

Crossplan

Integrated, participatory landscape planning
as a tool for rural development



A report of a project at Strathdon in Scotland

EDITED BY SIMON BELL



Forestry Commission

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as a tool for rural development**

Simon Bell

Forestry Commission: Edinburgh

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Summary

The Northern Periphery of Europe includes remote areas in the north of Scotland, Norway, Sweden and Finland as well as the Faeroes, Iceland and Greenland. Such areas are characterised by low levels of population, transport difficulties, high levels of out-migration by young people and a reliance on traditional means of livelihood such as farming, forestry and fishing.

These areas also have attractive, often wild and empty, scenery and the populations and authorities often see tourism as the economic future, enabling them to maintain or increase incomes, standards of living and to provide jobs for younger people. Tourism values in these areas are largely dependent on the quality of the scenery, which in turn depends on the way that the land is managed. Since costs and benefits of tourism are not borne equally by landowners, members of the community and entrepreneurs, it is important that all stakeholders participate in land-use and landscape planning. In this way it is possible to conserve the quality of the landscape while maintaining or improving the quality of people's lives.

The European Union has a programme aimed at supporting projects to help the economic, social and environmental well-being of these remote areas. 'Crossplan' was one project funded as part of the pilot part of this programme. It brought together researchers and communities in Scotland, Norway, Sweden and Finland. The aim was to test different models of participatory planning in these areas as a form of action research, while at the same time producing real plans with and for the communities involved.

This report focuses on the Scottish project in some detail. The Scottish study area was the upper Don valley in Aberdeenshire, known as Strathdon. The project was led by the Forestry Commission, because forestry has had and continues to have a major impact on the landscapes of the Highlands and because public participation in forestry has become a major issue. This provided an opportunity to test models and to compare them in the international setting provided by Crossplan. Strathdon is a heavily forested valley and is also the subject of studies into the potential to expand native forest in the region of the Cairngorm mountains within which the area lies.

The project applied three different participation tools. Interviews were held with individuals and groups, a questionnaire survey was undertaken and participatory workshops were held. These different methods enabled a wide cross-section of the community to participate in various ways. It became obvious that it is not possible to separate considerations of the landscape from the social and economic settings of people's lives. Thus, the results were not confined to landscape planning but included economic aspects in the final vision plan.

The issue of increasing forest cover and demonstrating the potential to the community was also undertaken by modelling various aspects and scenarios. This also provided landowners with new possibilities for managing their forests to look after the landscape better.

The main outcomes of the project were twofold. One was the actual vision plan for Strathdon, which emerged from all the different participation tools used. This provided the community with some important ideas which they could take forward with the support of the local authority and various agencies, including the Forestry Commission. The second outcome was the experience of testing the tools in this situation and comparing them to those used in the projects that took place in the other countries. The lessons learnt will enable other communities and agencies to apply the process of participatory planning in a more effective way.

Introduction

Simon Bell

Extremely sparse population, long distances and harsh climate characterise the northernmost areas of Finland, Scotland, Sweden and Norway. The key question is: how can new entrepreneurship grow while traditional industries are rationalising their operations, and while labour is increasing in the fields of tourism and information technology? In order to address these issues Finland, Scotland, Sweden and Norway set up the Northern Periphery Programme (NPP), which is co-financed by the European Commission European Regional Development Fund (ERDF) Article 10. This pilot programme ran until September 2001 when it was revised and became part of Interreg IIIB and expanded its involvement to cover Greenland and the Faeroe Islands. Iceland can also participate.

The overall objective for the pilot programme and its successor is to contribute to the improvement of services and value creation in northern areas of Finland, Scotland, Sweden and Norway (and now Greenland, the Faeroes and Iceland).

The programme is focused on the development of new knowledge about innovative and effective solutions for sustainable business activity, service provision and land-use/spatial development planning.

The original programme covered, geographically:

- In Scotland: Highlands & Islands Objective 1 area; North and West Grampian; Rural Stirling and Upland Tayside.
- In Finland: Objective 6 area and adjacent areas in the regions of Pohjois-Pohjanmaa, Keski-Pohjanmaa and Pohjois-Savo.
- In Sweden: Objective 6 area and adjacent coastal areas.
- In Norway: Four northernmost counties of Nord-Trøndelag, Norland, Troms and Finnmark.

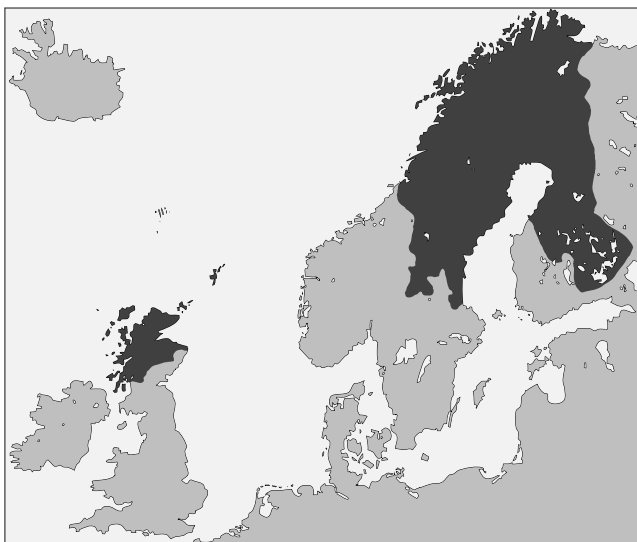


Figure 1.1

The Northern Periphery of Europe: original areas included in the pilot project.

‘Crossplan’ was one of the first pilot projects under the Northern Periphery Programme. The project’s aim was to focus on the development of new models for integrating sustainable forestry, agriculture, small-scale entrepreneurs and tourism businesses in Northern Peripheral areas. Several local

communities in Scotland, Finland, Sweden and Norway worked in co-operation with researchers, rural authorities and enterprises. The project activities included integrated participatory planning demonstrations in pilot areas, workshops of researchers, interview studies, dissemination of results for local people and planners, international seminars, guidelines for sustainable land-use and the development of Geographic Information Systems (GIS) (Bell and Komulainen, 2001).

