely gets excluded from the challenge of making more sustainable ways of living.

Society is often given only one option – to accept new policies and technologies. Technical 'solutions' are created which often don't work in the real world.

Let's take sustainable energy. Instead of looking to civil society action or broader lifestyle changes, the challenge is framed as a technical matter of finding the right energy mix and encouraging new energy technologies. So UK policies focus mainly on the economic and technical rather than social aspects.

With climate change, it's climate science at the forefront. This is because the issue is 'owned' by the Intergovernmental Panel on Climate Change which prefers knowledge from the natural and physical sciences. However we also know that science and technology contributed to these environmental problems in the first place.

Useful voices and potential partners get excluded and the social dimensions of sustainability are overlooked.

But science and innovation themselves are social – shaped by norms, values and practices. Because of boundaries between 'science' and 'non-science', the social and ethical implications of science are often left unspoken.

Sustainable development and innovation are for the public good. So it stands to reason that unless society is engaged and involved, innovation is unlikely to be sustainable.

3S CASE STUDY
SMART TECHNOLOGIES MISS THE PEOPLE

To improve the energy system the UK Government is rolling-out smart meters. Accompanied by in-home displays (IHDs) it is hoped that smart meters will allow householders to track energy use and take steps to save energy and money. Our Visible Energy Trial (VET) explored how householders actually interact with IHDs. We found that while IHDs do help people to learn about their energy use, often the effect is only short-term. They can also disrupt household dynamics – causing arguments about energy saving and may increase energy use by failing to challenge some energy uses. A core lesson is that IHDs' limitations often derive from assumptions about household behaviour. It's assumed that better informed individuals will make rational decisions and choose to cut their energy use. The reality, however, is that decisions about energy use must often be negotiated with others in a wider social context. Such decisions are far from rational but involve many other aesthetic, emotional and pragmatic considerations.

Decisions about household energy use are far from rational. They involve many other emotional and pragmatic factors.

A **3S RESEARCH** FINDING

INSIGHT 2

THE SYSTEM IS THE ISSUE

The exclusion of society from sustainability is a system-wide problem that's hard to tackle

Reinforced by ingrained laws and political cultures, social and technological systems interlock. Important systemic factors – including globalisation, consumer culture and economic development – are disregarded. Society gets excluded from sustainability policies and projects. We're both locked in and locked out.

So the status quo persists making it more difficult to achieve more sustainable ways of living.

Sustainability challenges – such as climate change or biodiversity – raise deeply political questions which too often get treated as technical ones.

To get to grips with sustainability we need major social, political and cultural changes.

We can't continue to rely on techno-fixes and leave unchallenged dominant visions such as 'green growth' being the only way forward

Alternative visions often challenge increasing consumption and profit maximisation but aren't deemed 'credible'. That's because economic growth and science-led progress gets priority. In 3S we argue that social and technological systems are produced together.

Questioning dominant framings of sustainability isn't easy. We must open up socio-political and technological systems and engage with civil society.

Marginalised voices in favour of alternative visions of sustainability must be heard and taking society out of sustainability has negative consequences.

3S CASE STUDY
SUSTAINABLE HOUSE BUILDING UNDERMINED BY UNSUSTAINABLE SYSTEMS

We are at the forefront of developing ways to understand sustainability as part of systems of energy supply and demand, public engagement, community action, the built environment and much more. We've found how attempts to build low-energy housing consistently fail to account for interconnections between the practices of policy-making, building design and construction, and domestic life. The result is building energy performance is frequently below that anticipated, and interventions often lead to unexpected outcomes. We looked at the Code for Sustainable Homes and uncovered problems throughout the construction process. New energy-efficient materials and renewable technologies were designed with little thought for how householders and building professionals might use them. Broader processes around the Code also failed to adequately address these problems, as they were unable to adapt to the changing approach to housing.

Systemic driving forces exclude social factors from the design and implementation of low carbon housing.

A **3S RESEARCH** FINDING

INSIGHT 3

SOCIETY CAN DO IT

Society can – and already does – make a positive contribution to increasing sustainability

We need to unleash society's potential to address sustainability challenges.

Often civil society is portrayed as a barrier to sustainability, innovation and 'progress'. Systemic factors are ignored and individuals' unwillingness to change their behaviours are seen as main reasons why environmental issues remain unresolved. The multiple ways in which people engage with science and the environment are disregarded.

3S sees civil society as a source of wisdom, creativity and innovation. Multiple forms of knowledge are needed to address sustainability issues. For example, 3S research shows the value to climate change adaptation of the local knowledge of fishermen and coastal residents. Social groups and 'grassroots' organisations – largely overlooked by governments – are already taking community actions. They're changing individual behaviour and lifestyles, creating sustainable food networks, low carbon community energy projects, and 'Transition Towns'.

