epaResearch
Climate - Water - Sustainability
Identifying pressures • Informing policy • Developing solutions

Sustainable Voluntary Communities: Supports for Sustainable Environmental, Social and Economic Development

Authors: Bernadette O'Regan, Richard Moles, Rosemary Byrne and Anne Bennett

www.epa.ie

Rialtas na hÉireann
Government of Ireland

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: *We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

Knowledge: *We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.*

Advocacy: *We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.*

Our Responsibilities

Licensing

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities *(e.g. landfills, incinerators, waste transfer stations)*;
- large scale industrial activities (*e.g. pharmaceutical, cement manufacturing, power plants)*;
- intensive agriculture *(e.g. pigs, poultry)*;
- the contained use and controlled release of Genetically Modified Organisms *(GMOs)*;
- sources of ionising radiation *(e.g. x-ray and radiotherapy equipment, industrial sources)*;
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

National Environmental Enforcement

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by co-ordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

Water Management

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

Monitoring, Analysing and Reporting on the Environment

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government *(e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports)*.

Regulating Ireland's Greenhouse Gas Emissions

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

Environmental Research and Development

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

Strategic Environmental Assessment

- Assessing the impact of proposed plans and programmes on the Irish environment *(e.g. major development plans)*.

Radiological Protection

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

Guidance, Accessible Information and Education

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making *(e.g. My Local Environment, Radon Maps)*.
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

Awareness Raising and Behavioural Change

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

Management and structure of the EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

Sustainable Voluntary Communities: Support for Sustainable Environmental, Social and Economic Development

(2016-SE-MS-5)

EPA Research Report

A copy of the end-of-project Technical Report is available on request from the EPA

Prepared for the Environmental Protection Agency

by

The Centre for Environmental Research, University of Limerick

Authors:

Bernadette O'Regan, Richard Moles, Rosemary Byrne and Anne Bennett

ACKNOWLEDGEMENTS

DISCLAIMER

Project Partners

Dr Bernadette O'Regan
Centre for Environmental Research
School of Natural Sciences
University of Limerick
Limerick
V94 T9PX
Ireland
Tel.: +353 6 120 2552
Email: bernadette.oregan@ul.ie

Professor Richard Moles
Centre for Environmental Research
School of Natural Sciences
University of Limerick
Limerick
V94 T9PX
Ireland
Tel.: +353 6 121 3070
Email: richard.moles@ul.ie

Dr Rosemary Byrne
Centre for Environmental Research
School of Natural Sciences
University of Limerick
Limerick
V94 T9PX
Ireland
Email: rosemary.byrne@ul.ie

Ms Anne Bennett
Centre for Environmental Research
School of Natural Sciences
University of Limerick
Limerick
V94 T9PX
Ireland
Email: anne.bennett@ul.ie

Contents

List of Figures and Tables

Executive Summary

The need to involve voluntary communities at local level in the implementation of successful sustainable development programmes to achieve reductions in greenhouse gas (GHG) emissions is widely recognised. The 2015 White Paper *Ireland's Transition to a Low Carbon Energy Future: 2015–2030* stated that citizens and communities would be at the "centre of efforts", envisioning greater, and necessary, community involvement in energy projects and other efforts to reduce carbon emissions. Therefore, this research analysed community-scale sustainable development action from both bottom-up and top-down perspectives, and evaluated the financial and legal support available to community groups as at 2019.

Here, community is defined as "a group of citizens occupying a distinct physical space, capable of coming together as voluntary active participants, for the purposes of developing and implementing a set of goals and actions leading to the achievement of climate-related objectives within their local area".

The objectives of this study were to:

- demonstrate the extent to which community-led sustainable development action supported key European and national environmental and socio-economic policies;
- analyse the success of sustainable development action within communities in Ireland and elsewhere, so as to identify potentials for appropriate actions, successful actions (including organisational actions) and sources of finance for Irish voluntary communities;
- on the basis of this analysis, create a comprehensive online decision support aid (DSA), designed to incentivise and facilitate Irish communities through knowledge transfer in implementing sustainable development programmes capable of qualifying for certification;
- maximise the accessibility and visibility of project deliverables aimed at communities, and to ensure that these remain freely available online;
- provide a technical report for local and national government that identifies laws and regulations that support, or fail to support, community-scale

sustainable development action, with recommendations for possible changes.

Several research methods were employed to analyse the success of sustainable communities and identify potentials, successful actions and sources of Irish finance. These included a Q-study to examine Irish voluntary communities that have successfully implemented sustainable development goals. Case studies were then used to examine communities as organisations taking sustainable development action. The third research method applied an innovative futures approach, named Three Horizons, to construct the steps necessary to achieve transformative societal change.

By identifying what aids and hinders the progression of local-level sustainable development action, the research team constructed a DSA, which is intended to fill the pre-determined knowledge gap by disseminating technical, legal and financial information and thereby acting as an enabler of local-level sustainable development action. A critical review of existing web aids and comparative analysis of development platforms provided a strong case for the construction of an accessible web-based DSA. Here, a web-based DSA is described as an information tool in the form of a website that guides users through decision stages, providing them with information so that they can make an informed decision at the end of the process.

The key project findings are outlined below:

- Community members become involved in taking action for various reasons, including because of environmental concerns, but also because of wider social and economic objectives.
- The measurement and verification of GHG emissions at the local level can, by demonstrating the effectiveness of actions taken, act as both a motivation and a stimulus for action among nascent communities and also encourage further engagement in experienced community groups.
- With regard to personal decisions to take action, the motivations of community members differed

from those of individuals. This challenges the view that effective incentive, and hence sustainability policies, is best based on individuals' economic considerations.

- Differences in top-down and bottom-up perspectives on appropriate strategies for community involvement have been highlighted. Results indicate that communities want to be active partners in decision-making processes, while on the other hand decision-makers expressed support for the top-down provision of services and technological advances rather than for communities being instigators of action.

A further key deliverable for this project was the set of technical recommendations aimed at both enabling and providing continued support for voluntary communities undertaking sustainable development action. It is considered essential by the research team that these recommendations are linked to existing policies and practices, to ensure their feasibility at present and in the foreseeable future.

Recommendations were made at the national level on the one hand and at the local and regional levels on the other.

Summarised national-level recommendations:

- A national intermediary entity should be established to provide both an impetus and ongoing support for community involvement in taking sustainability-related action.
- A dedicated national online information resource for community-scale sustainability-related action should be provided.
- Detailed and accessible information should be provided on funding allocated to community-scale sustainability-related action.
- The opportunities presented through community-scale sustainability-related projects should be promoted.
- A form of suitable legal status specifically recognising community groups and social enterprises should be provided for in law.

Summarised regional- and local-level recommendations:

- The post of community sustainability action coordinator should be established in each of the four climate action regional offices.
- It should be ensured that the community coordinator undertakes additional tasks, including encouraging nascent and experienced communities to take sustainability-related action.
- GHG emission reductions related to community-led actions should be measured; this would allow community groups to clearly see the contribution of their actions to meeting national targets.

1   Introduction

In 2018, greenhouse gas (GHG) emission projections indicated that Ireland not only was going to miss European Union (EU) 2020 emission reduction targets but also was off course to meet longer term international and national commitments (EPA, 2018). The Intergovernmental Panel on Climate Change (IPCC) had previously stated that climate change is a global problem requiring diverse policy responses and collective action encompassing "the full breadth of human social structures" (IPCC, 2001). This was reiterated in its 2018 special assessment report, in which the IPCC warned of the urgent need for "rapid, far-reaching and unprecedented changes" at all levels of society to limit global warming to 1.5°C above pre-industrial levels (IPCC, 2018). The objectives for Ireland's transition to a low-carbon society were addressed in the 2015 White Paper *Ireland's Transition to a Low Carbon Energy Future: 2015–2030* (DCENR, 2015a), which set out a framework to guide energy policy to 2030 and beyond, to 2050. This paper stated that citizens and communities would be at the "centre of efforts", envisioning a necessity for greater community involvement in efforts to reduce GHG emissions.

1.1   Definition of Community

Taking action at the community level is found to play an important role in promoting the ideals of sustainable communities (Carragher *et al.*, 2018). Defining the term "community" can be difficult, as no single definition will provide an explanation that satisfies all authors (Cohen, 2013). However, a clear definition of the meaning of community within the context of this project was required. Agrawal and Gibson (1999) provided an important practical description of community in determining that an essential attribute of a community is the ability to make decisions and follow through with actions to achieve agreed goals. In defining community here, the attributes of existing Irish communities must also be taken into account, and the definition must also reflect community functions and actions with measurable outcomes. Therefore, the authors adopted the definition of a community being "a group of citizens occupying a distinct physical

space, capable of coming together as voluntary active participants, for the purposes of developing and implementing a set of goals and actions leading to the achievement of climate-related objectives within their local area". Such groups may also come together in partnership with other stakeholders to achieve their goals. Examples of such groups are energy cooperatives, and Transition Towns and Tidy Towns groups. The authors envisage that plans and actions developed and implemented in communities, where successful, will be disseminated to many other communities, so as to support national-level action.

