

Research Note

A framework for sharing experiences of community woodland groups

Anna Lawrence and Bianca Ambrose-Oji

August 2013

Community woodland groups are growing, and there are now over 650 groups in England, Scotland and Wales. The rise is the result of both social pressure and changes in policy. Groups are keen to learn from each other's experiences, and policy stakeholders seek evidence of the effectiveness of past and current policy. While some experiences have been documented, many others have not, and evidence is available in a variety of forms that are difficult to compare. There is therefore a need for a consistent approach to describing the dimensions of a community woodland model that supports the documentation of case studies. This will provide the basis for a robust and comparable body of evidence, to enable comparisons between case studies, and between different points in time within a single case study. This rigorous approach to description will also help with evaluation and impact assessment of different approaches to community-delivered forestry. For some uses, such as national counts of community woodland groups, it will be important to carefully define a 'community woodland group'; for others it is more important to leave the definition open, so that the method can document case studies of interest to a wide range of users. With the publication of this method, we invite fellow researchers and practitioners to join us in producing a robust shared evidence base.



FCRN015

Introduction

Over the last 20 years, England, Scotland and Wales have seen some of the most rapid changes in social involvement in forestry anywhere in the world. Community action, political and social priorities, and commitment from the forestry profession and forest policy makers have all contributed to this.

This has had particular impact on community woodlands and groups (i.e. situations where a community group owns the woodland or shares in management decisions). From the first community purchase of a woodland in 1984, there are now over 650 community woodland groups in the UK. Over 300 are in England, 200 in Scotland and 150 in Wales (Pollard and Tidey, 2009; Wavehill Consulting, 2010; Stewart and Edwards, 2013). The most accurate studies, in Scotland, indicate a 67% increase in numbers of community woodland groups in the last five years (Edwards *et al.*, 2009; Stewart and Edwards, 2013).

Unlike in other parts of Europe, there is no long history of community woodland ownership or management in the UK (Lawrence et al., 2009). Common land is usually owned by a single landowner and commoners have rights of use (Short, 2008). Such commons are not generally the basis of community forest management. Instead, the rise of community woodlands is through change in social and political processes and priorities (Lawrence et al., 2009). In Scotland, rural activism in the 1980s and 1990s led to some celebrated community property buy-outs under the feudal property system in place before the Land Reform Act of 2003, including in some cases forests (Matheson, 2000). Substantial international funding in Wales led to the Cydcoed programme which supported the establishment of 163 community woodland groups. Approaches in England have been more diverse and began with the Community Forest programme to establish large peri-urban woodland zones in 12 regeneration areas. Further important developments include the rise of the Community Woodlands Association, in Scotland, and Llais y Goedwig in Wales, which support community groups through networking and training events.

The result is a variety of arrangements of ownership, membership and decision-making in relation to a woodland resource. For example, most groups in Wales (73%) do not own the land but have some form of agreement with the owner. Of these, the land is owned by local authorities (67%), private owners (15%), and the Welsh Assembly Government (10%) (Wavehill Consulting, 2010). The majority of groups surveyed in Scotland, Wales and England have some formal constitution to enable them to handle funds or own land (Wightman, Callander and Boyd, 2004; Pollard and Tidey, 2009). In Scotland a key driver for the form and function of groups derives from the Land Reform Act and related schemes (such as the National

Forest Land Scheme) which prescribes rules to protect both community and public interests and accountability. Some have developed woodland-based enterprises, ranging from social enterprise based on enjoyment of the woodland environment, to profitable woodfuel industry (Stewart, 2011).

We can call different types of arrangements 'models' as a way of generalising about experiences. For example, ownership of the woodland can be by a group of individuals owning shares, or through a management agreement with the local authority that owns the land. The aims and objectives and the preferred methods of realising them are also likely to be different for each group. Each of these combinations of legal and operating approaches to managing and using woodland is a specific 'model'.

Each of these approaches has a different set of impacts, including both intended and unintended effects of the community involvement process, and the woodland management itself. It is helpful for community groups, supporting organisations and policy professionals to be able to link these outcomes to the community woodland management model that was adopted and the realities of the process as it unfolded, and to understand which models are most appropriate in which contexts.

While there is plenty of experience, this experience is not often documented in ways that make it easy for others to learn, to compare different models and to evaluate the effects. This Research Note draws on research and experience-sharing over the last five years, and proposes a way forward that describes examples consistently and allows comparisons and lesson-learning.

Learning processes in community woodlands

Community learning

Community groups involved in woodland management and forestry are keen to network and learn from each other as a way to achieve their aspirations. Community woodland groups actively seek the means to share experiences, and the use of case studies that record and comment on individual community group histories and journeys of change and achievement are one important way of doing this. Both the Scottish and Welsh associations (the Community Woodlands Association and Llais y Goedwig respectively) have produced case studies as a source of information for group learning. Case studies and information about other community woodland groups that clearly discuss the different elements of the models being applied and the issues connected with them provide a significant and easily shared learning resource.

Policy learning

Community woodlands are seen as a way to deliver a wide spectrum of social, economic and environmental benefits, including outcomes as varied as improved community cohesion, improved cardiovascular or mental health, and increased woodland biodiversity. Consequently, they are encouraged by the forest strategies and policies of all three countries (Forestry Commission Scotland, 2006; Welsh Assembly Government 2009; Defra, 2013). Over the last 15 years, policy approaches have shifted towards a greater reliance on evidence (Mackenzie, Blamey and Hanlon, 2006; Sanderson, 2009) so there is an increasing demand for evaluation of community woodlands. For example, recent policy questions have included:

- How many community woodland groups are there in Wales, what do they do, and how much woodland do they manage? (Wavehill Consulting, 2010).
- What impacts have community woodland groups produced as a consequence of the Cydcoed programme, and how far did this achieve programme objectives? (Owen et al., 2008).
- How many community woodland groups are there in Scotland and how has this changed over the last 5 and 10 years? (see Box 1).
- How can we support the establishment of a community woodland association in England? (Ambrose-Oji, 2013).

Some of these questions require careful definition of community woodland groups in order to ensure a robust indicator. In other situations, it is important to keep the definition open, to allow stakeholders to decide what is a community woodland and include what is relevant to them.

International learning

As Britain's experience with community forestry increases, there is also growing interest in sharing that experience internationally. The increasing role of local people in both forest ownership and forest decision-making has been well documented as a movement that has taken hold first in developing countries and more recently in industrialised countries (Charnley and Poe, 2007; Lawrence, 2007). Participation and community are sometimes, but not always, connected with power shifts and local benefit; sometimes, but not always, connected with decisions about forest management; and sometimes, but not always, connected with ownership. Globally, community forestry can be associated with forest land in a wide range of ownership contexts, including private forest lands, common property, indigenous peoples' lands or public lands.