We must better understand how people are engaging with sustainability issues and their reasons for adopting, or rejecting, particular technologies and innovations. We need their input so we can reach beyond the narrow scope of existing institutions. Without that input we won't be able to address public concerns over the purposes of innovation, the direction of change, issues of control, and questions related to the distribution of risks and benefits.

3S CASE STUDY
SEEDS OF CHANGE: UNLEASHING THE POTENTIAL OF GRASSROOTS INNOVATIONS

Innovations, such as community currencies and community energy initiatives, provide solutions for sustainability. Yet we've found the potential of these initiatives remains largely unexploited. Community currencies – alternative forms of money designed to meet social, economic and environmental needs – can be found all around the world and help improve local economic resilience while reinforcing a sense of community. Community energy projects, such as small-scale renewable energy systems or energy awareness and behaviour networks, are critically important for low carbon energy transitions. But they are much more than just about energy: these projects promote social cohesion while providing opportunities for learning and knowledge exchange between participants. Active networking and communication from the part of grassroots innovators, intermediaries, and support from policy are crucial so these seeds of change can thrive.

Community-led initiatives are the seeds of change from which great responses to sustainability issues can blossom.

A **3S RESEARCH** FINDING

INSIGHT 4

WE NEED NEW FORMS OF PARTICIPATION

Sustainability must make new and improved forms of participation to allow society to engage better

We can't get society into sustainability without new forms of participation that take into account an increasing diversity of perspectives and interests.

Mainstream social science methods struggle with this. We must do things differently and society itself needs to grow more grassroots forms of participation and better share them.

Existing participatory practices take many different forms but are often just seen as a means to an end. It's assumed there's a single 'public' whose view is waiting to be discovered. But really, multiple forms of knowledge and many publics exist.

We can't only depend on rigid approaches like opinion polls, deliberative processes and one-shot consultations. Instead, 3S advocates new theoretical and practical approaches to societal engagement.

3S develops innovative techniques which reveal the diversity of perspectives around public sustainability issues. We interrogate how people routinely and practically engage with technologies and innovations in everyday life. This shows how unsustainable practices can persist when mainstream policy addresses all individuals as if they were the same.

Looking at whole systems, we can see forces which limit society's engagement with sustainability and understand why some voices are heard and some actions seen while others aren't.

3S CASE STUDY
DEVELOPING DELIBERATIVE MAPPING AS A NOVEL APPROACH TO PARTICIPATION

For over a decade, 3S has been involved in developing a participation tool called Deliberative Mapping (DM), which aims to open up the range of potential framings or understandings of pressing and controversial policy issues. Importantly DM doesn't promote consensus but rather maps divergent perspectives and identifies alternative policy and governance options. Originally developed to progress important discussions around nuclear waste disposal, more recently the method has been applied in relation to 'geoengineering' as a potential response to climate change. We used DM to bring together specialists and citizens to appraise geoengineering against other options for tackling climate change, expanding the set of options and assessment criteria against which geoengineering was assessed, compared to earlier attempts at public engagement. 3S researchers are now further developing this approach to engage citizens around UK energy transitions.

Deliberative Mapping in 3S brings together specialists and citizens to open up and debate options for sustainability.

A **3S RESEARCH** FINDING

INSIGHT 5

LEARN, REFLECT, EXPERIMENT

We must learn, reflect and experiment to transform science and society for sustainability

For new ways of engagement to thrive we have to help them grow and travel into new contexts. We have to learn better from experience and to think in different and novel ways and to experiment with forms of engagement that are more critical and reflective.

At the grassroots, innovative activities for sustainable development already exist. Policy and decision-makers need to recognise this.

Policy must consider how grassroots innovations can be supported in, and between, communities. Connections between different governance settings and networks must develop. Everything must become more adaptive, responsive and open.

Standardised best practices don't always work. What works somewhere, at a particular time, may not in others.

3S research shows even organisations of participation take on narrow policy understandings of the relevant issue and stick to pre-defined models of engagement. Instead we must take advantage of instances of more transformative learning in these organisations.

With that in mind, 3S develops collective and experimental approaches to sustainable innovation *and* forms of social engagement, Experiments are not just carried out in laboratories – living together is an experiment too!