1.2   The Context for Climate Policy in Ireland

Ireland's policies on climate change action and GHG emission reductions are derived from the country's commitment to international agreements and achieving national targets set by the EU (DCCAE, 2013). The Irish government has stated that it views efforts to reduce GHG emissions as complementary to other national strategic objectives and to achieving the United Nations Sustainable Development Goals. While the 2015 White Paper (DCENR, 2015a) sets out energy policy in Ireland, policy aimed at reducing GHG emissions is described in *Climate Action and Low-carbon Development National Policy Position Ireland* (DCCAE, 2013), which also established the national objective of achieving a "transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050". This policy was enacted into law under the Climate Action and Low Carbon Development Act 2015 (DCCAE, 2018a). This act requires the government to submit a series of national mitigation plans and national adaptation frameworks detailing actions and progress towards the national transition objective. See Table 1.1 for climate policies and related actions.

1.3   Inclusion of Community in Climate Change Policy

In 2018, the then Minister for Communications, Climate Action and Environment stated a vision of

Table 1.1. Climate-related policies at international and national levels

Level	Policy/framework	Action
International	United Nations Framework Convention on Climate Change (UNFCC)	Kyoto Protocol 1997
		Paris Agreement 2015
EU	First European Climate Change Programme, 2000–2004	Implement Kyoto Protocol
	Second European Climate Change Programme, 2005	Implement priorities identified in the first European Climate Change Programme
	2020 Climate and Energy Package	20% GHG emission reduction
		20% RE
		20% EE improvement
	2030 Climate and Energy Framework	>40% GHG emission reductions
		27% RE
		27% EE improvement
	2050 Long-term Strategy	Net zero GHG emissions[a]
National	National Policy Position on Climate Action and Low Carbon Development 2014	"Transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by end of 2050"
		Target of >80% CO_2 reduction in energy, built environment and transport by 2050
		Carbon-neutral agriculture and land use
	Climate Action and Low Carbon Development Act 2015	National Mitigation Plan
		National Adaptation Framework
		Climate Change Advisory Council
	Ireland's Transition to a Low Carbon Energy Future: 2015–2030	50–85% non-ETS GHG emission reduction compared with 1990 by 2050
	Climate Action Plan 2019	183 planned actions across key sectors
		Prepare for zero emissions by 2050
Regional	National Adaptation Framework 2018	Regional climate change offices
		Local authority climate change adaptation strategies[b]

[a]**Long-term strategic vision of a climate-neutral economy proposed in November 2018.**
[b]**Under development by local authorities.**
EE, energy efficiency; ETS, Emissions Trading Scheme; RE, renewable energy.

"communities as an essential part of the low carbon transition" (DCCAE, 2018b). However, no details or indications of plans for participation by communities or details of how much funding would be made available for community-scale action were included. It should also be noted that details of the role of the community in climate change efforts are not included in the National Planning Framework, which instead refers to only the "behaviour change of citizens" (Government of Ireland, 2018a).

1.3.1 Participation in community-scale sustainable development

While specific participation in community-scale sustainability action in Ireland currently exists at low levels, awareness of opportunities for action on the community scale is growing. The increasing importance of sustainability and environmental actions is also recognised and encouraged within the Tidy Towns competition through new special award categories (Tidy Towns, 2019). The launch, in 2018, of the Sustainable Energy Authority of Ireland (SEAI) Sustainable Energy Communities (SEC) Pilot Grant scheme resulted in more than 130 expressions of interest from communities (SEAI, 2018) in the first year. Other groups across Ireland are engaged in action ranging from membership of the Transition Towns movement to energy cooperatives engaged in developing small-scale renewable energy (RE) projects or in lowering the cost of energy to members. This evidence suggests that there is widespread

acceptance of and a willingness for communities to become involved in taking action to increase sustainability, given the right support.

1.4   Inconsistencies in Policy

While the 2015–2017 statement of strategy on energy (DCENR, 2015b) sought to ensure the future of state-owned energy companies, the equivalent 2016–2019 statement instead looked towards the stronger engagement and participation of communities in both policymaking and taking action (DCCAE, 2017a). Yet, in 2018, many of the support instruments in place at the community scale were predominantly based on energy efficiency (EE) programmes, and the National Mitigation Plan (DCCAE, 2017b) and National Adaptation Framework (DCCAE, 2018c) focused on consultation with communities in developing large-scale energy infrastructure rather than supporting bottom-up action.

The Climate Action Plan, published in June 2019, includes over 180 actions intended to lead Ireland towards achieving the 2030 GHG emission reduction objectives. To achieve the further aim of planning for carbon neutrality by 2050, the plan envisions delivering a "just transition", engaging all citizens, and exploiting new economic opportunities in communities (Government of Ireland, 2019). However, concerns have been expressed that, while ambitious, the plan lacks any clear commitment to the necessary long-term GHG emission reductions (Environmental Pillar, 2019).

1.5   Project Objectives

The concept driving this project is that taking well-planned sustainable development action on the community scale helps to achieve national environmental policy targets. While opportunities to participate in such action exist, to date Irish communities have largely not been able to take advantage of opportunities for potential environmental and socio-economic gains through implementing more ambitious programmes of action. This project aims to provide detailed and accessible guidance for communities that is sufficient for them to progress along a path of continual improvement towards greater sustainability in citizens' daily lives. This information targets communities starting out in taking sustainable

development action and those already engaged. Within this context, the project objectives were:

- to demonstrate the extent to which community-led sustainable development action supports key European and national environmental and socio-economic policies;
- to analyse the success of sustainable development action within communities in Ireland and elsewhere, so as to identify potentials, successful actions (including organisational actions) and sources of finance for Irish voluntary communities;
- to create, on the basis of this analysis, a comprehensive online decision support aid (DSA), designed to incentivise and facilitate Irish communities through knowledge transfer in implementing sustainable development programmes that are capable of being up-scaled to contribute to meeting national climate change objectives;
- to maximise the accessibility and visibility of deliverables aimed at communities, and to ensure that these remain freely available online;
- to provide a technical report for local and national government that identifies policies that support, and fail to support, community-scale sustainable development actions, with practical recommendations.

Four work packages were completed to achieve these objectives:

1. Communities were analysed to identify what significant information Irish communities will need to gain sustainable development certification.

2. Examples of community-scale sustainable development action were analysed to identify verifiable environmental and socio-economic gains, and the organisational, legal and financial conditions that incentivise and facilitate successful and continuing programmes of action.

3. Legal, financial and organisational conditions were identified that aid community-scale sustainable development action elsewhere, but that are not prevalent in Ireland. A set of recommendations was developed for overcoming obstacles faced by Irish communities in implementing programmes of sustainable development actions to the standard required for international certification.

4. Project management and the dissemination of research findings were also carried out.

1.6　　Report Structure

This report presents the outputs from each work package. Chapter 2 presents the results of a review of existing financial and legal support in Ireland and other selected EU Member States. Chapter 3 summarises the individual research methods adopted and associated findings. In Chapter 4, the development and structure of the DSA are presented. Chapter 5 provides a synthesis of findings and concludes with policy recommendations. A copy of the full end-of-project Technical Report is available on request from the EPA.

2　Review of Existing Support

A common feature of communities that have been successful in developing sustainability projects is their ability to access funding. This chapter provides an overview of the financial and legal support available for community-scale sustainability action in Ireland.

2.1　Financial Support

In Ireland, community RE and EE projects are supported by grant funding from the SEAI, Údarás na Gaeltachta (in Gaeltacht areas) and LEADER.[1] However, the application processes are often lengthy and complex. Local Irish government support is available through Local Agenda 21 on an annual basis. Government support for RE projects is provided through the recently (2019) launched Renewable Electricity Support Scheme.[2]

While social enterprises are still relatively novel in Ireland, sources of finance available in 2019 included Social Entrepreneurs Ireland, which supports new entrepreneurs. Energy Cooperatives Ireland supports the development of community RE projects. Direct social financing is available from Clan Credo and Community Finance Ireland. As funding aimed at community-scale action is more prevalent in some other EU Member States, reviews of such support instruments are provided in the full end-of-project Technical Report, which is available on request from the EPA.

2.2　Legal Support

There are no barriers in Irish legislation in relation to communities undertaking sustainable development action. In general, Ireland is subject to the same environmental and planning laws as the other EU Member States. Differences among Member States in terms of support for communities relate to policy rather than to law.

