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## Article

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# Grassroots Innovations for Sustainable Development: a New Research Agenda

**By Gill Seyfang, Adrian Smith  
and Noel Longhurst**

Community action for sustainable development is an important element of most countries' policies for sustainable development. Appeals to 'big society' from the new UK coalition government imply an enlarged role and responsibility for civil society in achieving policy objectives around climate change and sustainability, among other things.

We welcome this growing recognition of the role of civil society in achieving sustainability objectives, but tempered with a few words of caution: First, there is very little empirical evidence to support claims that such objectives are realistic or achievable; second there is a lack of understanding about how to best harness and support the activities that are taking place; and third, existing evidence points to the need for policy support and public investment, and that effective communities may require effective states. In short, the 'big society' rhetoric promises a growing role for civil society, but must not be a smokescreen for community development budget cuts.

Spurred on by these issues, we have developed a research agenda to deepen our understanding of these civil society processes, and their potential. Our recent research into this field, which we term 'grassroots innovations' examines the processes by which community-led initiatives might develop new solutions for sustainable development, and how those ideas and practices might grow and diffuse into wider society.

Two ongoing projects are underpinned by the recognition that much social innovation for sustainable development takes place in civil society, outside of the institutions that are normally associated with the term 'innovation'. In conceptualizing complementary currencies and community projects in sustainable energy as 'green niches' we are seeking to understand the contexts within which such innovation takes place, and how it might be translated to more 'mainstream' contexts. We aim to inform policymakers about how they can support and harness the creative

energies and innovative potential of grassroots communities, to help meet sustainable development policy goals.

This short paper sets out our recent research findings, and reports on two new projects, in this field. First, we summarise our arguments about grassroots innovations, distinguishing them from other forms of civil society action, or environmental initiatives. Then we discuss two projects in turn which aim to empirically develop these ideas with new evidence and theory-testing, through detailed investigation of case studies in sustainable energy, and sustainable currencies, in turn.

## Introducing Grassroots Innovations

Grassroots innovations for sustainable development take many different forms. Examples include furniture recycling schemes, organic food co-operatives, low impact self-housing developments, farmers' markets, cycle networks, local car clubs, and community composting schemes. Since 1992, local authorities in the UK have produced over 400 sustainability strategies that promote these kinds of activities. Shell Better Britain's network of groups grew from 10,000 in 1992 to 26,000 in 2002.

We understand them to involve networks of activists and community groups generating novel, bottom-up solutions for sustainable development, and that typically respond to the local situation and the interests and values of the communities involved. In contrast to mainstream business greening, grassroots innovations operate in civil society and social enterprise arenas. Important points about grassroots innovators are provided below.

■ Conventionally, government policy and support for sustainable development has considered 'innovation' separately from 'community involvement'. Sustainable innovations are led by firms and market settings; community involvement encourages participation and behaviour change.

■ This division misses an opportunity for considering local communities as sites of innovative activity for sustainable

development. Social enterprise and community involvement can be considered as sources of innovative potential.

■ Policy to promote sustainable innovation should extend its view and consider how it can support grassroots innovation in and between communities.

■ Communities can provide niche settings, out of which grassroots innovations can spread, scale-up and be adopted into more commercial and market settings (though this process is far from automatic). Grassroots innovators provide green ideas, not sustainable blueprints.

■ The kinds of innovation that take place in communities are not limited to greener technologies. More usually, it involves novel organisational arrangements, new values and lifestyle practices that facilitate the use of greener technologies.

■ Small initiatives, repeated many times over, can add up to significant environmental improvements. Local knowledge and capabilities help develop tailor-made sustainable solutions where top-down sometimes measures fail.

■ Certain communities can champion unpopular and difficult issues because it matters to them. This provides a vital source of innovative diversity when similar issues become salient more widely.

■ Grassroots innovations mobilise collective solutions to sustainability, which helps overcome a sense of powerlessness or futility when sustainability is considered merely a matter of individual consumer choices.

■ However, many grassroots innovators struggle to obtain resources for their projects. Raising grants to survive can eclipse investment in long-term development of an initiative.