3S CASE STUDY
KEEPING OUR HEADS ABOVE WATER WITH COLLABORATIVE FLOOD GOVERNANCE

Flooding and coastal-governance are major challenges for the UK. The policy landscape is changing – there are new ways to address these challenges, taking on board wider opinion. The Regional Flood and Coastal Committees (RFCCs) are an experiment in bringing together relevant flood risk management authorities and other bodies to better understand and manage flooding and coastal events. 3S has explored the extent to which the committees work collaboratively and reflect local concerns in the East Anglia and South West regions. Findings indicate support of the RFCCs' approach, but with a need to encourage communication, learning and sharing of best practices. They recommended improving communication and engagement, including with local communities and ensuring that local interests, for example people's concerns over coastal erosion, are reflected in the RFCCs' work programme and in funding decisions, making them more sensitive to local concerns.

We have to think in different and novel ways and experiment with forms of engagement that are more critical and reflective.

A **3S RESEARCH** FINDING

INSIGHT 6

INSTITUTIONS MUST RESPOND!

Without responsive and responsible innovation we can't make sustainability social

We must also transform our institutions of science and governance. These are too centralised and rely on top-down approaches and are rooted in outdated models of science, governance and economy. Science and technology are part of society itself.

Science, government and business struggle with the diversity of public engagement – as well as the effects of their own social assumptions. But some initiatives have responded by promoting principles such as public engagement, open access and ethics.

However, the tendency has been to focus on high-profile and controversial emerging technologies. We argue that to get responsible research and innovation, change needs to go beyond these.

This means also looking at more mundane and established technologies such as smart meters in the home or conventional energy supply technologies, to ask how or whether they have been responsible and have addressed societal needs.

Social, grassroots, governance and democratic innovations need to be more responsible and responsive too. Often presented as being softer and more benign, these kinds of innovation can still have damaging effects. We need to anticipate and be responsible for these.

We need a more distributed and holistic notion of Responsible Research and Innovation to make the necessary breakthroughs in sustainable development.

3S CASE STUDY
CRAFTING SOCIALLY RESPONSIBLE ENERGY FUTURES

Transitioning to sustainable energy systems is a defining challenge of our age – currently driven by centralised energy system decisions, innovation in low carbon technologies, and quantitative modelling. Societal issues and concerns about energy futures are often missed out. Realising Transition Pathways (RTP) has pioneered new approaches that encourage better responses to the social aspects of energy transitions. We've got people to think about the diverse social meanings and forms of social organisation, and not only technological developments, underpinning energy transitions. These approaches have been successfully used to: reflect the social implications of energy transitions; initiate collaboration between 3S researchers and energy modellers over the social assumptions of energy demand models; and extend analyses of responsible innovation to wider society, such as community energy initiatives and climate camp protests.

Responsible innovation is about much more than the technology. We need to be responsible about the social innovations too.

A **3S RESEARCH** FINDING

INSIGHT 7

OPEN UP, LISTEN UP, JOIN UP: THE 3S WAY

3S social science is not about following a formula. It involves taking a particular disposition to academic work and engagement. In 3S we aim to be constructively critical, as well as critically constructive. We need new forms of public scholarship – an engaged (social) science undertaken with and for society.

3S builds on innovative qualitative research to provide better understandings of sustainability issues and empower the voice of society. This helps transform relations between science, society and policy and makes it possible to identify solutions and alternatives for sustainability.

We engage directly with policy, business and civil society but all of our interventions remain rooted in insights from academic work.

We need new forms of (social) science that aren't separate from politics and society. We need to go beyond a simplistic linear model of impact where science attempts to speak truth to power. As engaged scientists we expect to be impacted on as well as impacting others. So we recognise our own assumptions and the social and ethical implications of our research.

We're at the interface between science and technology studies, human geography and political sciences with links to the natural sciences and humanities. That has helped us develop novel conceptual frameworks for understanding the dynamics of societal engagement with sustainability.

Reflexive, interdisciplinary and engaged, that's the 3S way.

3S RESEARCH

We work with a wide range of partners and funders. We worked with Government and the ESRC to study and improve approaches to public participation in science policy. 3S has also developed new forms of public engagement with Government and charities. Our work on grassroots innovations directly engaged with civil society groups and was supported by the RCUK, the Leverhulme Trust and the EU. To understand how people engage with smart meters and in home displays we teamed up with energy companies and engineers. 3S members have been involved in several large-scale projects with engineers and economists, engaging with Government and energy companies around low carbon energy transitions, supported by the EPSRC and others. We've engaged with local authorities, charities and agencies in our local area, as well as scientists, to explore responses to flooding and sea-level rise.


In 3S we aim to be constructively critical, as well as critically constructive.
THE 3S WAY

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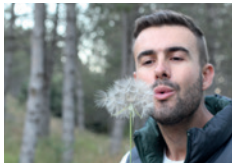

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