The main task of the project has been to test different methods of participatory landscape planning with special emphasis on the impact of forestry development and management on scenery as a resource for tourism. In each of the study areas traditional land-uses such as farming, forestry, game management and reindeer herding are increasingly unable to support rural populations unless supplemented by additional income. One of the main sources of this additional income is tourism which in turn depends on the quality of the landscape, either as the main attraction drawing visitors, or the setting within which a range of recreational activities take place. In many cases the owners and managers of the landscape are not the same as the small entrepreneurs developing and running tourism businesses, so that land-use changes may adversely affect tourism potential unless they take into account a wider group of stakeholders. Alternatively, the landowners and managers may themselves be seeking to develop additional income-generating activities such as tourism ventures. Thus, the land, its management and the interests of the wider community intersect and must be considered together if sustainable solutions are to be found.

Some of the common features of the Northern Periphery in general, and the case study communities in particular, include:

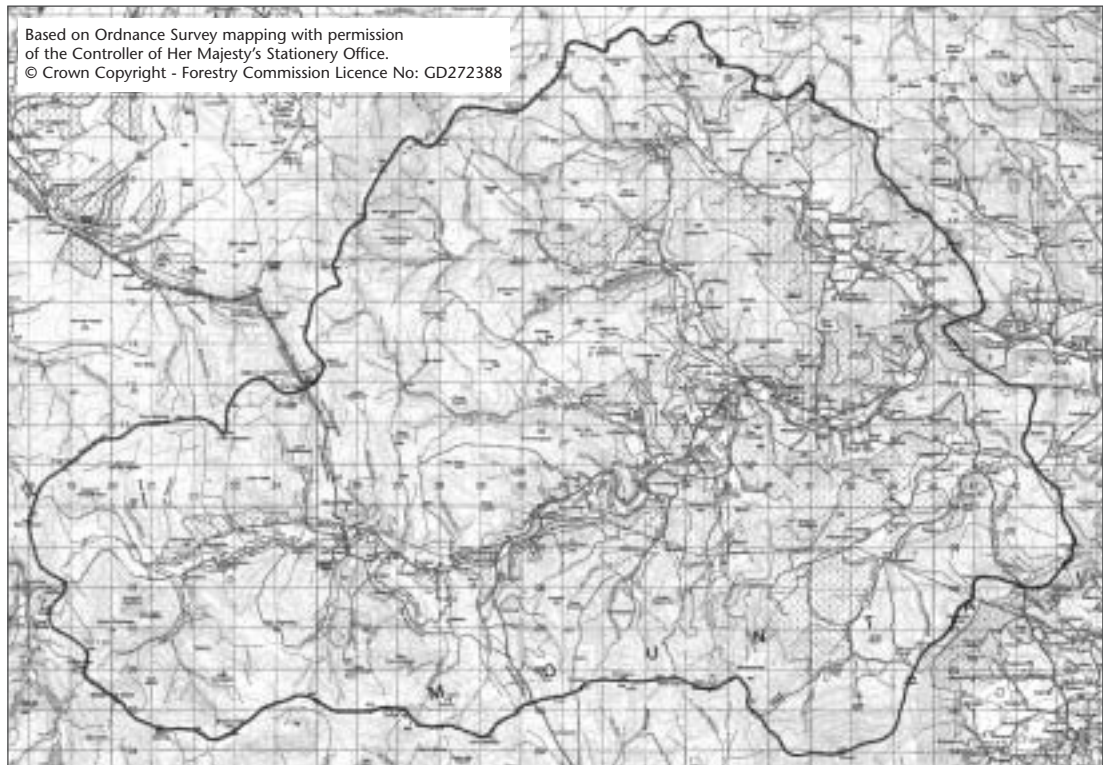
- Remoteness, with problems of rural services, transport and isolated communities.
- Sparse populations, which may be the result of historical out-migration and where young people still tend to leave to find work elsewhere.
- Local economies historically reliant on farming, forestry, fishing, reindeer herding or sporting, all difficult for people to make a living from in these locations due to climate, costs of production and transport.
- Tourism, based on the wild and remote scenery of the areas becoming either the mainstay of the economy or at least a significant contributor to increase the incomes available from traditional sources.

Crossplan involves communities in all four NPP countries. The project areas for each are:

- Finland: Two areas have been studied. Vuokatti is located in Kainuu region, where a prominent forested ridge is an important landscape feature and where diversification from farming and forestry into tourism and recreation is an important goal of the local people. Siikajoki is situated on the coast of the Gulf of Bothnia in northern OstroBothnia. Here the coastal, river and sand dune landscape includes land rising out of the sea. Tourism is less well-developed here but the local council is keen to see the area developed and some imaginative enterprises already exist.
- Sweden: This project is not based around a single community but involves tourism in a remote region with special wilderness qualities in the provinces of Norrbotten and Västerbotten. The main issue concerns the development of tourism by small local populations within areas in which economic forestry has long traditions but no longer employs very many people.
- Norway: The community of Naerøy is situated in the very north of North Trondelag county, approximately 350 kilometres north of Trondheim. Farming, forestry and fishing have been the traditional activities. As in most of Norway, the ownership structure is mainly small-scale, with local owners living on relatively small farms with some forest, having combined household incomes from agriculture, forestry and outside sources. The landscape is varied and very attractive, including mountains and a beautiful coastline, and provides opportunities for diversification into tourism.

- Scotland: Strathdon is a large valley lying in the north-east of Scotland and is part of the Cairngorms mountain range. It contains a number of small, scattered communities. The landscape is not as forested as those of the other countries but contains the potential for much more afforestation or expansion of native woodland. The area contains a number of traditional Scottish estates, each of which is managed for a mixture of upland farming, forestry, deer stalking, grouse shooting and salmon fishing. Some members of the community are tenant farmers or estate workers. Tourism is presently a small element in the valley economy compared with many other parts of Scotland. The community is tightly knit and is already involved in a number of community projects and initiatives.