There is a global trend to decentralise or devolve environmental governance, including forest governance (Nygren, 2004; Parkins, 2006). This takes different forms, including advisory committees whereby citizens can contribute to forest policy making; committees sponsored by the private sector, where forest companies manage forest on public land; and certification schemes.

Recent conferences and projects that incorporate British experience include the International Association for the Study of the Commons annual international conference in 2009; 'New Challenges for Community Forestry: Sharing Scientific Knowledge in a South – North Perspective' in Göttingen, Germany, 2013; and a COST Action entitled 'Forest Land Ownership Changes in Europe: Significance for Management

Box 1 Measuring the number of community woodland groups in Scotland (Stewart and Edwards, 2013)

Progress against the Scottish Forestry Strategy (SFS) is measured using a suite of indicators. The SFS vision is made up of seven key themes, one of which is community development (Forestry Commission Scotland, 2006). The purpose of this document is to report on progress against one of the indicators used to measure this theme: 'Number of community groups involved in owning or managing woodland'.

This indicator is measured every five years. It was first measured in 2002 by Reforesting Scotland when a total of 51 groups were identified; in 2007, the measurement was conducted by Forest Research, and 138 groups were recorded (Edwards *et al.*, 2009). A repeat study in 2012 found a total of 204 community groups involved in owning or managing woodland. Corrections to earlier figures imply a 67% increase in number of community woodlands, in five years. Of these 204 groups, 72 groups own their woodlands, 19 lease their woodlands and 113 manage them in partnership with the owner.

In order to measure the number of community woodland groups, it is necessary to be clear what counts. The great diversity of groups that have emerged in recent years triggered intense discussions at the time of re-measurement. While it was relatively straightforward to agree that to be included in the count such groups must have a role in decision-making, there were other more difficult judgements to make. For example, some community renewable projects included woodland, although they did not see themselves as primarily a woodland management project.

and Policy'. The diversity of British experiences, the dynamics of evolving groups and the learning processes at community and policy level are all factors of interest internationally. Conversely, British developments have been enriched by awareness of governance models overseas (Lawrence and Molteno, 2012).

How this approach was developed

In order to describe models it is helpful to analyse the dimensions (or variables) associated with them. There are numerous starting points for doing this. The approach described here is informed by the academic work of leading international researchers, and based on an iterative approach, involving a range of partners, over the last five years of documenting experience in the UK.

The theoretical basis for the framework draws on the substantial literature that analyses what are collectively known as 'common property regimes'. This approach summarises the 'design principles' widely found to support successful common property management (Ostrom, 2012). This approach is most usefully applied at the scale of an individual case (forest or community). Others have highlighted the role of power and knowledge dynamics (Nightingale, 2005), the evolution of models through several 'generations' (Lawrence, 2007; Danks, 2009), and the need to pay attention to context and history as well as internal structures (Agrawal, 2003).

All of this is challenging to summarise in one standardised framework. It needs a pragmatic balance between structure (in the form of headings or reminders about necessary content) and narrative text, which describes the processes, dynamics and stakeholder interactions that have led to the current situation. This always requires a balance of attention to objective (hard facts) and subjective (personal experience) aspects. While subjectivity by definition depends on the point of view of the person writing or speaking, it is also the basis on which we engage with the world, and therefore 'reality' for each of us. The challenge is to balance the subjective experiences of those involved, so that the description is not biased.

The framework proposed in the next section has been developed over the course of research projects and collaborations since 2009. In addition to these attempts by Forest Research to document experience more consistently, the framework draws on the work of colleagues from Llais y Goedwig, the Community Woodlands Association, Coed Lleol, the Small Woods Association and Wavehill Consulting.

In 2009, for the first time, policy and programme leaders spoke at a joint seminar, hosted by the International

Association for the Study of the Commons at their annual international conference, in Cheltenham. This provided an opportunity to compare and contrast community woodland development in Scotland, Wales and England, and resulted in a paper entitled 'What does community forestry mean in a devolved Great Britain' (Lawrence *et al.*, 2009).

This seminar highlighted the wealth of experience, and poverty of evidence. As a result, Forest Research commissioned three 'baseline' studies to document current knowledge about community woodlands in each of the three countries of Great Britain (Calvert, 2009; Pollard and Tidey, 2009; Wilmot and Harris, 2009). The Wales study described case studies, and in collaboration with Forest Research developed a standard set of descriptors (tenure, wood size, legal structure, group structure and function, income and funding) (Wilmot and Harris, 2009). Separately, in 2009 Forestry Commission Wales commissioned a survey of community woodlands in Wales, and a set of case studies (Wavehill Consulting, 2010). These case studies were structured around group background, aims and objectives, income and funding, advice and support, and sustainability.

Meanwhile the growing networks of community woodland groups in Scotland and Wales were documenting their own experiences. From 2000 the Caledonia Centre for Social Development has documented case studies of social land ownership in the Highlands and Islands of Scotland, several of which include community woodland (Callander, 2000; Matheson, 2000; Tylden-Wright, 2000). These gave detailed attention to the historical process, the rights and ownership arrangements, policy opportunities and constraints, and the woodland resource itself. In 2011 and ongoing, members of Llais y Goedwig (the Welsh association of community woodland groups) commissioned a set of case studies with strong involvement of the community groups.

These lively documents focus very much on process, paying attention to woodland history, ownership, group formation and constitution, community engagement, information gathering (e.g. surveys), management planning, networking, advice and assistance, rules and regulations (e.g. grant applications, felling licences), and income (Llais y Goedwig, 2011).

In 2011 the UK Government commissioned a review of 'evidence on the range of existing community engagement, governance and ownership arrangements for managing forests in England, and more widely' (Lawrence and Molteno, 2012). The authors found that it was difficult to compare and learn from experiences overseas, because different examples focused on different dimensions. For example, some focused on the rights and institutional arrangements, while others focused on engagement processes.

We therefore developed a framework, drawing on the experiences listed above, to help us extract the information from published examples. This framework forms the basis of the one presented here. The dimensions were sorted into four broad categories:

- Institutional context: the external rules-of-the-game: for example, ownership structures, laws and regulations that affect the options available to a community group.
- Internal organisation: the internal group structures, legal forms and decision-making procedures that affect the scope for members to be represented and to participate.
- External linkages: how this group is linked with others through partnerships and associations.
- Resources: the ecological, financial and knowledge resources available to the group.

In addition we found it necessary to include an introduction highlighting the key points, describing the background, and assessing the transferability and impact of each case.

What was significant about this approach was that we separated out the 'description' of each case into a 'profile' of the community woodland model under consideration. Commentary and interpretation about the key lessons and impacts were attached to the profile, but did not form part of it.