2.2.1　*Legal recognition and status of voluntary community groups*

In accordance with EU directives, the legal recognition of voluntary community groups is determined by individual Member States. In Ireland, such community groups are recognised across all government departments and local authorities. However, they do not have any special status and are not given priority except in the case of funding allocated to named projects by national and local government and certain funding agencies; for example, exclusive funding may be allocated by the LEADER programme to certain voluntary groups from time to time or on an ongoing basis.

A number of suitable legal entities are available for voluntary community groups in Ireland and it may be prudent for groups to establish legal status to protect members from personal liability. This may be done in several ways but currently (as at 2019) the three most common means in Ireland are to form a general partnership, a limited company or a cooperative society. While Irish voluntary community groups may form social enterprises for networking purposes, again, as at 2019, these have no legal status.

1　LEADER is an EU support instrument, with funding allocated at the local level.

2　For further information, see Government of Ireland (2018b).

3   Methods and Results

3.1   Introduction

This chapter introduces the individual research methods used for this project to achieve the aims and objectives outlined in Chapter 1. The results generated from this strand of the research were used to inform both the development of the DSA and the policy recommendations on encouraging and supporting community-scale action, presented in Chapter 5.

The challenge of developing solutions that both meet the real-world problem of climate change and achieve sustainability goals requires the involvement of transdisciplinary, community-based and participatory research approaches (Lang *et al.*, 2012). In addition, avoiding gaps between community-scale action (bottom-up) plans and national (top-down) policy is crucial in advancing the governance of climate change across all levels (Corfee-Morlot *et al.*, 2009, p. 2). For this to happen, it is necessary to understand how Irish communities may be encouraged to take action. Examining the experiences and opinions of those already engaged in community-scale sustainability projects provides crucial assistance in determining how to develop programmes for GHG emission reductions and greater sustainable development across other communities.

3.2   Linking Methods to Objectives

This research consisted of three main stages within an integrated approach, combining a Q-study in Stage 1, case studies in Stage 2 and the Three Horizons approach in Stage 3. Stages 1 and 2 took place on the community scale, while Stage 3 involved working with those who inform and implement climate change and sustainable development policy in Ireland, so as to gain their top-down perspectives on community-scale action. Information gathered in Stages 1 and 2 assisted with the evaluation of which policies assist or hinder community-scale action and the effects that communities may have on meeting EU and national emission reduction targets. Evidence gathered in Stages 1 and 2 was also used in Stage 3 and to provide background information and context for the development of the DSA, so that communities may

use it effectively. Please refer to the end-of-project Technical Report (available on request from the EPA) for further information on the methods applied.

3.3   Research Participant Selection

The necessarily limited number of participants involved in this research was not intended to represent the views of the overall population but rather to enable an analysis of the opinions of those involved in, or supporting, community-scale action in Ireland as at 2017. Participants in the Q-study were selected in conjunction with the Tipperary Energy Agency on the basis of their previous or current involvement in sustainability action. Case study participants were selected to illustrate as wide as possible a range of objectives and organisational structures. The five cases selected were from community-scale organisations engaged in sustainability actions such as RE and EE programmes, waste and recycling projects, local food initiatives, and promoting and leading activities at the community scale. Participants in the Three Horizons study were drawn from various non-governmental organisations, government agencies and local authorities that influence policy development or implementation through endeavours such as the promotion of environmental and sustainability goals and actions, and developing and promoting community engagement. To ensure the candour of participants, it was guaranteed that those taking part in the Q-study and the Three Horizons study would remain anonymous.

Approval to conduct this research was granted by the Ethics Committee of the Science and Engineering Faculty, University of Limerick, on 19 February 2016, reference number 2016_02_09_S&E.

3.4   Engaging Community Members in Sustainable Development Action: Methods and Results

Understanding social attitudes and developing clear narratives and mechanisms for social change are critical in building social and political support to achieve climate change policy objectives (Bain *et al.*,

2015; EPA, 2019). Hence, the principal focus of this study was on identifying ways in which individuals within communities become motivated to engage in environmental action, in particular action capable of contributing to GHG emission reductions. In doing so, it was necessary to determine if common motivational factors existed among these communities, or if particular circumstances dictated the levels of environmental awareness and action among citizens in a community. The Q-method[3] was identified as an appropriate means of achieving the required outcome, as this method is designed to explore and explain patterns in information gathered from respondents, and to identify consensus and contrasts in views, opinions and preferences (van Exel and de Graaf, 2005).

3.4.1   Results

Climate change, while viewed as a serious issue, was not the main motivational influence driving action for the study participants. Instead, involvement was driven by a strong ethical sense of "doing the right thing". Participants showed an insightful understanding of the essence of climate-related action, with energy use reduction viewed as one part of the pathway needed for a low-carbon transition, while important elements, such as building resilience, education and social equity, were also emphasised. Concerns were also expressed regarding the impact on future generations of a continuing failure to act decisively on climate change issues. The ability of local-level action to make a significant contribution to national GHG emission reduction targets was widely endorsed by participants. However, the participant communities took the view that they could not bring about significant change in isolation, with top-down and bottom-up collaboration and partnership being viewed as the most effective method of achieving a low-carbon society.

3.4.2   Discussion and conclusions

The key aim of the Q-study was to understand how these perspectives can inform the development of meaningful top-down policies aimed at the greater encouragement and involvement of communities, in addition to understanding, from a bottom-up perspective, what is largely preventing this from happening.

In 2016, the Climate Change Advisory Council (CCAC) advised that short-term financial incentives may be necessary to bring about behaviour change (CCAC, 2016). National efforts to include communities in climate change action, such as the SEAI SEC scheme, are principally based on EE upgrades of buildings (SEAI, 2018). While these measures will achieve reductions in fossil fuel use, resultant household financial savings may lead to inadvertent rebound or backfire effects[4] (Druckman *et al.*, 2011; Gillingham *et al.*, 2016) unless such financial gains are redirected into low-carbon actions. Such economic models assume that an individual's actions can be guided mainly by external rewards (Berglund and Matti, 2006). However, while people acting alone may take action in response to financial rewards, community member participants indicated different motivations for acting (further explored in Byrne *et al.*, 2017). Here, evidence indicates that the availability of personal financial incentives may in practice act to reduce the extent of desirable morality-driven behaviours, as was also suggested by Brekke *et al.* (2003) and van der Werff *et al.* (2013). The goal for participants in this study was not personal financial gain through their actions, but rather to become involved in a shared practice that brings benefits to the wider community. This collective and continued enthusiasm for action was also found by Hoffman and High-Pippert (2010), whereby personal benefits were found to be less important to community members than their connection with and appreciation of community engagement. As such, the community can be seen to be the major driving force for taking action. Policies that reflect the moral imperative to act, as expressed by participants in this study, have been shown by Markowitz and Shariff (2012) and Roe (2013) to be a more effective and positive influence on social norms in terms of promoting sustainable development action than policies that promote individual-based, short-term financial rewards or penalties.

---

3   For further information on the application of the Q-method, see https://qmethod.org/ (accessed 13 June 2020).

4   Where EE measures do not produce the savings expected (rebound) or financial savings stimulate greater energy use (backfire).

3.5 Analysis of Community Action: Methods and Results

The focus of this section is an analysis of community-scale sustainable development action in practice. This involved the use of a case study methodology to examine communities as organisations in developing local projects. These case studies were then analysed to gain an understanding of how community-scale action may relate to the local context, and to identify transferable lessons from these actions.

Data were gathered though semi-structured interviews with active participants and community organisation leaders ("champions") and site visits, to allow for direct observation. Interviews and site visits were supported by searches for existing literature, reports, planning records and, where available, empirical data on each of the groups. Interviews and site visits were conducted between November 2016 and August 2017.

3.5.1 Case study analysis

The community case studies were analysed following the approach of Martiskainen (2014), using a framework developed from Raven *et al.* (2008), to examine:

- Variation through local contextualisation: actions taken relate to the particular local context, as each project has different motivations, objectives and expectations of outcomes.
- Negotiation, participation and engagement: the focus here is on the methods used, the administrative processes, leadership and the impact of external factors, such as finance, planning and other regulatory requirements (Martiskainen, 2014). These factors are influenced by the participation and engagement of stakeholders and the ways in which they may shape and reshape the project (Raven *et al.*, 2008).
- Retention and transfer of learning: key lessons may be learned from every project undertaken on the community scale.

3.5.2 Discussion and conclusions

These case studies show that communities may not engage in sustainable development action because of environmental concerns per se, but that such action can provide a means of achieving diverse objectives. In practice, the communities and organisations operated in similar ways to commercial organisations, in that they formed management and legal structures. These structures served to protect members, organise activities and source funding for action. However, unlike commercial organisations, the purpose was to provide a benefit to the wider population and environs, and not personal financial gain.