Figure 1.2 | *A location map showing the general character of the Strathdon study area.*



Engaging local people more actively in all aspects of planning is one of the goals of sustainable development. This has been carried out in urban conditions and for development planning but is only now seeing wider application to land-use planning in remoter rural areas. This project provided an opportunity to test some methods and techniques applied to case study areas in each country with a view to providing guidance to anyone interested in setting up their own project.

Although participatory planning is about involving local people in planning, there have to be some organisations willing and able to lead and set up any project. In the case of Crossplan, various agencies within each country came together to work on the project. These include research-based organisations, forestry administrations, private forestry interests and local authorities. The key element was to locate communities where there was a genuine interest in joining in the project so that the participatory element was real and not merely theoretical. This made the projects more practically useful but also meant that certain unique features of the project areas affected the outcome of the research and may limit its more general applicability. In the Scottish project, the subject of this report, the main partners were the Forestry Commission, including its agencies Forest Enterprise and Forest Research, and the Cairngorms Partnership. Aberdeenshire Council, many of the local estates, researchers at Edinburgh College of Art and Aberdeen University were also involved, while a large section of the local community took part in a number of different ways, as will be described later in the report.

This report summarises the main findings of the Scottish Crossplan project and attempts to synthesise them into a vision for the possible future direction of landscape and community development in the area. While the overall aim of Crossplan has been to develop and test participatory landscape planning, it has proved impossible to disentangle landscape from community. Inevitably, therefore, ideas and concerns about the community and its well-being, particularly the future economic development of Strathdon, have also featured.

Crossplan Scotland contains 3 linked elements. Firstly, there is the actual process of public participation in landscape planning leading to ideas of what the community themselves want to see. Secondly, there is the ecological potential for landscape change, especially forestry expansion and different forest management opportunities. Thirdly there is the integration of these with the strategic development of the Cairngorms expressed through the Forestry Framework (Cairngorms Partnership, 1999). The report presents a means by which individual landowners, the Forestry Commission, local authorities and other agencies can ensure that community aspirations are taken into account in their planning. Thus it represents a valuable source of information in its own right.

There were three interlinked elements to the public participation exercise in Strathdon: interviews, questionnaires and workshops. The reason for choosing several methods was to reach as many people as possible and to compare the results of each approach.

The interviews and questionnaires contained two elements. Firstly, Dr Margaret Scott, then based at the Landscape Design and Research Unit at Edinburgh College of Art used individual interviews to collect material about people's perceptions of Strathdon as a community and a landscape (see Chapter 3 and Scott, 1999). This was used both as information of direct use and to help to construct the questionnaire. The questionnaire sampled a wider cross-section of the community and obtained some quantitative information about people's attitudes. Secondly, Stephen Robertson, an MSc student in the Forestry Department at the University of Aberdeen interviewed the same people to collect material on people's attitudes to the idea of public participation itself (see Chapter 3 and Robertson, 1999). He did not follow this up with a questionnaire survey.

The workshops also contained two elements. They were facilitated by the project leader, Simon Bell, with the help of staff from the Forestry Commission and Cairngorms Partnership. Firstly, the planning workshops aimed to bring local people together with 'experts' from some of the agencies, particularly the Forestry Commission, in order to put together as much factual information and analysis as possible for use in developing the 'vision plan' and for future use by land managers. Secondly, a number of art workshops enabled people to express their attitudes and feelings towards the landscape in other ways. This is more difficult to use for planning but nevertheless contributes valuable information about the 'sense of place.'

Also incorporated into the project is research into what kind of forestry potential exists in the study area. This information helps convert aspirations into real possibilities within a framework of climatic and ecological constraints. The work was carried out by Chris Quine and Dr Jonathan Humphrey of the Forest Research (see Chapter 6). The ecological site classification used for this provides valuable information which should also be of use to landowners preparing their own forest management plans.

Finally, Crossplan Scotland presents some useful findings about the scope, role and methods of participatory planning at a scale probably not yet carried out elsewhere, that of an entire strath. While some aspects are labour- and time-intensive, nevertheless, it is a process that could be repeated in whole or in part elsewhere in the country.

The report contains 7 chapters:

2. A Scottish perspective on public involvement in forestry prepared by Richard Broadhurst, the policy officer for the Forestry Commission's National Office for Scotland.
3. The work on public participation using interviews and questionnaires carried out by Margaret Scott.
4. The work on people's attitudes to public participation carried out by Stephen Robertson.
5. The results of the workshops led by Simon Bell.

6. The research into the ecological foundation of forestry expansion and development carried out by Chris Quine and Jonathan Humphrey.
7. A vision plan for Strathdon, which synthesises all the research, developed by Simon Bell.
8. Conclusions and recommendations arising from the project, prepared by Simon Bell.

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A framework for involving people in forestry: a perspective from Scotland

Richard Broadhurst

Introduction

Public participation, or community involvement, in forestry is nothing new. Put simply it merely describes a relationship between people (in their communities) and the forest. The nature of the relationship, and its intensity will vary, across space and time, according to the nature of the people, the community, and the forestry concerned.

The desire for involvement or participation increases under three quite different scenarios, as:

1. the community enjoys forest benefits, and sees the potential for more;
2. the community currently enjoys forest benefits, but perceives a threat, or change (Broadhurst, 1992; Beskine, 1992); and,
3. the community wishes, but (for whatever reason) is unable to enjoy forest benefits.