This profile was developed as a way of making sense of a multitude of academic and other literature. In other words, we were applying it retrospectively. The next step was to use it to gather new evidence in a consistent way. Two organisations agreed to test the profile by writing new case studies – six in Scotland, four in England (Community Woodlands Association, 2012; Hughes 2012). Each organisation reflected on their experiences using the framework as a generic research tool. The key points were summarised in their reports.

They pointed out that the framework is a useful guide, but researchers still needed to develop appropriate questions to elicit the required evidence and information for each dimension. In addition, they emphasised the need to maintain discipline in collecting the same information in all case studies, even where this seems repetitive because the sample of community woodland groups chosen produces the same detail under each dimension. It is the 'read-across' (the generic synthesis) that is a key value of the framework when looking at evidence from woodland groups across a region or country.

Taking note of the changes suggested by partners, the framework was tested again by Forest Research later in 2012. This period of testing emphasised that the dimension of time is a particular challenge. Community forestry is always

changing, so the researcher needs tools that acknowledge the period of data capture, and provide a consistent means to record and understand changes over time.

The framework for profiling community woodland case studies

This Research Note presents a standard version of the framework that we invite researchers and practitioners to apply. The framework is outlined in Table 1. It has been developed to include generically stable elements relating to the woodland and the community group context. The fully evidenced framework becomes the community woodland group profile.

The objective of the framework is to provide a systematic approach to data and evidence collection that enables comparison between community woodland case studies across different geographical areas and between different points in time.

Five key elements of the framework record the evolution and the current position of the community woodland and community woodland group. They are:

- 1. History
- 2. Institutional context
- 3. Group organisation
- 4. External links
- 5. Resources

Associated with each of these elements are the important factors, the model 'dimensions', which provide the evidence about community woodland governance and impacts. There are two methods of ensuring rigour and read-across in the data collected under each of the dimensions.

The first is the use of a set of guide questions which direct the researcher towards the key issues of interest. The use of guide questions allows the researcher to decide upon the appropriate level of detail and coding system they wish to apply according to their own research objectives.

The second method we advocate is the use of standard schemes of description and categorisation, for those dimensions which have proved to be essential to understanding community forestry models, but prove particularly challenging in terms of generalising results. We have identified five dimensions where this is important (i.e. woodland tenure, group structure, woodland management objectives, woodland characteristics and funding). For these five dimensions, we provide both guide questions and categories of description.

 Table 1 A framework for profiling community woodlands.

Key element	Dimensions	Guide questions	Categories
History	Motivations	How and why did the group start? What were the key motivations? Who led the process?	
	Challenges and barriers	What were the main challenges the group had to overcome to establish themselves? How did they overcome these barriers? What were the key lessons learnt overcoming these barriers? Were there any challenges which were not overcome or continue to be issues?020809	
	Establishment support	What were the key processes which enabled the group to establish? What were the key sources of financial or other support which enabled the group to establish?	
Institutional context	Woodland tenure	Who owns the woodland? How is this ownership established? If the community woodland group does not own the woodland how is their tenure established? Is this formal or informal?	Categories for woodland tenure: Public or private? Owned; leased; management agreement; use agreement; or mixed?
	Access and use rights	Who has access rights? How are these rights maintained? Who has rights to using the woodland or other (e.g. mineral, water) resources? How are these rights maintained?	
	Statutory regulations and responsibilities governing woodland	What are the legal constraints and obligations placed on the owners of the woodland? What are the legal constraints and obligations placed on the community groups as managers or users of the woodland?	
Group organisation	Membership	Who is eligible to join the group, and who does actually join? What is 'the community'?	
	Representation and decision making	What is the group's perceived representation – who does the group feel it represents and how does it view the limits of its legitimacy? How are decisions made and what methods are open to members to take part in decision making? How is the wider community involved in decision making?	
	Communication and learning	What methods are used for communicating regularly within the group and beyond? What happens less regularly? How do these contribute to learning and evolution of the group? Does anything else contribute?	
	Group structure and legal form	How is the group constituted and how does it operate? How are the finances arranged? What is the relationship, if any, between any different parts of the group? What if any responsibilities are there which come from the form/ model/constitution that the group has chosen that have any effect on the groups working, either in the way they work as a group or in their decision making about the woodland?	Categories for group structure: Informal or formal? Company, charity, co-operative unincorporated or mixed?
	Statutory regulations and responsibilities governing group	What if any responsibilities are there which come from the form/model/constitution that the group has chosen that have any effect on the group's working, either in the way they work as a group or in their decision making about the woodland?	
	Group objectives	What are the objectives of the group? How does this relate to their approach to working?	

Key element	Dimensions	Guide questions	Categories
	Woodland management objectives and procedures	What are the primary objectives of managing the wood? Is there a formal or informal management plan? Who/how was it prepared? Who is aware of it/uses it? How is it developed? Any formal accreditation, e.g. FCS? Who is employed or who does the implementation of the management plan? How is this funded?	Categories for management plan: Productive woodland and employment; Public access and recreation; Conservation and heritage; Education; Quality of life.
	Business/ operating model	What are the overall objectives of the group in terms of strategic management and future development so that the group can realise its aims? What is the model in terms of the balance of income and revenue sources? What are the main products and services produced or activities undertaken? Are these 'free', a source of grant income, or priced and sold? What markets and marketing is used? What are the main barriers to markets? Is there long-term planning and consideration of sustainability?	Categories for the business/ operating model: Approach/philosophy; Inputs and outputs; Business/enterprise tools used.
	Benefit distribution rules	What are the tangible benefits? Who gets what and how is it decided?	
External links	Partnerships	What formal or informal partnerships and agreements are there with other stakeholders/organisations. What are the benefits of these? i.e. how do these help the group achieve what objectives?	
	Associations	What if any associations or similar organisations is the group a member of? Is it a member of less formal networks?	
Resources	Woodland characteristics	Describe the forest/woodland. Size Location Access Soil type and site potential Species mix Age of stands and major operations (date of last felling, planting, thinning) General mix of management compartments Features: Deadwood, ponds, glades, open space NFI classification (woodland type) Outline management history General condition of woodland Biodiversity information – including any notable species	Categories for forest/woodland: Woodland type (e.g. conifer, broadleaf or mixed; coppice; young trees). Area. Slope and soil; Access; Species; Wildlife; Major operations.
	Funding	How was the woodland purchased? Funds for asset transfer/purchase/initial investment. What on going grants and income are supporting the woodland management? What other sources of income continue to support group operation and development?	Categories for funding: Capital/funds for purchase; Grants; Revenue; Loans; Membership fees; Fund raising/donations; In-kind funding.
	Skills and knowledge	What sources of knowledge/information/advice are drawn on? Is it 'expertise'? Is it external or internal to the group? How is knowledge developed and how is it stored/drawn on? Is there any monitoring or evaluation or group learning that takes place and adds to the skills and capacity of the group?	