The importance not only of leadership but also of relationships and trust within the community in realising goals has been demonstrated by the cases examined here. Those involved also stressed the importance of communication and integrity from the outset when engaging in community-scale projects.

Selection of appropriately sized projects, in terms of the capacity of the community, has also been shown to be critical, as large-scale plans in particular may prove difficult to achieve for inexperienced community groups. However, the actions examined demonstrated that, while not every action may be successful and all objectives be achieved, communities learn and benefit from taking action and many objectives can be achieved.

These case studies have highlighted that community-scale action cannot operate in isolation, as developing key relationships was fundamental to the ability to act and to persevere. The importance of the role played by trusted intermediary organisations[5] was highlighted, for instance their ability to provide both an impetus to start, and continuing support for, action for all communities. By building relationships and trust, the communities and organisations examined here have shown how communities can become a positive influence on and a catalyst for change in wider society.

Finally, the cases presented here have demonstrated that communities are organised in a variety of ways, and distinct forms of communities were identified. While the structure of these may depend on factors

---

5 The involvement of an intermediary organisation may help to bridge the gap between large-scale action and the internal capacity of a community (Guerreiro and Botetzagias, 2018). The importance of this role in supporting communities to achieve their goals has received increasing attention. Examples of such organisations in Ireland include Energy Agencies.

such as the objectives and legal status adopted, all types can, and need to be, exploited, so as to contribute to national GHG emission reductions.

3.6 The Viewpoints of Decision-makers on Facilitating Community-scale Action: Methods and Results

The aim of the third study was to determine how results from the previous research stages may be mainstreamed and made accessible, so as to engage and support wider community-scale efforts to achieve climate change objectives. While society, politics and individual choices will dictate how the future will unfold, developing a vision of what changes may occur, or are desirable, may prove a valuable exercise in the challenge of achieving a low-carbon future (Kirby and O'Mahoney, 2018). Strategic foresight non-predictive narratives, known as scenarios, are increasingly being used to envisage new patterns or systems in transition-scale change (Miller, 2007). This study applied a strategic foresight tool, named Three Horizons[6] (Curry and Hodgson, 2008; Sharpe, 2013), that utilises a participatory scenario-based approach to:

- capture participants' understanding of practical top-down plans and measures, and especially informed preferences for both appropriate community-scale actions and what is needed to achieve goals through the implementation of these actions;
- help identify the current obstacles to community-scale sustainability action and what can be done to overcome these;
- help determine which organisations and agencies should take initiatives to facilitate the implementation of appropriate community-scale action.

While strategic foresight may not at first sight appear to be compatible with evidence-based policy formulation methods, its use is growing, as it both supports the development of insights on possible future directions and enables collective understanding (Jones, 2017). Such tools are increasingly being used to guide the implementation of climate change adaptation and transformation measures (Fazey *et al.*, 2016).

3.6.1 Results

The participants of the Three Horizons study were able to provide a broader overview of mechanisms that support and engage people in community-scale sustainable development action in Ireland than those in the Q-study. To identify ways in which the scenarios developed under the Three Horizons method may be helpful in fostering additional community-scale sustainable development action, the results were considered under three key headings:

1. The role of government: participants in 2018 expressed their frustration with government inaction on climate change and wider sustainability issues, resulting from poor cooperation across government bodies and the adoption of, at times, contradictory policy positions. However, these participants also welcomed positive changes in efforts to include citizens in decision-making processes, in particular collaborative governance approaches and adaptive co-management, which are increasingly recognised as parts of an effective strategy for addressing climate change (Baird *et al.*, 2016).

2. The role of activists and communities: concerns were expressed regarding the impacts of busy lifestyles and rising consumerism on community-scale action. Participants appeared to favour technology and service provision as means of achieving greater sustainability. Some participant responses suggested that in future communities might be consulted on planned top-down action but not expected to plan and initiate action.

3. Energy: contradictory views were expressed on how the low-carbon future was to be achieved and on the role of communities in that transition.

The importance of the role of a trusted intermediary body, to provide advice, information, and support to communities on energy generation and use, was described by participants as being transformative in the process of achieving transition. The positive

---

6   For further information on the Three Horizons framework, see https://www.internationalfuturesforum.com/three-horizons (accessed 13 June 2020).

supportive influence of intermediary bodies such as Údarás na Gaeltachta had also been highlighted by the case study groups.

3.6.2   *Discussion and conclusions*

Achieving the future as envisioned by participants will necessitate system shifts, and, as Curry (2015) stated, the effort to achieve such change is required primarily in the transformation phase, known as Horizon 2 in the Three Horizons model. Participants were unclear on whether or not they viewed voluntary communities as having a proactive role in determining what sustainable development actions to undertake on the local scale. However, participants offered some reasons as to why it was difficult for these communities to be proactive. Government policies in 2018 were viewed as insufficient to support widespread community activism. The difficulties experienced in implementing action to initially engage communities were also recognised. In suggesting key actions to remedy this situation, the participants stated that better resourcing and education were required, which perhaps suggests that the participants did not view existing communities as able to be proactive in a significant way. Participants had knowledge of many initiatives and innovative actions capable of facilitating effective

change on the community scale. During the process, participants discussed actions in addition to those that are energy related, spanning consumer choice, food, transport and waste. However, in suggesting key actions, participants again focused strongly on energy solutions such as RE and EE installation training and developing regional energy agencies. There appeared to be a mismatch between participants' level of understanding of the potential role of communities and the lack of inclusion of this role in their selection of key actions. This would suggest that, while the participants clearly showed awareness of international examples of communities playing key roles in taking climate-related action that enhanced sustainability, they did not appear to consider that Irish communities could act in a similar way.

Differences of opinion existed as to the role communities might play in contributing to future objectives. This uncertainty on the inclusion of communities in direct action was also expressed in recommendations made by the Joint Committee on Climate Action. While this committee recognised that community action should be addressed as a matter of urgency, members considered that they did not possess sufficient evidence or information to make direct recommendations (Joint Committee on Climate Action, 2019).

4   Development of the Decision Support Aid

While other online support tools share some similarities with the DSA described here, none fully satisfies the requirements of communities reported here. An analysis of the knowledge gap associated with other web-based aids, and how this DSA differs from other sources, is provided in the full end-of-project Technical Report, which is available on request from the EPA.

As discussed in Chapter 3, the findings of the studies described previously were used to provide background information and to establish the framework for the development of the DSA. This process was divided into five phases:

1. Planning: information was gathered relating to sustainable communities in Ireland, existing environmental and sustainability web aids, DSA goals, target audiences, DSA content and suitable platforms for development.

2. Design: the content was structured in an easy-to-navigate and intuitive manner, a memorable website name and tagline were identified, and professional information was married with good accessibility. Research was conducted on user-centred website design with an emphasis on user-experience design.

3. Construction: the most suitable content management system (CMS) was selected, the web-based DSA was populated with content to create a prototype and the draft prototype DSA was reviewed.

4. Evaluation: the prototype was evaluated by two Irish community groups and subsequently reviewed by the project steering committee. Reviews focused on website usability, accessibility, functionality and practicality.

5. Modification: modifications were made, based on responses from the evaluation stage.

Figure 4.1 provides an overview of this development process.
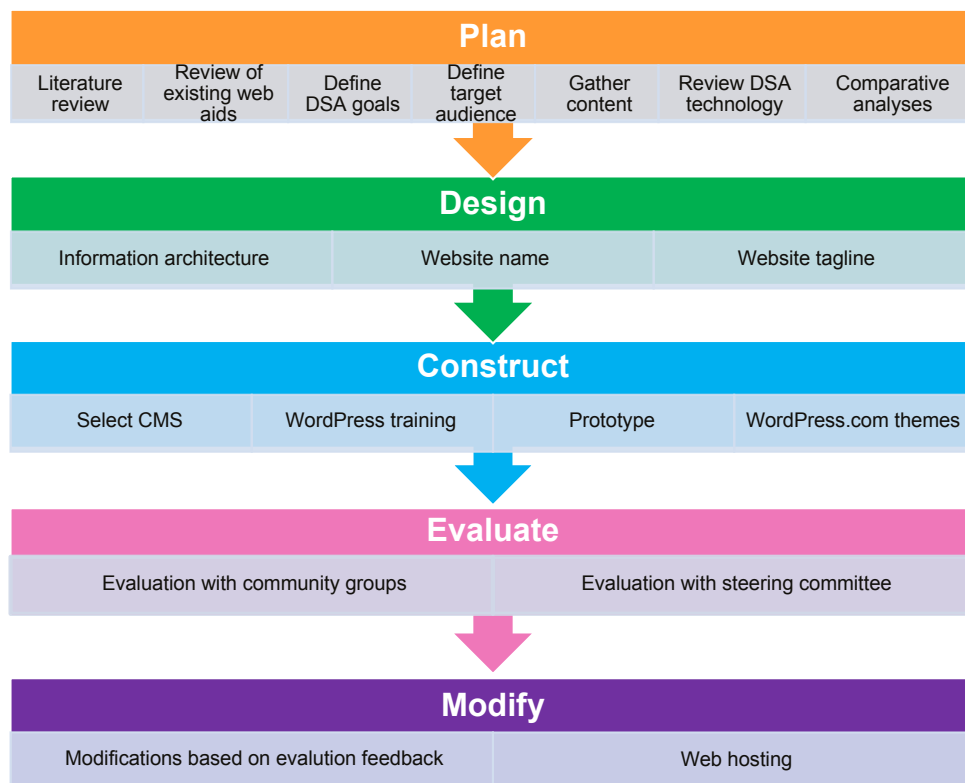
Figure 4.1. DSA development process.