■ Many grassroots initiatives are technology takers – the production of modern technologies makes it difficult to adopt and develop locally appropriate forms.

■ The local roots of grassroots initiatives can make scaling-up and diffusion difficult. Amongst socially excluded groups, the initiative is a means to another end, such as the skills to enter employment, or wealth to purchase goods and services.

■ Many grassroots initiatives fail. Risk aversion amongst policy-makers means they are reluctant to support these ventures. But failure and, more importantly, learning from failure is a positive part of the innovation experience. Policy-makers need to take risks, but to do so with effective mechanisms for learning in place.

■ Significant change relies on forces that operate way above the local level. Grassroots innovators alone are unable to drive sustainable development, but they are able to provide diverse seeds for change when conditions in the wider society and economy are right.

■ Finally, our understanding and policies for innovation, developed in commercial and market settings, may be inadequate for grassroots community initiatives. Research is needed to develop our understanding of local communities as sources of sustainable innovations.

Having set out our key understandings of grassroots innovations, we now turn to each of two new research projects which seeks to deepen, test, revise and extend some of the claims made for grassroots innovation above.

## Community Innovation for Sustainable Energy

*“Decentralising energy and embracing the potential of small-scale generation is a crucial component of the green switch in energy... A decentralised approach saves energy and puts generation under the control of local people.”*

*Chris Huhne, MP*

*UK Secretary of State for Energy and Climate Change (REF)*

Recent years have seen a surge in interest and activity in small-scale, sustainable energy projects led by local communities. Examples include solar water heating clubs and insulation clubs, which provide mutual support for system installation; energy awareness and behaviour networks, which provide guidance and reassurance to neighbours on energy matters relevant to them; and co-operatively-owned small-scale renewable energy systems, such as micro-hydro and wind energy.

Our research project will study the diffusion of community energy projects in the UK. It explores the extent of networking between projects, and whether this is assisting in

the innovation of community energy. We do this with a view to providing independent advice to policy-makers, community groups and energy businesses about the merits and processes for supporting community energy.

The project is being carried out by a team of researchers from SPRU at the University of Sussex and CSERGE at the University of East Anglia who have experience in the analysis of grassroots innovation for sustainable development. We will draw upon the findings of our research to develop with practitioners a number of Foresight scenarios for community energy in the UK.

There have been a number of initiatives to promote and support community energy projects in recent years. Most recently, in late 2009, the Government's Low Carbon Community Challenge attracted over 500 expressions of interest. It joins a dynamic portfolio of policies helping innovative community projects. It is argued these projects nurture local support for other forms of low carbon energy. Intermediary organisations, such as local and national energy agencies, span local groups through their advice and support, and help new groups access resources and networks.

Are these networks of community-based approaches a promising component for low carbon energy transitions? Existing research on these 'grassroots innovations' finds that individual projects bring small but significant sustainability benefits, but face challenges in meeting their objectives. First, participants have diverse objectives and expectations: boosting their local economy; enhancing local energy security; cutting carbon emissions; contributing to sustainable communities; catalysing wider environmental behaviours; and democratising energy. Second, social entrepreneurs and intermediaries can help develop the social networks involved in the development and diffusion of community energy initiatives. Third, community project activity promotes social learning amongst participants about wider energy issues. However, realising these objectives requires committed individuals, resources, skills, and access to technologies and supportive infrastructures that are not often readily available. Trying to replicate an exemplary community energy project elsewhere appears to be far from straightforward. Scaling-up projects or translating aspects of them to different circumstances can be just as challenging. Each time, innovative adaptations to the process and content of community energy projects can be important.

We aim to examine a previously under-researched area of how these expectations, networks and social learning develop across and between projects, and so aid diffusion into wider society. Furthermore, might these constitute an influential community energy 'niche' within the UK energy system with its own identity and interests? How do projects replicate, scale-up and translate sustainable energy innovations between communities?