Understanding the framework

This section of the Research Note describes and explains each part of the framework, each of the elements, the key dimensions and any associated categories of description we recommend applying, in greater detail.

History

This element captures the narrative of change associated with the community woodland and the way in which the community woodland group was established. An examination of the reasons how and why a group or community woodland came about is an important introduction to their current form (model), as well as providing clues about why they have developed in a particular direction. The dimensions of community woodland history are: 'Motivations', 'Challenges and barriers', and 'Establishment support'.

Motivations

Included here are the key events or main drivers which initiated community woodland group formation and securing the community woodland. Documenting the significant reasons, how and why the group started and what the reasons for initial action were, are all important considerations.

Challenges and barriers

The evolution of community woodland groups involves addressing problems and barriers and requires community problem solving by group members. An appreciation of these issues and the main milestones (e.g. significant points of change) sets the background as to how the group capitalised on opportunities and what contextual conditions had a major influence.

Establishment support

The critical sources of support which enabled group formation or woodland management should be documented. In many of the examples we mentioned in the Introduction, financial support from particular programmes or projects has been crucial to establishment. In other cases it has been advice and knowledge. This kind of information is important to help discern the key factors enabling community access to the forestry sector and the likely degree of replicability associated with different models.

Institutional context

This element of the framework deals with documenting the rights, rules and regulations that make up the social and institutional context within which community woodland groups operate. These will vary according to country and region. The context relates to the set of given conditions: factors that cannot usually be changed by community groups, but which can have

a significant impact on the opportunities and choices open to them. This will impact on the opportunities for community forestry, and the scope of objectives for woodland management and group development. For example, in Scotland, the National Forest Land Scheme (NFLS) gives rural communities the opportunity to buy national (i.e. public) forest land under certain conditions; in England and Wales the Quirk Review in 2007 and the Localism Bill 2012 propose a community Right to Bid and Right to Challenge, enabling community access to public resources. Other spatial planning rules and development plans may protect feature trees, or require statutory agreement of new woodland features such as ponds.

If information about a number of case studies is being collected, data detailing the institutional context may appear to be repetitive. We emphasise again the value of this evidence when looking to compare cases across countries or regions, or for understanding more about how and why groups and enterprises change over time. The dimensions of the institutional context are set out in the following sub-sections.

Woodland tenure

Understanding woodland tenure is critical, but often complicated. Not all community woodland groups actually own woodland, and much community forestry is carried out on land owned by other organisations and institutions. In Wales, for example, 73% of community woodland groups do not own the land; 67% of these groups have a management or use agreement with local authority owners (Wavehill Consulting, 2010). We use the word 'tenure' to indicate the broadest possible pattern of ownership, leasing and management agreements. There may even be several different tenure arrangements in place over a larger woodland block. It is important to record the combination of ownership and tenure agreements which apply, and drill down into the detail of this.

Because there are so many different ways of describing tenure, we advocate the following system of categorisation to enable generalisation across cases. This relies on a matrix that captures whether woodland ownership is:

- held by a public (often local authority), or private body (community groups will normally be private bodies as will the larger NGOs and charities owning woodland);
- freehold or leasehold.

If community woodland tenure is not by ownership a record should be made of the category of agreement that exists with the owner, whether this is:

- formal or informal:
- and if a sub-let lease, whether a worked management

agreement (i.e. agreed management plan with formally agreed roles and responsibilities) or use agreement (defined terms of use for events such as volunteer activities and running forest schools) exists.

Categories of woodland tenure are presented in Table 2. Use of this to combine categories would lead to a description of woodland tenure as, for example, 'Private – community woodland group-owned (freehold)', or 'Public – community woodland tenure by formal management agreement'.

Access and use rights

Existing access and use rights should be described. Public access to woodland is generally connected with ownership and national law. However, community woodlands often include changes to public access (e.g. where grant funding was contingent on improving and increasing access, or where improving access was a significant motivation for a community group). Again, this is linked to the wider context: for example in Scotland, the Land Reform Act ensures the right of responsible access whether ownership is private, community or public. There may also be differences between formal and perceived access rights, and this is a useful aspect to note in the profile. Access to and use of woodland products and other natural resources may also be governed by the terms of tenure, particularly on leasehold properties.

Statutory and other regulations and responsibilities governing the woodland

In common with other woodlands, community woodlands will be managed in accordance with national legislation and standards.

For example, legislation such as the Forestry Act regulates felling practice; the UK Forestry Standard and associated guidelines are the basis for forestry grant funding and for some leasing schemes; and the UK Woodland Assurance Standard (UKWAS) provides voluntary guidelines for those seeking independent certification. Where a public body owns the land, standards are applied directly, rather than through regulation and incentive. There may also be particular conditions applied to specific woodlands (e.g. conservation easements), or, in England, terms applied to community woodlands as a consequence of development compensation arrangements such as a Section 106 Agreement or Community Infrastructure Levy (CIL). All these issues impact on community woodland models.

Group organisation

There is a significant amount of evidence about community groups and community governance of woodland. This shows that their form and function influence community participation as well as the type and success of forest management undertaken (Varughese and Ostrom, 2001; McDermott, 2009). There are many features to consider in this element including internal organisation, representation and learning, operating models and interactions with the woodland resource. The dimensions of group organisation are set out in the following sub-sections.

Group membership

Understanding more about the demographic and social features of group membership (who is able to join, the rules of membership) can uncover significant aspects of group capacity and success. Membership rules may be a condition of some

Table 2 Categories of woodland tenure

Public woodland (e.g. Forestry Commission, local authority, health trust)				
Leased	Formal leasehold agreement			
Management agreement	Formal or informal			
Use agreement	Formal or informal			
Mixed model	A combination of the tenure arrangements listed above for public woodland; these should each be listed			
Private woodland (e.g. owned by community woodland group, private owner or charity such as the National Trust)				
Owned by the group	Freehold or leasehold			
Leased	A sub-lease arrangement or other rental type agreement other than primary leasehold ownership			
Management agreement	Formal or informal			
Use agreement	Formal or informal			
Mixed model	A combination of the tenure arrangements listed above for private woodland; these should each be listed.			

community woodland schemes – for example purchases under the NFLS require membership to be open to anyone living within defined areas, such as local postcodes or community council areas.

Representation and decision making

Poor representation can focus power in few hands, but representing the diversity of the community may also prolong consensus building. This can also be affected by how groups themselves perceive 'community', and how far group members and the wider community are able to take part in decision-making processes.

Communication and learning

Community governance is dynamic and evolves. Groups learn about themselves and about their woodland. Skills and knowledge are built. Communication within groups, and between groups and the wider community and other stakeholders, is important in developing aims and maintaining internal and external support. Monitoring, reflection and learning is also important for group adaptation and evaluation of their activities and impacts. The methods used to reflect, learn and communicate, and who is involved, are therefore key features of interest.