The community places a value (whether economic, social or spiritual) on these benefits (Bateman, 1992; Benson and Willis, 1992; Bishop, 1992a; Whiteman and Sinclair, 1994). To obtain, or sustain, the stream of benefits care and management are required. The community seeks to ensure that the appropriate planning, design, and management occur. This may or may not involve the community in direct action, or it may simply require effective communication with foresters and other individuals or organisations concerned with managing the lands. The corollary is that if the community perceives no benefits from the forest, there is a risk that they will have no interest, and only those stakeholders who do benefit will be involved.

Our increasing sophistication in a technological world has encouraged the degree of specialisation to the point where the gap is widening in the understanding amongst our populations of the underlying natural processes. Even where the community and its component groups and individuals may well benefit from forests, they may be wholly unaware that they do so.

The nature of the involvement itself changes over time, reflecting changing needs, and the developing dynamics in the relationships within and between communities of trees and of people. The arrow of time may travel in one direction only, but to many of us it appears to fly ever more swiftly. Certainly, our capacity to change our environment has been increasing at an alarming rate.

People have always valued forests, but in some parts of the world, people have been taking them for granted or have forgotten the many benefits (Figure 2.1) they will continue to provide, if they are sustainably managed. This dislocation or fracture from nature is particularly acute in the more urban areas of Europe. It is worst amongst those societies that have most warmly embraced electronic communications, high-speed transport and the 24-hour day. In Britain, this development of new ways of communicating has been accompanied with the decline in older ways of communicating, and in institutions such as the Church, marriage, the family, and the many other forms of social organisation, which depend on proximity. There is great interest in this topic at present amongst a wide range of organisations.

A recent two-day conference was held in London, entitled, 'Disconnected: the changing role of participation'. This conference sought to reconcile the mixed messages about people's willingness to take part. The fear of decreasing rates of participation in representative democracy and a reported apathy of the young, seems to be matched by an apparent growth in novel ways of engaging in

Figure 2.1 *Forest benefits ... for everyone!*

Forests provided our ancestors with all that they needed. We sometimes forget just how rich forests are. The benefits can be thought of as flowing from the forest – as a source of (forest) products, as a setting for activities, and as a component of the global ecosystem. These three roles correlate with the benefits usually described as economic, social and environmental.

1. The forest as a source of forest products

- Timber:
 - Building and construction e.g. houses and boats
 - Transport e.g. skis, travois, toboggan, wheels and carts
 - Tools and utensils
 - Sports equipment e.g. cricket bats and shinty sticks
 - Musical instruments
 - Construction of composite building materials
 - Generating income to pay for managing woodlands and generating other benefits
- Energy:
 - Fuel
- Plant-stuffs:
 - Food e.g. berries, fruits, nuts, herbs, mushrooms
 - Fabrics
 - Paper
 - Dyestuffs
 - Medicines
 - Art materials
- Animals:
 - Hunting
 - Food
- Minerals:
 - Water

2. The forest as a setting for activities, experiences and life

- Setting
 - To live
 - Holidays e.g. cabins or camping
 - Earning a living
 - Adding quality to our urban environments
 - Increases the value of housing
- Shelter
 - Better microclimates
 - For stock
- Meet friends/family
 - Talk
 - Walk
 - Play
 - Rest
 - Discuss
 - Develop relationships
- Peace and quiet
 - Think
 - Rest
- Learning
- Sport
- History and culture
- Spiritual uplift

3: The forest as something much larger – a component of the global ecosystem

- Diversity
- Genetic information
- Buffer for chemical or physical activity
- Recreation

Some of these benefits can flow from land-uses other than forestry, but forestry has the enormous potential to supply a broad array of benefits simultaneously. The dynamic, three dimensional and fractal nature of woodland makes it very absorbent and robust, and contributes something very special to our lives, to the local, regional and global ecosystem.

Collectively people have forgotten what fantastic benefits flow from sustainably managed woodlands. We need to remember, to remind them and to promote a better understanding.

participative democracy. Technology is being employed to reach into communities, with interactive web and television programmes, but so too are more community decision-making mechanisms.

What?

Terms such as 'community, involvement and forestry' cannot be crisply defined. There are some very fuzzy edges. Each of us belongs to a repertoire of different communities. The salient community will depend on the issues under consideration, or the benefits with which we are concerned. There are

many ways of looking at these benefits, and one such simple framework is considering the economic, the environmental, and the social benefits, mirrored in the categories given in Figure 2.1. Similarly there is a continuum, which stretches from a single tree through small woods to larger forests. At the level of woodland or forest, these areas of land include open spaces, water, rock, earth, and plants, animals and people. It all depends on scale, and on the views of the people. What is perceived as woodland by one person, may be viewed as something entirely different by another. For our purposes, anything which is viewed as having the appropriate woodland or forest character by the observer, is a woodland or forest.

Why?

Just why should communities seek involvement? The real reason may be much more deep-seated than any initial answer may suggest. Each of the benefits is likely to lead to a succession of consequences. Asking the question 'Why?' five times may come closer to revealing the underlying motives for the form of involvement or relationship sought. Our job as managers of forests or as policy-makers is to make these relationships possible, to facilitate the delivery of the greatest possible benefits to society. This requires judgement to reach an appropriate balance of distribution of benefits (and costs) across the different parts of society, balancing national and local benefits. In days of long ago, the local community was the society in question, but with the complex relationships in existence today the picture is not so clear.

When?

The form of involvement (and the benefits) sought will change according to season, to mood, and to the development of the community, and of its individuals. These changes will not be universal across the world, or even within any one country, but will vary greatly.

The hunter-gatherers of prehistoric times depended on forests for almost everything they had. When the plants or animals on which people depended were exhausted, these peoples became nomadic. There is plenty of evidence that these early people used fire to clear forests so that areas could be planted with food crops, or provide better grazing for animals. The forests themselves provided many of the materials required for settlement to proceed. In later years, the forests provided the raw material for industrialisation, as charcoal for use in the production of iron. The pace of development speeded up considerably as a result. Ironically, it seems to be the very speed of development in technology, sparked off by the use of wood, which in turn has led to the dislocation of people from their woodlands. In post-industrial societies, children no longer see the connection between trees and wood products packaged in plastic, or for that matter with paper, any more than they see the connection between cows and milk sold in plastic containers or cartons.