4.1   Finalised Version

Full details of the design, review and finalisation processes adopted for the DSA are available in the end-of-project Technical Report (available on request from the EPA). The home page for the DSA is shown in Figure 4.2. The full DSA may be accessed at http://sustainablecommunities.ie/.

4.2   Implications for Communities

The primary output of this part of the research project was a web-based DSA that guides the complex task of forming a sustainable community through manageable decision stages. Through the dissemination of technical, legal and financial information, sourced from professionals, the web-based DSA acts as an enabler for local-level sustainable action, helping to promote sustainable communities in Ireland.
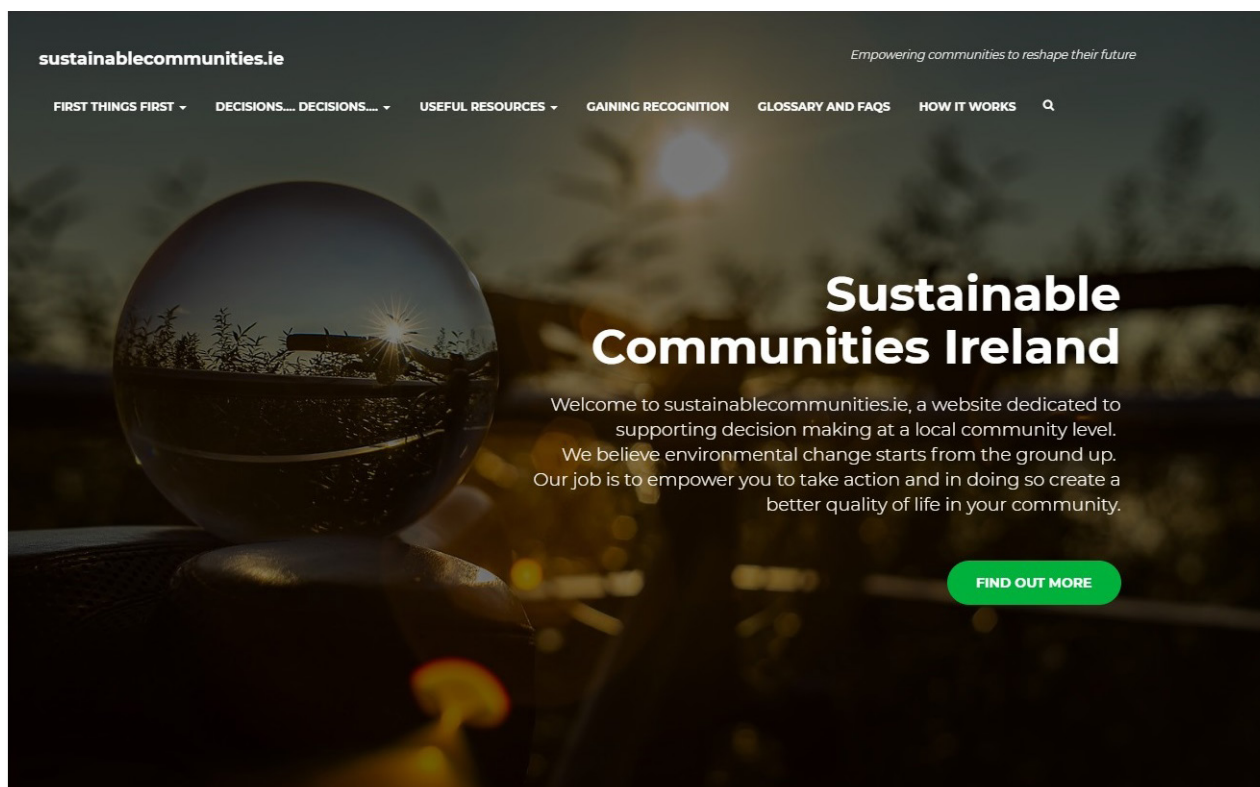
Figure 4.2. Sustainable Communities Ireland home page (sustainablecommunities.ie; accessed 13 June 2020).

5 Synthesis of Key Findings and Recommendations

5.1 Introduction

Previous chapters presented reviews of existing financial and legal support, means of engaging community members in sustainability action, case studies and a top-down perspective on community-scale action, and the development of the DSA, which is designed to support communities in taking sustainable development actions. Comparable chapters in the full end-of-project report provide the evidence base for these conclusions and recommendations.

In this chapter, key policy conclusions are synthesised and recommendations are made for national-, regional- and local-level government in Ireland.

While online information sources for communities wishing to take sustainability-enhancing action existed prior to the publication of this report, there were gaps in the information provided to encourage and enable both nascent and experienced community groups to take action. Moreover, there have been significant recent developments in policies relating to climate change action in Ireland. In particular, the 2019 Irish government's Climate Action Plan points to the need for engagement and buy-in across all sections of society, with a commitment to providing knowledge and support to voluntary and community groups to enable them to take climate change action. The development of the DSA is therefore particularly timely in terms of providing a valuable online resource for such community-scale efforts.

5.2 Key Findings

5.2.1 Methods

This project brought together several strands of research, each adopting a distinct method. In so doing, this research analysed community-scale sustainable development action from both bottom-up and top-down perspectives, and evaluated the financial and legal support available to community groups as at 2019.

The methods adopted supported an overall understanding of what needs to change to enable

communities to play their full role in climate-related mitigation and adaptation actions. The research has established that citizens become involved in taking action for various reasons. While taking action may not necessarily be motivated initially by environmental concerns, as communities included in this project have demonstrated, taking sustainable development action can be a key mechanism for motivating champions, and for individuals to form communities and thus achieve wider social and economic objectives. In previous chapters of this report, it was argued that setting environmental goals may also result in achieving wider sustainability objectives.

5.2.2 Verification of action outcomes

Information on management and measurement systems is set out in the DSA. This research found that, as at 2019, no government policy existed relating to approved systems for measuring or verifying GHG emission reductions at community level. The measurement and verification of GHG emissions can act as both a motivation and a stimulus for taking initial action, and can also encourage experienced community groups to take further action. While measuring the environmental impact of all actions is not obligatory, such impacts must be verifiable to demonstrate their contribution to national GHG emission reductions. The lack of such systems also means that communities' claims that sustainability actions are beneficial cannot be verified, which makes it harder for them to attract funding. Moreover, it may potentially lead to some communities gaining an undeserved reputation for success and hence an unfair advantage in attracting such funding.

5.2.3 Community motivation

Some common themes were identified that challenge the view that effective motivation and sustainability policies should be based on financial incentives for individuals. Instead, the results indicate that community members are motivated not by individual financial gain, but by the desire to act now to prevent further environmental damage in the future. Therefore,

it is argued here that, while individuals may take action for personal financial reward, communities of individuals are likely to have different motivations. This clarification has major implications for policy development in Ireland and elsewhere.

5.2.4   *Policy*

This research has highlighted how the long-term consequences of the failure to act on climate change may not yet be fully acknowledged by both decision-makers and the wider population of Ireland. New forms of thinking are essential and radical action must be taken at a rapid pace if Ireland is to meet its climate change obligations. Therefore, Ireland must act quickly and with ambition, which requires support and cooperation at all levels. Evaluating suitable policies to promote the reduction of GHG emissions on the community scale can be complex. The Irish government has published policies and accompanying plans for meeting both international commitments to GHG emission reduction targets and achieving by 2050 the national objective of transitioning to a low-carbon, climate-resilient and environmentally sustainable economy. While these plans have previously received criticism for their lack of concrete targets, the 2019 Climate Action Plan, while lacking details on implementation, may represent a policy that is supportive of community-scale action.

5.2.5   *Top-down perspective*

Results from this research highlighted differences in top-down and bottom-up perspectives on appropriate strategies for community involvement. Results indicate that communities want to be active partners in decision-making processes that affect their futures and to be regarded as part of transformation processes, not just end-of-line consumers. However, while decision-makers expressed support for such community participation, this was based on the top-down provision of services and technological advances in RE and EE, as opposed to communities being encouraged to be instigators of their own choice of actions beyond energy projects alone.