Group structure and legal form

Few groups surveyed in Scotland, Wales and England are unincorporated associations. The majority have a formal constitution and legal structure to enable them to handle funds (Pollard and Tidey, 2009) and own land (Wightman, Callander and Boyd, 2004). Groups may exist in more than one legal form to allow them to conduct different kinds of activities, and access different kinds of resources. It is common for groups to change legal form as they develop over time. These issues all complicate description and categorisation of community groups, but are essential to understanding group functioning and access to resources and what types of actions they undertake in woodlands.

To enable generic comparisons across cases, we advocate starting by categorising legal forms as follows:

- Charities (including Trusts, and Friends of Groups).
- Companies (e.g. Company Limited by Guarantee (CLG), Community Interest Company (CIC)).
- Co-operatives (e.g. Industrial Provident Society (IPS), Community Benefit Society (CBS)).
- Unincorporated (i.e. informal with no legal structure, the detail of this should be recorded).
- Mixed (i.e. where a group exists in more than one form, the detail of this should be recorded).

Statutory and other regulations and responsibilities governing the group

It will then be important to record the detail of what the chosen structure allows, in terms of the core principles and function of that structure and how it is applied by the group. This may include the group's interpretation of the legally prescribed possibilities (e.g. non-profit distribution, and the ability to raise equity finance). The rules and regulations linked with charity law, company law and the Co-Operatives Act 2012 will provide the basis of the opportunities open to a group, but each case will vary in how these constraints and guidance are applied and how multiple structures are managed as a whole. Health and safety law will also impact on the working of a group as part of the contextual conditions.

Group objectives

Sometimes the group will have a written record of their objectives; sometimes there are so many that it is worth discerning which are the most important, in the view of group members. Objectives can also evolve. Understanding group objectives provides further insights into how and why they have made decisions about woodland management or about group structure and business models. Knowing more about group objectives can also provide perspectives on group dynamics, benefit distribution and governance processes.

Woodland management objectives and procedures

The management plan is a key focus of involvement for community woodland groups, with the planning process itself building community consensus as well as skills and knowledge about woodland management. A management plan may be inherited with the acquisition of a new woodland, it may be required as part of the woodland purchase or for securing a grant, or it may form the route to agreement with a woodland owner about what a community group will be doing on the land. Some woodlands may not have a plan, but the community group may instead have broad management objectives listed in their Articles of Association or other legal documentation. Capturing data about the management objectives that groups have for the woodland and compartments within it provides insights into group governance and learning, and a means to measure achievements.

Management plans may have multiple objectives. However, recording all the detail of all management plans and all the objectives does not help with generalising research results. Applying a system of categorisation that captures the primary aim of woodland management helps overcome this issue. It provides information that can be compared between groups and helps explain why they chose particular activities and governance mechanisms. Both the primary aim and detail of the management plan will provide measures against which to

assess group achievements. We advocate categorising primary objectives as follows:

- Productive woodland and employment (i.e. focused on producing woodland products such as timber and firewood, and generating woodland-based employment).
- Public access and recreation (increasing public use and enjoyment of the woodland for a range of benefits).
- Conservation and heritage (maintaining and increasing biodiversity and other conservation values, as well as traditional systems of woodland management and heritage features).
- Education (using the woodland mainly as a learning resource, e.g. a location for forest schools, providing courses and training opportunities, involving NEETs (young people not in education, employment or training), or running volunteer programmes).
- Quality of life (forest regeneration and greenspace improvement in neglected, brownfield and post-industrial sites).

Who does the practical woodland management is of interest to understanding more of the detail about groups' governance, capacity building, operating models, and the extent to which management objectives and ambitions are achieved or realised.

Business/operating model

The variety of legal forms, woodland management objectives and group constitutions and aims mean that the business and operating models followed by groups are very diverse. Important here is an understanding of how groups visualise their development and sustainability (What are their visions for the future, and how do they plan to realise these?), their financial organisation, and their use of members, volunteers and contractors (How do they value member and volunteer skills and time? Why are contractors employed and how are they remunerated?), as well as the group's philosophy and 'business ethics'.

For example, groups with not-for-profit motivations and legal structures, and with a strong charitable ethos and non-commercial operating style, will make very different choices and decisions compared with groups that are not-for-profit motivated but have an enterprising ethos and a more business-oriented approach to woodland development. A useful way to approach the description of the business/operating model is to distinguish between three main categories of influence:

- Approach and philosophy (e.g. enterprising not-for-profit, social enterprise, conservation volunteerism).
- Inputs and outputs (i.e. what are the main sets of resources the group draw on and what products or other benefits are

- produced as a consequence of their activities? The inputs may be covered under dimensions included in the 'Resources' element below, but there may be other inputs such as volunteer time that should be recorded. Being clear about what outputs are produced allows for better explanation of what benefits are subject to distribution rules e.g. firewood harvested, income generated, and which benefits are less tangible or not explicitly recognised or valued, (e.g. increased numbers of visitors to a wood).
- Business/enterprise tools used (i.e. the specific and notable mechanisms used to implement the philosophy, achieve objectives and facilitate production of the outputs. Included here would be mechanisms such as community share issues, partnership working and asset transfer).

Benefit distribution rules

Who gets what from a community woodland project, is highlighted as a key issue in the international literature about community forestry. In some cases the legal form of the group may place restrictions on how benefits are distributed or reinvested in the group or enterprise. In other circumstances inkind benefits may be crucial to maintaining group membership and community goodwill, and may, as in the case of many emerging fuelwood producer co-operatives, be the main reason for the community woodland group existing.

External links

This element relates to the connections that a community woodland group has with other communities, organisations and agencies. This is important because social networks of this sort have been shown to increase community resilience and sustainability (Gibson, McKean and Ostrom, 2000). The dimensions of external links are: 'Partnerships and agreements' and 'Associations'.

Partnerships and agreements

Formal partnerships and agreements may provide routes for community management of woodland. Some partnerships may be specific to a project, while others are more general supporting arrangements, or looser expressions of goodwill and mutual interest. Programmes such as the Community Forests in England represent partnerships able to attract funding and provide community support and advice.

Associations

Membership of formal groups and associations such as the Community Woodlands Association in Scotland or Llais y Goedwig in Wales, provide support through social learning and training, news and advice and providing a forum for group discussion.

Resources

This section includes the natural, financial and knowledge resources to which community woodland groups have access. The dimensions of resources are: 'Woodland characteristics', 'Funding' and 'Skills and knowledge'.