In many countries people have been seduced by the advances of technology and the economy, without the commensurate development in concern for the environment, for society, and for health and well being. Forests are essential for this health, in physical, social and spiritual terms. Communities in developed and post-industrial countries are reawakening to the value of forests, and can see that they may provide the touchstone for rural development, and for rural regeneration. Devising mechanisms for effective involvement will challenge notions of fairness and the distribution of resources. Equity must be achieved across society now, and across generations into the future. Inevitably this becomes a political business, but the fact is that it is also a technical business. Given the busy lives we all lead, how can we best develop effective participation?

The context

The continual press of time, and desire to achieve more in ever shorter periods of time, is a major force in shaping how we move forward. Many people feel trapped on an escalator over which they have little (if any) control. On the one hand this encourages us to look for swift and simple mechanisms for involvement for those under this pressure. On the other, it also promotes a reaction to the pressure, creating a parallel world within which people can follow a less hurried and more participative life. They may seek to become involved in something where they feel they can have a real influence on the outcome.

Two strong socio-political forces also help to shape the world in which we live. Standardisation or globalisation seeks to take advantage of economies of scale, and is often associated with concerns about economics. Whether as a reaction to standardisation, or a reflection of reality, another major force takes us in a different direction. This force is about devolution, characterised by the term 'subsidiarity' in which the aim is to return as much degree of control to the lowest level of organisation. This force seeks to give responsibility back to communities and ultimately to individuals. There is a recognition that solutions do not have to be universally applied, and that good plans at local level reflect rather than duplicate what is planned at national or regional level. There is a web of different mechanisms to enable different communities to participate.

At the Earth Summit in Rio, and subsequently up to the formation of the United Nations Forum on Forests in October 2000, international discussions have continually underlined the importance of involving people, and of the transparency of the decision-making process. The result has been a great deal of activity all around the world. There is something to learn from any of the examples (Ingles *et al.*, 1999; Loikkanen *et al.*, 1999; Niskanen and Väyrynen, 1999; Sherwood, 2000; Poffenberger, 1998, 1999; USDA, 1995). While individual solutions worked out locally may 're-invent the wheel', some element of this may be desirable in ensuring that there is real local ownership. On the other hand there is great benefit to be gained from exchanging experience, whether through seminars of this kind, conversations, or in exchanges of staff on the ground.

Examples from around the world

Many forestry services have long and illustrious histories reflecting the changing concerns of nations and communities. The insignia on the uniforms of the Russian Forestry Service reflect their origin, more than 200 years ago, when the service was set up to provide timber for the building of ships for the navy. In Russia and many of the countries in transition, forestry is now a major source of hard currency. As such many of the activities have been geared to meeting national needs, but this has been balanced by the need to work with local communities, and to work to secure environmental and social benefits. In 1998, the Service showed a keen interest in the environmental guidelines developed by the Forestry Commission for its own use. The service has been keen to explore the development of the infrastructure for rural tourism (e.g. in the far east of the Russian Federation). At a more local scale, foresters continue to provide for the practice of gathering nuts, berries and fungi from the forest as an important source of additional foodstuffs in some areas.

In many parts of the world, wood-fuel is still the major fuel source on which populations depend. With growing populations putting increasing strains on natural resources, there have been occasions when the best laid plans of forest managers have been frustrated by local populations who have seen simpler and more direct (but not necessarily legal) ways of gaining social benefits from local forests. In addressing these kinds of problem, the Indian Forest Service developed its Joint Forest Management approach (Bruce, 1999), through which the local community became entitled to a share of the benefits. Entitlement to a share encouraged a closer dialogue between managers and local communities inducing a more co-operative approach, and fostering a greater understanding of the principles of sustainable forest management.

Forests may supply forage, and fuel, and in circumstances when subsistence farming is practised there can be enormous pressures brought to bear. Such practices, unchecked, could easily put at risk not only the long-term sustainability of the forests, but in some instances their immediate and necessary protection role. In parts of Nepal for example there have been initiatives supported by the World Bank, the UK's Department for International Development, and the overseas aid services of other countries. The focus here has been to build up a detailed picture of people's needs, using participative techniques, which enable participation from a very wide background of people, including not only middle-aged men, but older people, women and children. Through a shared understanding of the problems it has been possible to build trust and encourage greater stewardship. The aim is that forests should thrive and be enabled to perform their protective functions, e.g. helping to reduce the likelihood of landslips and flooding, whilst providing adequately for foreseen forage and fuel needs. Nevertheless, severe pressures remain.

In some countries the concern is less about flooding and more about the risk of reducing the flows and accumulation of sufficient volumes of water of a suitable quality to meet the many pressing and legitimate needs, whether for drinking water, agriculture, or environmental needs. In South Africa mechanisms have been developed for conducting Strategic Environmental Assessments, as such environmental benefits are generated on a larger scale than could be addressed by involving solely local communities.

In Australia, to resolve the conflicting views over forestry, the Commonwealth has been working with State and Territorial Governments to reach Regional Forest Agreements. The RFA process involved many consultations to build up a picture of the use of forests over the past few hundred years, to identify areas of particular significance, in cultural and environmental terms, and establish a range of comprehensive, adequate and representative reserves. Meetings, workshops, telephone and other surveys have been used to build a better picture of the needs of communities and stakeholders, as part of the process of social impact assessments. In the course of developing this work, a social sciences centre has been established within the Bureau of Rural Sciences.