5.2.6   *Financial support*

In comparing Ireland with other EU Member States, as discussed in section 2.1, sources of finance for communities were found to be more developed in some other Member States. Ireland has the opportunity to increase financial support for communities through the development of small-scale support schemes. Social enterprise, cooperative and community RE projects are also more developed in Germany and the UK, and, if given the incentives and support required, these projects might greatly expand in Ireland too.

5.2.7   *Legal status*

There are no specific legal barriers to community-scale action in Ireland. As Ireland is subject to the same EU regulations as other Member States, legal provisions to support community-scale action will not transgress EU directives.

The professional advice (as at 2019) is that community members engaging in sustainability action should have legal protection from personal liability and risk. While voluntary community groups may avail of legal status through Companies Registration Office Ireland, as at 2019, no legal entity was available to meet the specific needs of community groups that envisage generating a monetary return on investment in, for example, RE technology. Such legal entities exist in the UK, whereby recognition is given to social enterprises and other organisations developed to provide benefits (in terms of energy generation) to their communities.

5.2.8   *Development of the decision support aid*

The research conducted during this project informed the development of the DSA. Information gathered in the Q-study formed a major role in the planning phase of the DSA development. This study explored the obstacles to development and growth encountered by established Irish communities and provided information on how to best overcome these obstacles. The case studies were particularly effective in highlighting how technical and practical skills and knowledge were essential in navigating planning and legal requirements, particularly in project development. This research also revealed a gap in the provision of accessible technical information for communities.

As those accessing the DSA generally may not have prior professional knowledge of such information, it was necessary that technical information be presented in a straightforward, easy-to-understand manner and

be made available through an accessible platform. It was also important that professional practitioners agreed on the content of this information, so that community members would have direct access to expert advice.

5.3   Recommendations

5.3.1   *National level*

- Establish a national intermediary entity for community involvement in sustainability-related action:
  – The engagement with communities of Údarás na Gaeltachta demonstrated the ability of an intermediary organisation to provide an impetus for community-scale action and ongoing support to enable further initiatives by established groups. It is recommended that this be considered a model for the size and structure of such an entity.
  – Such an entity should provide a central focus for coordination in areas such as national funding programmes, the roll-out of policies and plans, information provision and the gathering of data, and act as the interface between national policy and community-based action, providing guidance and support for communities seeking to take action for the first time or additional action.
  – While this entity will require cross-agency cooperation and also a degree of autonomy, the possibility should be examined of locating this entity within an existing established national body such as the SEAI or the Environmental Protection Agency (EPA).
- Provide a dedicated national online information resource for community-scale sustainability-related action:
  – Where support mechanisms are in place or where new supports and opportunities become available, community groups should be able to easily access such information.
  – The DSA described here was hosted by the University of Limerick until May 2020. It is recommended that a permanent location be provided through negotiations initiated by the EPA. Maintenance is low cost (€150 per annum for the hosting site) and will require periodic updating by relevant professionals.

– In addition to the DSA developed in this project, as at 2019 other web-based information resources existed aimed at Irish communities and organisations undertaking sustainability action. It is recommended that these resources be reviewed for their potential to be combined to create a single information source. The national intermediary entity, as recommended above, could then be responsible for administering and updating such an online resource.

- Provide detailed and accessible information on funding allocated to community-scale action:
  – At the June 2018 launch of "Empowering Communities for Climate Action", it was announced that €21.8 billion had been prioritised for climate action under the National Development Plan 2018–2027 (Merrion Street, 2018). It was further announced that the investment would both require and support behaviour change. However, no further information was provided on the provision within these funds for community-scale action. It is recommended that clarification is provided on the criteria on which funding allocations are based, including more details on the evaluation of community-level action.
  – The €500-million Climate Action Fund was established under the National Development Plan 2018–2027. In 2018, potential support for up to seven projects totalling up to €76 million was made available. While two of these projects concerned local authority district heating systems in Dublin, none had an element of community involvement, despite the stated intention that the fund would contribute to policy priorities in areas such as community resilience and development (DCCAE, 2018a). It is recommended that this fund should support programmes of action championed by voluntary communities as defined in this report.
- Promote the opportunities presented through community-scale sustainability-related projects:
  – At the national level, the language used to describe and explain the significance of climate change often is overly technical, focuses on the negative and is inaccessible to many people. As such, necessary action may not seem relevant in everyday life. It is recommended that the language used to describe climate

change action is altered so that more positive alternatives are used that are more closely related to people's everyday lives. This could be done through the use of non-technical language, and by highlighting the opportunities and benefits for society of taking action.

– As of 2019, national-scale support mechanisms for community-scale action were limited to energy-related efforts supported by the SEAI. As mentioned previously, sustainability-related actions embrace much more than RE and EE. It is recommended that funding bodies include support for the range of actions identified in this report and for any additional actions that may emerge.

● Provide in law a form of suitable legal status specifically recognising community groups and social enterprises:

– There are a number of legal entities including partnerships, organisations with charitable status, cooperatives and limited companies available to voluntary community groups through Companies Registration Office Ireland. However, a legal form recognising the position of voluntary groups or social enterprises working on behalf of the community would help to prevent confusion or unintended risk to members. A precedence for this exists in the UK, where community interest companies are recognised as a hybrid between a charity and a profit-making company set up and run for the benefit of the community (gov.uk, 2018). It is recommended that this precedent be evaluated by the appropriate authority and Companies Registration Office, Ireland, and, if feasible, that legislation be proposed to provide for recognition under Irish law.

– Community-scale sustainability action is more developed in other EU Member States, where projects undertaken on the community scale are often classified as "exempted developments" either in whole or in part, depending on the type and scale of the project. While exempted developments are

included in Irish planning law, in practice they appear be too limited in scope to support sustainability-enhancing projects. In addition, in the past it may not have been clear what should be defined as such a project, and how neighbouring local authorities might manage, for example, proposed wind farms or hydro-electric projects that straddle local authority boundaries. It is recommended that the relevant minister expand the list of Irish exempted developments to include the types identified in the German and Swedish systems, for example. It is also recommended that the government define more precisely what constitutes a sustainability-related development. It is recommended that the minister consider prioritising such projects under new legislation, and moving the responsibility for the assessment of such projects from local authorities to An Bord Pleanála, following the model of the Strategic Housing Development Policy introduced in 2017.[7] In these ways, community-scale sustainable development projects could be accelerated in line with those in other EU Member States.

5.3.2   *Regional and local levels*

● Appoint a community sustainability action coordinator within each of the four climate action regional offices:

– The establishment of climate action regional offices and the creation of a €10-million fund in 2018 represented an opportunity to create the post of dedicated regional coordinator for community-scale action on climate change. It is recommended that such posts be created as a matter of urgency.

– As at 2019, the extent of cooperation and coordination between community groups and local and regional government authorities depended on geographical location, as some authorities were more proactive than others in supporting community engagement efforts.

---

7   This policy includes strategic housing development planning applications, the Planning and Development (Housing) and Residential Tenancies Act 2016 and the Planning and Development (Strategic Housing Development) Regulations 2017. Certain planning applications for certain housing developments can now be made directly to An Bord Pleanála. This new type of application was introduced as part of Rebuilding Ireland to speed up the planning application process and accelerate the delivery of larger housing and student accommodation proposals.

A dedicated position within the new regional offices might provide for a coordinated approach by local authorities, and act as the liaison between the national intermediary entity, relevant stakeholders and local actors. This is further justification for the next recommendation.

- Ensure that the community coordinator undertakes additional tasks:
  - It is recommended that experienced sustainable development and environmental action groups be identified, with the aim of encouraging and supporting further action and providing for the dissemination of information and best practice.

- It is recommended that other existing groups within each local authority be identified, with the aim of encouraging community involvement in sustainability-related action.
- It is recommended that an accessible database of local expertise and skills be created.

- Measure GHG emission reductions related to community-led action:
  - It is recommended that this be coordinated by the climate action regional offices. This would allow community groups to see clearly the contribution of their actions to meeting national targets and might be expected to motivate the fostering of continual improvement, and provide a transparent basis for community funding.