Woodland characteristics

A clear description of the woodland provides information about the opportunities for management, enterprise development and conservation. Descriptors include the size, type of woodland (see the National Forest Inventory (2012) for categories applied in Great Britain), the main tree species present, a timeline of key operations such as felling or restocking, biodiversity and species lists, and woodland features such as ponds, slope, soil, and access and infrastructure. Descriptions of the woodland (particularly woodland condition and quality) can also form baseline data from which to track the impact of community operations.

We advocate collecting information about the following categories:

- Type of woodland (use National Forest Inventory survey categorisation, i.e. conifer; broadleaf; mixed predominantly broadleaf; mixed predominantly conifer; coppice; coppice with standards; young trees; bare ground after felling; restocked ground).
- Area (size of woodland in hectares).
- Tree species (main species mix listing the tree species).
- Slope and soil (use European Soil Bureau soil types and slope descriptions available on the NERC interactive mapping portal: http://mapapps2.bgs.ac.uk/soilportal/wmsviewer.html).
- Access (good or poor, by roads or forest tracks).
- Location (urban, rural near village, remote rural).
- Wildlife present (key biodiversity species and indicator species).
- A history of major woodland operations (e.g. thinning treatments and dates, felling areas and dates, restocking).
- Environmental and conservation designations (e.g. SSSI, SAC).

Funding

Income supporting the community group and the woodland will come from different sources, including capital raised for woodland purchase, grant capture, revenue generation from woodland activities and sales, and fund raising. The relative balance of different funding sources is important to understanding issues such as sustainability of community woodlands. It can be useful to describe any shift in mix of funding through the lifetime of the community woodland, for example from grant dependence to income generation.

We advocate collecting information about the following categories on an annual basis:

- Capital or funding for woodland purchase is probably a
 one-time issue unless the group continues to purchase
 additional woodlands as they develop. It is important to
 record the total capital sum and how it was secured. This may
 have been in the form of a capital grant or in the form of a
 share issue to the local community. Recording the initial
 capital source is important to understanding different models
 of community forestry and assessing replicability of the
 approach.
- Grants would include all financial support for the group or the woodland that comes in the form of a non-repayable grant.
- Revenue is the income that the group generates from the woodland as a consequence of selling goods and services to paying customers.
- Loans may be part of a business development package and may be provided privately by banks or as part of government or NGO sponsored initiatives.
- Membership fees are often a small but significant element of a group's financial stability.
- Fund raising / donations can form a significant part of some groups' overall income portfolio.
- In-kind contributions may be linked with inputs described under the 'business/operating model' (e.g. volunteer time), but are given a financial value and recognised as important forms of income or matched funding.

Skills and knowledge

The level of skills and knowledge available will affect the type of management undertaken or the degree of ambition in the objectives held for groups and their woodland-based activities. Knowledge and skills may be technical or practical; may relate to woodland management, or to issues such as group development, grant capture and business management; may be drawn from external sources, which might lead to contracted management of community woodland; or may develop as groups engage with forestry activities themselves.

Case studies

The following are profiles of three case studies produced using the framework. They are relatively short examples. Case studies can be as detailed as the authors wish. Further examples can be found in the reports by the Silvanus Trust (Hughes, 2012) and Community Woodlands Association (2012), at www.forestry. gov.uk/fr/peopleandtrees.

Case study 1 - North West Mull Community Woodland Company Ltd, Argyll and Bute, Scotland

1. History

The North West Mull Community Woodland Group was formed in February 2005 following a public meeting in Dervaig Village Hall called to discuss the feasibility of making a community bid for the purchase of the West Ardhu and Langamull woodlands. Forestry Commission Scotland had declared these woods surplus to requirements, opening the opportunity for community purchase through the National Forest Land Scheme. Critical to success was the £343 000 used to purchase the woodland in 2006. This came from the assistance of the Scottish Land Fund, Highlands and Islands Enterprise, The Robertson Trust, Hugh Fraser Foundation, significant local fundraising and an interest-free loan.

2. Institutional context

The woodland is owned freehold by the community company (i.e. private ownership). Responsible public access (by foot, bicycle, horse or canoe) is guaranteed by the Scottish Land Reform Act. Woodland management responsibilities exist under the UK Forest Standard and UKWAS accreditation.

3. Group organisation

The main purpose of the community woodland is sustainable forest management for community benefit. The primary aim is productive woodland and employment. A long-term forest plan (LTFP), finalised in 2009, focuses on restructuring the evenaged conifer monoculture to increase species and age class diversity. The plan is implemented by the North West Mull Community Woodland Company (NWMCWC), a company limited by guarantee with charitable status. Full voting membership in elections and decision making is restricted to adults who are on the electoral role within the company's catchment area. NWMCWC Ltd has established a subsidiary trading company: North West Mull Community Woodland Trading Company Limited. This trading company is limited by shares, with the shares wholly owned by NWMCWC, and exists to enable activities and operations outwith the holding company's charitable purposes. NWMCWC is the first community landowner to create new woodland crofts, allocating nine in Langamull wood. The group conforms to company law, charity law and health and safety legislation.

4. External links

NWMCWC is a member of the Community Woodlands Association, Development Trusts Association Scotland, Community Energy Scotland, Community Land Scotland and Confor.

5. Resources

Langamull is a 251 ha mixed conifer woodland including 170 ha of Sitka spruce, 17 ha of Japanese larch, 20 ha of Lodgepole pine and 11 ha of mixed broadleaves, with the remaining 32 ha being open ground. West Ardhu is a larger mixed conifer woodland of 440 ha, but with a much greater proportion of open land: Sitka spruce is dominant over 117 ha, with 11 ha of Japanese larch and 34 ha lodgepole pine, plus significant areas (c. 50 ha) of native woodland scattered across the site. These woods present challenges for conventional forest management, both in terms of the distance from markets and the lack of extraction infrastructure. Funding continues to come through from grant capture, as well as an increasing proportion of income from trading woodland products and timber. In terms of skills and knowledge, MWMCWC employs a Development Manager to deliver funding and planning applications and to oversee forestry and other operational contract works. The Board and the active membership is building up a body of knowledge and experience, and has received valuable input, advice and assistance on forestry and other matters from consultants, Forestry Commission Scotland, Highlands and Islands Enterprise Community Land Unit and the Community Woodlands Association, and from peer support and knowledge exchange within the community woodland movement.

Sources: Lawrence (2009) and Community Woodlands Association (2012)

Case study 2 - Friends of Oakfrith Wood, Wiltshire, England

1. History

Friends of Oakfrith Wood (FoW) formed first as an informal group and after taking legal advice decided to move to a Trust model, a device that enabled Wiltshire Council to provide them with a management agreement in 1994. The main motivations for forming the community group were to address their concerns about the poor state of the woodland, and improve the management for wildlife conservation, and public access for passive recreation. A woodland management plan was developed with Wiltshire Wildlife Trust (WWT) in 1995. This was used to attract Woodland Grant Scheme funding.