In a number of countries, and particularly in Canada, there is an extensive programme of consultation through the International Model Forests Programme, where many of the conflicts surround the different rights of indigenous peoples and subsequent settlers. Negotiations can be protracted, as is demonstrated in the United States, where there have been countless examples of community participation and the development of comprehensive plans taking account of the different interests in National Parks as well as National Forests. The case of Devil's Tower National Monument (Wondolleck, 1999) is instructive, as with considerable skill, planners have resolved conflicting values held by very different groups, concerned with social values of the area, rather than the economic benefits. The rock is a sacred place for many native Americans, and has had spiritual significance for many hundreds of years, and for rock climbers, the rock is an exquisite challenge. Consensus has been achieved, and the future values assured.

In Europe the position varies a great deal with our different histories. In France, following its revolutions, many communes have the ownership of a town wood, with the state forest service providing the management input under an agreement. Local involvement is through the municipal authority. In some of the Länder in Germany, there is a very close involvement of communities with their local forests, with clubs set up to help develop the full recreational potential of the forests, inducing extra income from tourism into the local economy.

In Scandinavia, the traditions and laws of *Allemansrätt* and *Allemansretten* have ensured that the links between communities and forests have been maintained, where otherwise they may have declined. In many parts of Europe, individual families are closely involved through ownership of small parcels. Around the world some 150 countries are engaged in developing criteria and indicators for sustainable forest management, in a range of international processes. These include reference to social benefits and the involvement of communities.

In Scotland

For several hundred years, the Orkney Isles, Shetland Isles, the Western Isles, and parts of the mainland of Scotland were linked to kingdoms in Scandinavia. Not until 1266 did Norway finally cede its lands to the Scottish king. Scotland still has many things in common with its neighbours in Scandinavia arising out of that shared history, but it faces a very different set of circumstances now. Commentators have argued that Scotland has the most concentrated pattern of land ownership in Western Europe (Wightman, 1999). The Scottish Parliament was restored (after a 300-year absence) in July 1999. It has focused on delivering a major set of reforms, including The Land Reform Bill, which was out for consultation at the time of writing. It includes provision for introducing a right of responsible access to land and water, for recreation and passage (which has drawn considerably from the inspiration and experience of Scandinavia), and a community right to buy, as well as particular right to buy for crofters.

Scotland covers some 7.8 million hectares, and has 1.2 million hectares of forests. It possesses the lion's share of the forests producing timber in Britain, as well as many scenic and environmentally rich areas. The Forestry Commission in Scotland serves as the Scottish Executive's Forestry Department, and manages almost 40% of Scotland's forests, an estate of 467 000 hectares; the remainder of the forests are managed by a rich mix – other public bodies, traditional estates, institutional landowners, forestry companies, farmers and crofters.

Underpinning everything we do in forestry in Scotland is the UK Forestry Standard (Forestry Commission, 1998), which sets out our approach to sustainable forestry, and what is required of forestry in Britain; and the Scottish Forestry Strategy (Scottish Executive, 2000), our core policy document.

In recent years, the Forestry Commission has been able to stimulate others, through partnerships of all kinds towards a greater involvement in forestry. The UK Woodland Assurance Scheme (a voluntary certification scheme recognised by FSC) is a case in point with the Forestry Commission stimulating the initial work, but other partners taking forward the development of the scheme. Similarly in developing community forestry close to towns, we have been working with the Central Scotland Countryside Trust, and in developing innovative approaches to the use of hardwoods, with partners through Highland Birchwoods, and the Scottish Hardwood and Timber Market Development Group.

One of the other major differences between Scotland (or Britain), and most other countries, is that almost all the original natural forests were removed in centuries gone by. By early in the twentieth century Britain's forest cover had declined to less than 5%. Scotland now has forest cover of 17% and on launching the Scottish Forestry Strategy in November 2000, the Forestry Minister voiced the aspirational target of 25% cover by the middle of this century. In the recent past, concerns have been raised in some quarters about the changing appearance of the landscape and changing balance in land-use. Sometimes the concern has focused on the relatively swift change in appearance. It is perhaps our reluctance to appreciate time-scales other than those linked to the human life cycle, which seems to cause us problems. The proposals for the planting of the Trossachs in the 1920s drew criticism, and in a similar way the first felling plans were criticised in the 1970s, as people had become attached to their forested landscape. Now this wooded area is set in the heart of what will become Scotland's first National Park.

One of the most important outcomes of developing a strategy jointly is the building of support amongst partners. For example, the Forest Industries Cluster group has identified a number of priorities including Rural Development, which will help drive forward our priorities. In the past, the expansion of the forests (e.g. in the 1970s) was resisted in some areas by nature conservationists, and in some other areas by local authorities. Out of these conflicts developed a most useful tool, the Indicative Forestry Strategy. Such strategies are developed by local authorities, working with the Forestry Commission and other interested stakeholders. They show crudely where forestry is preferred, where there is potential, and where new planting would be a sensitive matter. These strategies are devised through a form of consultation, at the representative end of democracy, and have been broadly welcomed.

There is now widespread support for the Strategy, although as might be expected, the different interests still consider that more could be done to support their particular interests, at the expense of others!

Experience

The same influences that have encouraged devolution have been at work to encourage greater community involvement and participative planning in forestry in Scotland. The experience of the Forestry Commission, in managing the national woodlands has given ample room for experimentation using different techniques and different forms of participation depending on the particular case. Techniques have been borrowed from the wider planning movement, for example in developing Forests for Real, which took much from the techniques developed by the Neighbourhood Initiatives Foundation, and sought to turn participation into something accessible to all ages, and all interests.

This has been used to great effect in Glen Affric, a forest in the Highlands, which has been recently awarded National Nature Reserve status. Forest District Managers have developed models to suit their areas. The Forestry Commission in its authority role has also been encouraging partnerships and the development of Community Woodland Planning (Cullen, 1994). Much of the experience gained in community forests with an urban focus has been incorporated in guidance, which has wider application (Ageyman, 1996). A number of examples of community involvement, which have been concerned with rural development forestry, have been written up as case studies under the Rural Development Forestry Toolbox (McPhillimy Associates, 2001), a project co-sponsored by the Forestry Commission, Highlands and Islands Enterprise, Scottish Enterprise and Scottish Natural Heritage.