References

Agrawal, A. and Gibson, C., 1999. Enchantment and disenchantment: the role of community in natural resource conservation. *World Development* 27: 629–649. https://doi.org/10.1016/S0305-750X(98)00161-2

Bain, P.G., Milfont, T.L., Kashima, Y., Bilewicz, M., Doron, G., Garðarsdóttir, R.B., Gouveia, V.V., Guan, Y., Johansson, L.-O., Pasquali, C., Corral-Verdugo, V., Aragones, J.I., Utsugi, A., Demarque, C., Otto, S., Park, J., Soland, M., Steg, L., González, R., Lebedeva, N., Madsen, O.J., Wagner, C., Akotia, C.S., Kurz, T., Saiz, J.L., Schultz, P.W., Einarsdóttir, G. and Saviolidis, N.M., 2015. Co-benefits of addressing climate change can motivate action around the world. *Nature Climate Change* 6: 154–157. https://doi.org/10.1038/nclimate2814

Baird, J., Plummer, R. and Bodin, Ö., 2016. Collaborative governance for climate change adaptation in Canada: experimenting with adaptive co-management. *Regional Environmental Change* 16: 747–758. https://doi.org/10.1007/s10113-015-0790-5

Berglund, C. and Matti, S., 2006. Citizen and consumer: the dual role of individuals in environmental policy. *Environmental Politics* 15: 550–571. https://doi.org/10.1080/09644010600785176

Brekke, K.A., Kverndokk, S. and Nyborg, K., 2003. An economic model of moral motivation. *Journal of Public Economics* 87(9–10): 1967–1983. https://doi.org/10.1016/S0047-2727(01)00222-5

Byrne, R., Byrne, S., Ryan, R. and O'Regan, B., 2017. Applying the Q-method to identify primary motivation factors and barriers to communities in achieving decarbonisation goals. *Energy Policy* 110 (Supplement C): 40–50. https://doi.org/10.1016/j.enpol.2017.08.007

Carragher, V., O'Regan, B., Peters, M. and Moles, R., 2018. Novel resource saving interventions: the case of modelling and storytelling. *Local Environment* 23: 1–18. https://doi.org/10.1080/13549839.2018.1434493

CCAC (Climate Change Advisory Council), 2016. *First Report*. CCAC, Dublin. Available online: http://www.climatecouncil.ie/media/CCAC_FIRSTREPORT.pdf (accessed 1 March 2017).

Cohen, A.P., 2013. *Symbolic Construction of Community*. Routledge, London.

Corfee-Morlot, J., Kamal-Chaoui, L., Donovan, M.G., Cochran, I., Robert, A. and Teasdale, P.J., 2009. *Cities, Climate Change and Multilevel Governance*. OECD Environmental Working Papers No. 14. OECD Publishing, Paris.

Curry, A., 2015. Searching for systems: understanding Three Horizons. *APF Compass*, January 2015: 11–13. Available online: https://www.researchgate.net/publication/288994305_Searching_for_systems_understanding_Three_Horizons (accessed 23 August 2018).

Curry, A. and Hodgson, A., 2008. Seeing in multiple horizons: connecting futures to strategy. *Journal of Futures Studies* 13: 1–20.

DCCAE (Department of Communications, Climate Action and Environment), 2013. *National Policy Position on Climate Action and Low Carbon Development.* DCCAE, Dublin. Available online: https://www.dccae.gov.ie/en-ie/climate-action/publications/Pages/National-Policy-Position.aspx (accessed 24 August 2018).

DCCAE (Department of Communications, Climate Action and Environment), 2017a. *Statement of Strategy 2016–2019*. DCCAE, Dublin. Available online: https://www.dccae.gov.ie/en-ie/news-and-media/publications/Pages/Statement-of-Strategy.aspx (accessed 23 August 2018).

DCCAE (Department of Communications, Climate Action and Environment), 2017b. *National Mitigation Plan*. Available online: climatecaseireland.ie/wp-content/uploads/2018/04/National-Mitigation-Plan-2017.pdf (accessed 3 June 2020).

DCCAE (Department of Communications, Climate Action and Environment), 2018a. *National Climate Policy*. Available online: https://www.dccae.gov.ie/en-ie/climate-action/topics/climate-action-at-a-national-level/Pages/default.aspx (accessed 25 August 2018).

DCCAE (Department of Communications, Climate Action and Environment), 2018b. Project Ireland 2040 – empowering communities for climate action. Press release, 20 June 2018. Available online: https://www.dccae.gov.ie/en-ie/news-and-media/press-releases/Pages/Project-Ireland-2040---Empowering-Communities-for-Climate-Action.aspx (accessed 20 June 2018).

DCCAE (Department of the Environment, Community and Local Government), 2018c. *National Adaptation Framework: Planning for a Climate Resilient Ireland*. Available online: https://www.dccae.gov.ie/documents/National%20Adaptation%20Framework.pdf (accessed 5 June 2020).

DCENR (Department of Communications, Energy and Natural Resources), 2015a. *Ireland's Transition to a Low Carbon Energy Future 2015–2030*. DCENR, Dublin. Available online: http://www.dccae.gov.ie/energy/sitecollectiondocuments/energy-initiatives/energy%20white%20paper%20-%20dec%202015.pdf (accessed 10 February 2017).

DCENR (Department of Communications, Energy and Natural Resources), 2015b. *Statement of Strategy 2015–2017*. DCENR, Dublin. Available online: https://www.dccae.gov.ie/en-ie/news-and-media/publications/Pages/Statement-of-Strategy-2015-2017.aspx (accessed 23 August 2018).

Druckman, A., Chitnis, M., Sorrell, S. and Jackson, T., 2011. Missing carbon reductions? Exploring rebound and backfire effects in UK households. *Energy Policy* 39: 3572–3581. https://doi.org/10.1016/j.enpol.2011.03.058

Environmental Pillar, 2019. Climate plan: environmental coalition welcomes plans to boost ailing funding. Press release, 4 July 2019. Available online: https://environmentalpillar.ie/climate-plan-environmental-coalition-welcomes-plans-to-boost-ailing-funding/ (accessed 10 July 2019).

EPA (Environmental Protection Agency), 2018. *Ireland's Greenhouse Gas Emissions Projections 2016–2035*. EPA, Johnstown Castle, Ireland. Available online: http://www.epa.ie/pubs/reports/air/airemissions/ghgprojections2016-2035/#d.en.64039 (accessed 9 August 2018).

EPA (Environmental Protection Agency), 2019. *How Do We Engage Communities in Climate Action? Practical Learnings from the Coal Face*. EPA, Johnstown Castle, Ireland. Available online: https://www.marei.ie/how-do-we-engage-communities-in-climate-action/ (accessed 9 June 2019).

Fazey, I., Wise, R.M., Lyon, C., Câmpeanu, C., Moug, P. and Davies, T.E., 2016. Past and future adaptation pathways. *Climate and Development* 8: 26–44. https://doi.org/10.1080/17565529.2014.989192

Gillingham, K., Rapson, D. and Wagner, G., 2016. The rebound effect and energy efficiency policy. *Review of Environmental Economics and Policy* 10: 68–88. https://doi.org/10.1093/reep/rev017

Government of Ireland, 2018a. *Project Ireland 2040: National Planning Framework*. Government of Ireland, Dublin. Available online: http://npf.ie/wp-content/uploads/Project-Ireland-2040-NPF.pdf (accessed 27 February 2018).

Government of Ireland, 2018b. *Renewable Electricity Support Scheme (RESS) – High Level Design*. Government of Ireland, Dublin. Available online: https://www.dccae.gov.ie/documents/RESS%20Design%20Paper.pdf (accessed 1 June 2020).

Government of Ireland, 2019. *Climate Action Plan 2019.* Government of Ireland, Dublin. Available online: https://www.dccae.gov.ie/en-ie/climate-action/topics/climate-action-plan/Pages/climate-action.aspx (accessed 19 June 2019).

gov.uk, 2018. Community interest companies. Available online: https://www.gov.uk/government/organisations/office-of-the-regulator-of-community-interest-companies (accessed 12 July 2018).

Guerreiro, S. and Botetzagias, I., 2018. Empowering communities – the role of intermediary organisations in community renewable energy projects in Indonesia. *Local Environment* 23: 158–177.

Hoffman, S.M. and High-Pippert, A., 2010. From private lives to collective action: recruitment and participation incentives for a community energy program. *Energy Policy* 38: 7567–7574. https://doi.org/10.1016/j.enpol.2009.06.054

IPCC (Intergovernmental Panel on Climate Change), 2001. *Climate Change 2001: Mitigation.* IPCC, Geneva. Available online: https://www.ipcc.ch/site/assets/uploads/2018/03/WGIII_TAR_full_report.pdf (accessed 5 November 2018).

IPCC (Intergovernmental Panel on Climate Change), 2018. *Global Warming of 1.5°C*. IPCC, Geneva. Available online: http://www.ipcc.ch/report/sr15/ (accessed 5 November 2018).

Joint Committee on Climate Action, 2019. *Report of the Joint Committee on Climate Action – Climate Change: A Cross-Party Consensus for Action.* Houses of the Oireachtas, Dublin. Available online: https://data.oireachtas.ie/ie/oireachtas/committee/dail/32/joint_committee_on_climate_action/reports/2019/2019-03-28_report-climate-change-a-cross-party-consensus-for-action_en.pdf (accessed 15 April 2019).