2. Institutional context

The woodland is owned by Wiltshire Council, and managed by FoW with supervision from the WWT and the council (i.e. is publicly owned with a community management agreement). Wiltshire Council is currently negotiating the sale of the estate, but Oakfrith Wood is excluded, so there are hopes that the wood will be leased or transferred as a community asset to FoW. Oakfrith Wood is designated a Local Nature Reserve, which limits operations to those maintaining the biodiversity values.

3. Group organisation

FoW was constituted as a Charitable Trust in 2006. There are eight Trustees including members from Wiltshire Council. Membership of the Trust is open to all. Decision-making is largely a matter for the Trustees, but meetings are open to all members. A woodfuel co-operative exists as an additional group. The practical management of the woodland is carried out by volunteer work parties as part of the Trust's activity programme, particularly the woodfuel co-operative, guided by Wiltshire Council and professional advisors. The aims of the management plan are conservation and low-key recreation. Sales of timber produced through management is a secondary objective. Members of the woodfuel co-operative get a discount on woodfuel depending on the amount of work they have put in over the year.

4. External links

FoW works closely with Urchfont Parish Council, Wiltshire Council and WWT, and has working relationships with Natural England, the Forestry Commission and BTCV. A number of other local groups have been using the woodland for different activities since FoW became involved in management, including the local schools, mental health charities and green woodworking groups.

5. Resources

The broadleaved woodland consists of 14 ha of ancient semi-natural woodland (ASNW), with mature beech dominating the main section of the woodland, and areas of oak, ash and hazel also present. The woodland is carpeted by bluebells in the spring. An area of hazel coppice was planted in 2000. The volunteer group has learnt woodland management skills through practice. Formal training in chainsaw use has enabled the woodfuel co-operative to take on more skilled tasks within the woodland. Other knowledge and skills have come from within the Trust membership, which includes foresters and conservation professionals. Funding is largely through grants, with some corporate sponsorship, local fundraising and a small income from woodfuel and timber sales.

Sources: Hughes (2012) and Urchfont Parish Council (no date)

Case study 3 - Blaen Bran Community Woodland Group, Torfaen, Wales

1. History

Frustration about anti-social behaviour (e.g. car burning and the poor state of the local woods), led to a community meeting with the local authority and the woodland owner. During the meeting the owner agreed to greater community involvement and a Community Trust was established in July 2003. The Trust organised volunteer working groups to deal with some of the most pressing issues in the woodland. The Trust evolved into the Blaen Bran Community Woodland Group (BBCWG) in 2005, when an opportunity to purchase the woodland emerged. The Cydcoed programme was critical, providing the £20000 required.

2. Institutional context

The woodland is owned leasehold (999 years) by the community company (i.e. private ownership). The terms of the lease detail major arrangements. Management conditions are attached to the Cydcoed grant management plan and the Better Woodlands for Wales grant. The UK Forestry Standard imposes legal requirements as well as voluntary recommendations covering all aspects of woodland management including soil, water, biodiversity and interaction with people. There are plant health restrictions imposed on the larch trees. Public rights of way must be maintained. Restrictions on access and use by the public visiting the woods are written into the Articles of Association of the community company.

3. Group organisation

The group has a mixed model legal form, existing as three different bodies. It is constituted as a Company limited by guarantee (CLG), and was registered as a charity in 2007, and a new community interest company (CIC) was established in 2012 as a separate entity to develop the social enterprise Blaen Bran Woodland Services (BBWS). BBWS is wholly owned by BBCWG. The CLG and charity are run as a 'joint enterprise'. The CIC has a different set of articles and accounting system. The CIC was set up with social enterprise development grant funding over £70 000 over three years. Anybody in the local area with an interest in the group is eligible to join the CLG. Membership is by annual subscription currently set at £10. This confers voting rights in elections and decision-making processes. Decisions are made through regular general or topic focused meetings. A woodland

management plan was agreed as part of the Cydcoed grant. The overall plan for the woodland is productive woodland management for employment and increased public access and recreational benefit. The plan is implemented by BBCWG and BBWS. The group conforms to company law, charity law and health and safety legislation..

4. External links

BBCWG works with the Wildlife Trusts, with organisations supporting NEETs, with the probation service and with a local horse trekking business. There is also a close working relationship with the local authority and community council. BBCWG is a member of Llais y Goedwig and Woodfuel Wales.

5. Resources

The woodland is mixed predominately conifer woodland of about 100 acres. The majority of planting is Japanese larch, with some Norway spruce and a sizeable area of Scots pine, planted initially 1937/38 and felled and restocked in 1983-87. Much of the larch/spruce mix has been neglected. Broadleaves are mainly beech and some oak. Many of the beech trees are in poor condition. Access to the site is difficult, through steep and narrow lanes. BBWS has undertaken thinning operations in the larch and selective felling of other trees as part of the fuelwood and furniture business development. Funding is still largely by grant capture, but increasing revenue originates from BBWS trading. BBCWG has significantly developed its knowledge and skills base. Woodland management skills, as well as group and business management skills, have been acquired through practice, and attainment of chainsaw certificates, and some training and advice, have come from Forestry Commission Wales and the Llais y Goedwig roadshows.

Sources: Llais y Goedwig (2011) and Forest Research (work in progress)

Conclusions and recommendations

The growth of the community woodland sector over Great Britain in the past couple of decades has generated significant interest from a variety of stakeholders. Policy makers are interested in evidence which can help structure policy responses and answer policy focused questions; community woodland groups and associations are interested in information which helps members learn more about how different approaches to community forestry have realised success or overcome barriers and challenges; researchers are interested in understanding trends and the reasons for those trends. The significant body of international research into community-delivered forestry has emphasised the need for consistent approaches to data and evidence collection to enhance the value and potential learning available from it (Ostrom, 2008; Wilson, Ostrom and Cox, 2013). These frameworks need to maintain a common approach to capturing the detail of important dimensions (or variables) and how they are related. The research framework presented here provides a tested, comprehensive and geographically appropriate response to this need. Continued use of the framework by researchers, practitioners and others to structure their data collection should provide evidence of greatest value to answering the variety of stakeholder questions now and in the future.

References

AGRAWAL, A. (2003). Sustainable governance of common-pool resources: context, methods, and politics. *Annual Review of Anthropology* **32**, 243–62.

AMBROSE-OJI, B. (2013). Community woodlands and community

woodland groups in England: sustainability, networking and voice. Workshop Synthesis Report. Forest Research, Farnham.

CALLANDER, R. (2000). Birse Community Trust. In: Social land ownership: eight case studies from the Highlands and Islands of Scotland. Volume 2. [www.caledonia.org.uk/socialland/case.htm].

CALVERT, A. (2009). Community forestry in Scotland: a report for Forest Research. Forest Research. Farnham.