The process has been given added impetus through the work of the Land Reform Policy Group, and the subsequent launch of *Working with Communities* (Forest Enterprise, 2000a). This provides a way in for communities, and a sister publication (Forest Enterprise, 2000b) sets out where Forest Enterprise (the agency managing the national woodlands on behalf of the Forestry Commission) stands on community involvement, in support of sustainable forest management, rural development, urban renewal and land reform. A helpful tool to emerge in developing this advice is the matrix, to help map out the opportunities or chart action. A simplified version is shown as Table 2.1. There are now well over 50 partner projects of one kind or another. Spread across the different parts of the matrix, these demonstrate the breadth of possibilities, and scope for different kinds of involvement.

Table 2.1 Mapping out the opportunities and/or the action.

	Community control	Full community involvement	Partial community involvement	Consultation	Information
Development	Land sold or leased to community groups	Local businesses with agreements, franchises and leases		Meetings with community councils and Forest Panels	On site forest operations notices
Recreation and access		Local partnerships or associations with agreements to run/assist with management of areas, e.g. Woodland Park Association			Published concordats with user groups
Quality of life			Local conservation volunteers		On site information panels
Culture		Community-run 'What's On' arts programmes	Sculpture projects		Use of local language/dialect in information panels

Where communities wish it, there is also a mechanism available for a 'sponsored sale' where the relevant agency identifies a particular need on the grounds of an amenity, conservation or community benefit, which might otherwise be lost. This enables the community to buy the land at the district valuers' valuation, rather than on the open market. A handful of organisations and a few communities have purchased land, including Abriachan (Mathieson, 2000). The capital cost is high, and (certainly with current timber prices) the likely revenues slight, so that many communities look for partnership agreements (Tylden-Wright, 2000), which can deliver many of the benefits, without the burden of ownership.

We have also been sharing our experience through training events on 'Involving People in Forestry' in which the focus has been on using effective communication and participative techniques that meet the local requirements. These events have focused on finding out what people want, and in making it happen. These events have made good use of local examples, to reinforce good practice and encourage managers to help each other. The underlying and key principle is effective communication. A joint project (Hislop and Twery, 2001) between the Forestry Commission's Research Agency and the USDA Forest Service has been exploring what extra advice may be helpful, and proposes a framework (and suggested improvements) to help answer the questions:

- How to identify who should be involved?
- When should they be involved?

- What public involvement tools can be used?
- What resources will be needed?

Alongside exercises such as the Crossplan project at Strathdon, we have been piloting the development of Local Forestry Frameworks in two areas of Scotland. In the Cairngorms, which is scheduled to be Scotland's second National Park in 2003, we have been exploring the use of this technique over an extensive area, where many different stakeholders have a view. In Dumfries and Galloway, in two much smaller areas, we have been working in partnership with the local authority and Scottish Natural Heritage, to explore what the appropriate tactics for forestry might be. This is an area where there is already extensive forestry, and where questions are being asked about the balance between different land-uses.

The Scottish Forestry Strategy and involvement nationally

In preparation for devolution, the previous administration set in train a consultation exercise to explore what kind of forests people in Scotland want. We developed a consultation paper, with the help of a working group representing arms of government concerned with the economic, environmental, and social aspects of forestry. The Minister launched the consultation paper in March 1999, and distributed in excess of 5000 copies, to the industry, to environmental groups, to communities (including all the Community Councils) and to anyone we considered would have an interest. From the outset the idea was that the questions should be couched so that interested lay people could return comment, as could forestry specialists. There were six questions:

1. Do you agree with the idea of multi-benefit forestry?
2. How important do you think the different (social, economic and environmental) benefits of forestry are?
3. How important do you think it is to create new forests and woodlands?
4. Do you have any views on their nature, scale and location?
5. Do you agree with the principles (of sustainability, integration, positive value, community support, and diversity and local distinctiveness) set out in the consultation paper?
6. Do you have views on the relative effectiveness of the different tools delivering forestry policy?

This initial consultation was supported by six seminars around Scotland, which some 400 people attended. There were over 250 responses to the consultation, from single side returns to those with in excess of 95 numbered paragraphs: in all about half a million words!

After analysis, a skeleton of a possible strategy was developed and tested out at a conference at Dunkeld in November 1999, to which all respondents were invited (and 150 attended), and in which there were workshops exploring some of the more difficult items. After further work a Draft Strategy emerged and was circulated for consultation, with a further six seminars attended by 300 people, and eliciting a further 150 responses. Forests for Scotland, the Scottish Forestry Strategy, was launched by the Forestry Minister at a conference in November 2000.

The Strategy identified 23 Priorities for Action under five Strategic Directions:

1. to maximise the value to the Scottish economy of the wood resource becoming available for harvesting over the next 20 years;
2. to create a diverse forest resource of high quality that will contribute to the economic needs of Scotland throughout the twenty-first century and beyond;
3. to ensure that forestry in Scotland makes a positive contribution to the environment;
4. to create opportunities for more people to enjoy trees, woods and forests in Scotland;
5. to help communities use woods and forests to promote sustainable economic and social development.

Work is now well underway in a number of areas, notably in reviewing the grant schemes, which deliver the Strategy (through a working group and consultation exercise), and in developing a suite

of indicators for the progress of the five Strategic Directions and 23 Priorities for Action. The suite of indicators has been circulated to interested parties and will be circulated in a further iteration before being adopted. Work is also underway in developing mechanisms to review the strategy, within five years, by which we expect a number of the priorities to have been addressed and new issues may have arisen.