Jones, P., 2017. The futures of Canadian governance: foresight competencies for public administration in the digital era. *Canadian Public Administration* 60: 657–681. https://doi.org/10.1111/capa.12241 (accessed 3 June 2020).

Kirby, P. and O'Mahoney, T., 2018. *The Political Economy of the Low-carbon Transition: Pathways beyond Techno-optimism*. Palgrave Macmillan, Cham, Switzerland.

Lang, D.J., Wiek, A., Bergmann, M., Stauffacher, M., Martens, P., Moll, P., Swilling, M. and Thomas, C.J., 2012. Transdisciplinary research in sustainability science: practice, principles, and challenges. *Sustainability Science* 7: 25–43. https://doi.org/10.1007/s11625-011-0149-x

Markowitz, E.M. and Shariff, A.F., 2012. Climate change and moral judgement. *Nature Climate Change* 2: 243–247. https://doi.org/10.1038/NCLIMATE1378

Martiskainen, M., 2014. Developing community energy projects: experiences from Finland and the UK. PhD Thesis. University of Sussex, Brighton, UK. Available online: http://sro.sussex.ac.uk/51506/ (accessed 23 July 2018).

Merrion Street, 2018. Project Ireland 2040 – empowering communities for climate action. Available online: https://merrionstreet.ie/en/News-Room/News/Project_Ireland_2040_-_Empowering_Communities_for_Climate_Action.html (accessed 26 February 2019).

Miller, R., 2007. Futures literacy: a hybrid strategic scenario method. *Futures* 39: 341–362. https://doi.org/10.1016/j.futures.2006.12.001

Raven, R.P.J.M., Heiskanen, E., Lovio, R., Hodson, M. and Brohmann, B., 2008. The contribution of local experiments and negotiation processes to field-level learning in emerging (niche) technologies: meta-analysis of 27 new energy projects in Europe. *Bulletin of Science, Technology & Society* 28: 464–477. https://doi.org/10.1177/0270467608317523

Roe, G., 2013. Costing the Earth: a numbers game or a moral imperative? *Weather, Climate, and Society* 5: 378–380. https://doi.org/10.1175/WCAS-D-12-00047.1

SEAI (Sustainable Energy Authority of Ireland), 2018. The Sustainable Energy Community Network. Available online: https://www.seai.ie/sustainable-solutions/community-projects/community-network/ (accessed 22 August 2018).

Sharpe, B., 2013. *Three Horizons: The Patterning of Hope*. Triarchy Press, Charmouth, UK.

Tidy Towns, 2019. Special awards. Available online: http://www.tidytowns.ie/special-awards/ (accessed 22 December 2019).

van der Werff, E., Steg, L. and Keizer, K., 2013. It is a moral issue: the relationship between environmental self-identity, obligation-based intrinsic motivation and pro-environmental behaviour. *Global Environmental Change* 23: 1258–1265.

van Exel, J. and de Graaf, G., 2005. *Q Methodology: A Sneak Preview*. Available online: https://www.researchgate.net/profile/Gjalt_Graaf/publication/228574836_Q_Methodology_A_Sneak_Preview/links/02bfe50f946fc9978b000000/Q-Methodology-A-Sneak-Preview.pdf (accessed 25 May 2020).

Abbreviations

21

CCAC	Climate Change Advisory Council
CMS	Content management system
DSA	Decision support aid
EE	Energy efficiency
EPA	Environmental Protection Agency
EU	European Union
GHG	Greenhouse gas
IPCC	Intergovernmental Panel on Climate Change
RE	Renewable energy
SEAI	Sustainable Energy Authority of Ireland
SEC	Sustainable Energy Communities

AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an Ghníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaol a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ó éifeachtaí díobhálacha na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialú: *Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun díriú orthu siúd nach gcloíonn leis na córais sin.*

Eolas: *Soláthraímid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírithe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.*

Tacaíocht: *Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaol atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaol inbhuanaithe.*

Ár bhFreagrachtaí

Ceadúnú

Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaol:

- saoráidí dramhaíola *(m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola)*;
- gníomhaíochtaí tionsclaíocha ar scála mór *(m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta)*;
- an diantalmhaíocht *(m.sh. muca, éanlaith)*;
- úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe *(OGM)*;
- foinsí radaíochta ianúcháin *(m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíoca)*;
- áiseanna móra stórála peitril;
- scardadh dramhuisce;
- gníomhaíochtaí dumpála ar farraige.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdaráis áitiúla agus le gníomhaireachtaí eile chun dul i ngleic le coireanna comhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, trí dhíriú ar chiontóirí, agus trí mhaoirsiú a dhéanamh ar leasúchán.
- Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (DTLL), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a ídíonn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Uisce

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchriosacha agus cósta na hÉireann, agus screamhuiscí; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

Monatóireacht, Anailís agus Tuairisciú ar an gComhshaol

- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.
- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus na n-údarás áitiúil *(m.sh. tuairisciú tréimhsiúil ar staid Chomhshaol na hÉireann agus Tuarascálacha ar Tháscairí)*.

Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn

- Fardail agus réamh-mheastacháin na hÉireann maidir le gáis cheaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn.

Taighde agus Forbairt Comhshaoil

- Taighde comhshaoil a chistiú chun brúnna a shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

Measúnacht Straitéiseach Timpeallachta

- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaol in Éirinn *(m.sh. mórphleananna forbartha)*.

Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta, measúnacht a dhéanamh ar nochtadh mhuintir na hÉireann don radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíoch.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Faisnéis Inrochtana agus Oideachas

- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Faisnéis thráthúil ar an gcomhshaol ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaol *(m.sh. Timpeall an Tí, léarscáileanna radóin)*.
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

Múscailt Feasachta agus Athrú Iompraíochta

- Feasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil

Tá an ghníomhaíocht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inmharthanacht Comhshaoil
- An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- An Oifig um Fianaise is Measúnú
- Oifig um Chosaint Radaíochta agus Monatóireachta Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.

Sustainable Voluntary Communities: Supports for Sustainable Environmental, Social and Economic Development

Authors: Bernadette O'Regan, Richard Moles, Rosemary Byrne and Anne Bennett

epaResearch
Climate - Water - Sustainability
Identifying pressures • Informing policy • Developing solutions

Identifying Pressures

The transition to a carbon-neutral future is challenging, and how this will be achieved is not yet clear. To date, Ireland has failed to meet European Union (EU) targets for reducing carbon emissions. This points to a pressing need for Ireland to adopt additional approaches to decarbonisation. This research identified 36 Irish communities that were, or were actively planning to be, involved in local-scale action to enhance sustainability. These communities shared the attribute of being functional, that is, being organised in such a way as to be capable of taking action. Among others, the areas of recycling, transport, food growing and energy were targeted by the actions identified. The communities varied in location, size, ambitions and goals, legal status and ability to access project funding. Six were selected for this research. Some worked in collaboration with local authorities. One significant challenge faced by these communities was finding up-to-date and accessible information on relevant legal and financial barriers to expanding their size and activity. Another problem faced by all was that, as at 2019, no dedicated legislative support or national-scale government entity was available to encourage their activity. Thus, their potential role in contributing to meeting national targets was not being fulfilled.

Informing Policy

Based on findings of this research, new policy is needed to allow the formation and operation of many more such communities, so that the success and prominence reached in some EU states can be achieved. The findings identified factors that motivate champions and community members to dedicate their time and effort to action; these are significantly different from factors that motivate individual citizens to change behaviour. The success of the Tidy Towns competition suggests that many communities are capable of organising themselves to take concrete action. However, it is clear from this research that, without additional support, existing sustainability-focused communities may fail and nascent communities will be unable to develop. *Our Sustainable Future: A Framework for Sustainable Development for Ireland* highlights the need to develop strategies to enhance sustainability. This study indicates that funding community-based actions will be a cost-efficient and effective means of aiding the process of decarbonisation.

Developing Solutions

This research identified and explained the significance of a wide range of measures aimed at removing existing barriers to community-based action. A website providing information on legal and financial matters was created (sustainablecommunities. ie). It is freely available, uses language accessible to non-specialists and is currently (2020) hosted by the University of Limerick. Research outcomes strongly support the creation and continual funding of an organisation dedicated to the support and recognition of sustainability-focused communities that would bridge the current gap between central government policy and the needs of community activists. A further crucial step will be collating and disseminating information on actions that have proved successful and less successful. Current community-scale funding is available through SEI for energy-related actions, but the communities studies are engaged in a much wider range of activities, all of which have the effect of reducing greenhouse gas emissions. Membership of active and functional communities confers other benefits, such as greater social contact and the availability of meaningful leisure time activities. Social enterprise plays a role that could be expanded, creating jobs. This research points to the need for greater government support for the initial establishment of such enterprises.

www.epa.ie