CHARNLEY, S. and POE, M.R. (2007). Community forestry in theory and practice: where are we now? *Annual Review of Anthropology* **36**, 301–36.

COMMUNITY WOODLANDS ASSOCIATION (2012). Testing a framework to describe models of community woodland case studies: six case studies of Scottish community woodlands. A report by the Community Woodlands Association on behalf of Forest Research. Forest Research, Farnham.

DANKS, C.M. (2009). Benefits of community-based forestry in the US: lessons from a demonstration programme. *International Forestry Review* **11**, 171–85.

DEFRA (2013). Government Forestry and Woodlands Policy Statement. Defra, London.

EDWARDS, D., ELLIOTT, A., HISLOP, M., MARTIN, S., MORRIS, J., O'BRIEN, L., PEACE, A., SARAJEVS, V., SERRAND, M. and VALATIN, G. (2009). A valuation of the economic and social contribution of forestry for people in Scotland. Forestry Commission Research Report (FCRP101). Forestry Commission Scotland, Edinburgh.

FORESTRY COMMISSION SCOTLAND (2006). Scottish Forestry Strategy. Forestry Commission Scotland, Edinburgh.

GIBSON, C.C., MCKEAN, M.A. and OSTROM, E. (eds) (2000). *People and forests*. MIT Press, Cambridge, MA.

HUGHES, V. (2012). Testing a framework to describe models of community woodland case studies: four case studies from South West England. A report by the Silvanus Trust on behalf of Forest Research.

- Forest Research, Farnham.
- LAWRENCE, A. (2007). Beyond the second generation: towards adaptiveness in participatory forest management. *CAB Reviews:*Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources 2. CABI Publishing.
- LAWRENCE, A. (2009). Community experiences of the National Forest Land Scheme. Forest Research, Farnham.
- LAWRENCE, A., ANGLEZARKE, B., FROST, B., NOLAN, P. and OWEN, R. (2009). What does community forestry mean in a devolved Great Britain? *International Forestry Review* **11**, 281–97.
- LAWRENCE, A. and MOLTENO, S. (2012). Community forest governance: a rapid evidence review. A report by Forest Research on behalf of the Independent Panel on Forestry. Forestry Research, Farnham.
- LLAIS Y GOEDWIG (2011). *Member case studies*. [http://llaisygoedwig.org.uk/resources/case-studies/]
- McDERMOTT, M.H. (2009). Locating benefits: decision-spaces, resource access and equity in US community-based forestry. *Geoforum* **40**, 249–59.
- MACKENZIE, M., BLAMEY, A. and HANLON, P. (2006). Using and generating evidence: policy makers' reflections on commissioning and learning from the Scottish health demonstration projects. *Evidence and Policy* **2**, 211–26.
- MATHESON, C. (2000). Abriachan Forest Trust. In: Social land ownership: eight case studies from the Highlands and Islands of Scotland. Volume 2. [www.caledonia.org.uk/socialland/case.htm].
- NATIONAL FOREST INVENTORY (2012). *NFI description of attributes*. Forestry Commission, Edinburgh.
- NIGHTINGALE, A.J. (2005). 'The experts taught us all we know': professionalisation and knowledge in Nepalese community forestry. *Antipode* **37**, 581–604.
- NYGREN, A. (2004). Competing claims on disputed lands: the complexity of resource tenure in the Nicaraguan interior. *Latin American Research Review* **39**, 123–54.
- OSTROM, E. (2008). Frameworks and theories of environmental change. *Global Environmental Change* **18**, 249–52.
- OSTROM, E. (2012). Why do we need to protect institutional diversity? *European Political Science* **11**, 128–47.
- OWEN, R., POWELL, J., REED, M., KAMBITES, C. and LEWIS, N. (2008). An evaluation of Cydcoed: the social and economic benefits of using

- trees and woodlands for community development in Wales. Forest Research, Farnham.
- PARKINS, J.R. (2006). De-centering environmental governance: a short history and analysis of democratic processes in the forest sector of Alberta, Canada. *Policy Sciences* **39**, 183–203.
- POLLARD, A. and TIDEY, P. (2009). Community woodlands in England. Baseline report for Forest Research. Forest Research, Farnham.
- SANDERSON, I. (2009). Intelligent policy making for a complex world: pragmatism, evidence and learning. *Political Studies* **57**, 699–719.
- SHORT, C. (2008). The traditional commons of England and Wales in the twenty-first century: meeting new and old challenges.

 International Journal of the Commons 2, 192–221.
- STEWART, A. (2011). Woodland-related social enterprise: enabling factors and barriers to success. Forest Research, Roslin.
- STEWART, A. and EDWARDS, D. (2013). Number of community groups involved in owning or managing woodland: Scottish Forestry Strategy community development progress indicator. Forest Research, Roslin.
- TYLDEN-WRIGHT, R. (2000). The Laggan Forest Partnership. In: *Social land ownership: eight case studies from the Highlands and Islands of Scotland*. Volume 2. [www.caledonia.org.uk/socialland/case.htm].
- URCHFONT PARISH COUNCIL (no date). Friends of Oakfrith Wood. [www.urchfont-pc.gov.uk/Community/Friends_of_Oakfrith_Wood. aspx].
- VARUGHESE, G. and OSTROM, E. (2001). The contested role of heterogeneity in collective action: some evidence from community forestry in Nepal. *World Development* **29**, 747–65.
- WAVEHILL CONSULTING (2010). A survey of community woodland groups in Wales: report of main findings. Report to Forestry Commission Wales. Forestry Commission, Edinburgh.
- WELSH ASSEMBLY GOVERNMENT (2009). Woodlands for Wales. The Welsh Assembly Government's Strategy for Woodland and Trees. Welsh Assembly Government, Cardiff.
- WIGHTMAN, A., CALLANDER, R. and BOYD, G. (2004). *Common land in Scotland: a brief overview*. Caledonia Centre for Social Development.
- WILMOT, A. and HARRIS, K. (2009). Community woodland baseline report: Wales. Forest Research, Farnham.
- WILSON, D.S., OSTROM, E. and COX, M.E. (2013). Generalizing the core design principles for the efficacy of groups. *Journal of Economic Behavior & Organization*, **905**, S21–S32.

Enquiries relating to this publication should be addressed to:

Anna Lawrence Forest Research Northern Research Station Roslin Midlothian, EH25 9SY +44 (0)131 445 2176

anna.lawrence@forestry.gsi.gov.uk www.forestry.gov.uk/forestresearch For more information about the work of Forest Research, visit: **www.forestry.gov.uk/forestresearch**

For more information about Forestry Commission publications, visit: www.forestry.gov.uk/publications

The Forestry Commission will consider all requests to make the content of publications available in alternative formats. Please send any such requests to diversity@forestry.gsi.gov.uk or call 0131 314 6575.