Our project runs from October 2010 until September 2013. We will be surveying community energy projects and evaluating their energy and carbon performance. This will be complemented by twelve in-depth case studies into community energy projects, both exemplars and failures. These will offer insights into the way innovations in technologies, organisational structures, market and business models, and strategies for securing support, diffuse across projects. We will also be interviewing advice organisations and policy-makers that provide support to community groups. A series of events, reports and a website will inform policy towards community energy projects, assess the potential of community energy in wider low carbon transition processes, and help improve the success of community energy practitioners at growing and spreading their initiatives.

## Complementary Currencies for Sustainability

The second of our empirical studies concerns complementary currencies, which are new systems of finance and exchange – new forms of money. The research will gather empirical data on complementary currencies to test the applicability of existing theory of niche sustainable innovations in this new setting, and develop new theory where necessary. The two-year project runs until May 2012, and we will convene an international expert practitioners workshop, and an international academic workshop, to inform the project and share our findings.

These ideas will be applied through the first international study of 'complementary currencies', a wealth of local community-led exchange systems that exist alongside mainstream money. They arise for a variety of reasons, in different forms and contexts, worldwide: the German 'Regio' regional money aims to boost local economic development; in the UK and US, Time Banks strengthen social networks and community cohesion by promoting reciprocal volunteering; a new wave of 'Transition Currencies' is launching local money to promote local resilience, and the

Dutch NU-Spaarpas incentivises sustainable consumption patterns through a green 'loyalty card'.

However, despite their intrinsic benefits and potential, complementary currencies have remained small and marginal. Little is known about the processes and contexts necessary for mainstreaming them. For the first time, complementary currencies will be investigated as specifically innovative activities, in order to:

- Examine the diversity and characteristics of 'complementary currencies' in contemporary practice.

- Conceptualise these 'grassroots innovations' as 'niches' where new social infrastructure may be tested, and investigate the range of contextual factors which contribute to the emergence, success or failure of these innovations, and their diffusion into wider society.

- Relate these findings to wider debates on sustainable innovations and transition management, sustainable development and the social economy.

We will map out the range of complementary currencies in existence; assess how they have tried to grow and diffuse; and identify the factors which have helped or hindered this process complementary currency diffusion. We will then investigate how this experience relates to theories of sustainable innovation and green niches, to highlight what is distinctive about grassroots innovations, and how innovation theory can adapt to better explain community-led initiatives. We will recommend policy changes to nurture and grow grassroots innovations for sustainability.

First, a scoping review of existing complementary currencies research and practitioner literature will produce a new dataset cataloguing the breadth and diversity of global complementary currencies, drawing on the applicant's extensive international contacts.

Second, approximately 12 exemplar currencies will be selected from the dataset, and further qualitative research with these exemplars will investigate their innovation-diffusion strategies (how they approach replication, scaling up, and translating ideas to mainstream settings). It will assess success, barriers, and factors which best support widespread diffusion, such as linking with local institutions, or using familiar technologies. A model of currency diffusion will be developed, linking contextual factors with innovativeness.

Third, theoretical work will review the literature on diffusing niche socio-technical innovations and identify what is new about grassroots innovations, and the implications for theory, policy and practice.

Contributions will be made to debates on complementary currency research, innovation/transition management, and sustainable consumption. The research will deliver timely evidence for policymakers to help them harness the potential of grassroots innovations, and policy recommendations will be suggested, forming the basis of a framework with action points for international, national, regional and local action.

## Conclusions

The programme of research we're embarking upon promises to open up exciting new areas for investigation, and offer new understandings about some of the critical areas of action for sustainable development. How do these innovative projects come about, how do they grow and spread, and what are the critical factors for them to 'catch on'? We have launched the research agenda with a new website ([www.grassrootsinnovations.org](http://www.grassrootsinnovations.org)) where we will post project news, research briefings, papers and other information, and which links in to our other work in the field. We invite your contributions, through commenting on our research blog, to feedback on our papers, and participation at our events. We look forward to developing an ongoing conversation among academics, practitioners and policymakers, with the aim of better supporting and harnessing the energy of community-led innovative action for sustainability.

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