Forestry for people

In the process of developing the Strategy, we realised that there had been good work done in the economic and indeed on the environmental aspects of forestry. To drive forward the social aspects of forestry, we needed to take full advantage of the best available advice. In June 2000, the Forestry Minister announced the intention to set up a panel to advise the Forestry Commission in Scotland on matters concerning Forestry for People. Advice from the panel would help deliver greater benefits to local communities. The Minister announced that Andrew Raven, a Forestry Commissioner with a wide range of relevant experience, would chair the panel. We were subsequently embarrassed at the wealth of expertise amongst those who applied, and were able to appoint a balanced panel with a wide range of practical experience and knowledge drawn from all parts of Scotland. The panel has established priorities for its work programme over its three-year life, and is making good progress.

Consultation on private sector forestry and involvement locally

Work is progressing on reviewing the way in which the Forestry Commission takes into account the views of communities and neighbours in relation to proposals from the private sector for planting and felling, to ensure that we keep abreast of best practice. Intentions are publicised on a public register which is available on our website, and in local offices. In addition, in a bid to cut bureaucracy we have developed a mechanism whereby provisional approval is given for private sector forestry over longer periods (10 years). This process requires consultation in developing a comprehensive Forest Plan setting out intentions, which would be subject to scrutiny in more detail for operations occurring over the next five years. This has borrowed extensively from the development of Forest Design Plans in Forest Enterprise. Mechanisms can be developed in the national woodlands, and then adjusted to suit private owners. There are also lessons from the private sector, which can be transposed to the national woodlands.

Where next ...?

There is great optimism that the recent work on community participation will bear fruit, through greater support for forestry to deliver the full range of benefits which society needs.

The crisis in farming precipitated by the foot and mouth disease outbreak has helped to focus minds on the importance of the different activities in rural Scotland, tourism and forestry amongst them. There is sure to be an important role for forestry in helping to support the rural development and rural regeneration required, to secure a healthy and dynamic countryside.

The joint programme in which the Forestry Commission and the Nordic Council are working together in promoting the value of timber and wood products amongst architects and specifiers, will be important in stressing the economic importance of one of the end-products of forestry. This campaign, 'Wood for Good', is very timely.

It is clear though, that a much wider audience also needs to be made aware of the wonderful opportunities available and the benefits that trees present. Treefest 2002 was a festival across Scotland, which helped ensure that everyone could celebrate the many gifts that trees in all their guises deliver. By strengthening the links between people, trees and woods, we will be able to ensure that future generations give adequate attention to sustainable forest management in Scotland, and ensure that we bequeath to our children the vision that:

'Scotland will be renowned as a land of fine trees, woods and forests which strengthen the economy, which enrich the natural environment and which people enjoy and value.'

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Interviews and questionnaires

Margaret S. Myers and Catherine W. Thompson

Introduction

Perceptions of landscape change and anticipation of its consequences are central to the concerns not only of landscape planners but also to those of all 'stakeholders' – people who have an interest, whether psychological or material, in the landscape. The research described here was designed to explore a rural community's perceptions of their local landscape and their attitudes to the uncertain future of that landscape. The methodology attempts to tap into people's most strongly held beliefs and attitudes about their environment and offers professionals engaged in landscape planning a valid tool for genuine stakeholder involvement.

Theoretical background to the methodology

The work of the Kaplans (1998) and others demonstrate that landscape specialists have developed different perceptions from those of the non-specialist public, and it is important to engage and inform the latter in discussions about what landscape change might be like, and how acceptable it might be. Much of the research on landscape perception has tended to focus on static aspects and qualities of the landscape (Zube *et al.*, 1982; Ribe, 1989; Purcell *et al.*, 1994). In particular, a number of psychophysical studies have yielded information about people's preference in relation to 2-dimensional images of the landscape, often premised on assumptions about the importance of visual aesthetics and the need for conservation of existing landscape qualities. There is much less work on how people perceive changes in the real environment over time. Preference for a place is about more than just the visual: people bring previous experiences, expectations and their personal objectives in a place to any evaluation they make of it (Scott and Canter 1997) and therefore a person's background will help shape their perceptions. In a similar way, response to change will be informed by cultural and personal experiences and ambitions.

Personal construct psychology, based on the work of Kelly (1955), provides a theoretical basis for exploring people's perceptions of a place and the key factors that determine their response to change. Drawing on this, Canter (1977) has developed a theory which identifies the three components of 'place': the physical environment, people's conceptualisations about a place, and people's activities or behaviours in relation to a place. A number of evaluations of the built environment have been carried out using personal construct methods in order to understand what users like and dislike about a place, e.g. in prisons, offices and housing (Farbstein and Wener, 1982; Marans & Spreckelmeyer, 1982; Vischer, 1985), often in the context of improving current conditions or as part of a post-occupancy study. Kelly's theory and its subsequent development provided the foundation for this research and Guttman's Facet Theory (see Donald, 1995) was used to develop a questionnaire which explored what happens in the Strathdon landscape, what people know about it, and what kind of beliefs and expectations they have in relation to it. These two theories are described in more detail below.

Personal construct theory

Kelly, the originator of Personal Construct Psychology, believed human behaviour to be based on individual constructions of reality rather than direct contact with reality – whatever that may turn out to be. These constructions of reality mediate between the person and the environment and are the basis for choices, judgements and actions. The properties of the construct system are elements – objects, events, places, people – and constructs which operate on this field of elements – the

individual aspects, features or qualities which discriminate between some objects, events, etc., and others. Our constructions are a representative model of the world, which is built over time and modified as we test it in prediction. We make assumptions about reality and then discover how useful or useless these assumptions are. We make sense of situations by imposing a structure on them – ‘events do not carry their meanings on their backs’ (Kelly, 1955). Put simply, the construct system is like a pair of spectacles, which filter not only the information we receive (e.g. what we see and how we see it), but also influence our expectations of the future.

According to Kelly, the construct system comprising individual constructs is hierarchical; constructs have a limited range over which they operate with those near the top of the hierarchy, ‘core constructs’, being more evaluative and general. A core construct is relatively stable and may influence responses to a range of different environmental contexts.

Facet Theory

Facet Theory is a meta-theoretical approach to scientific research that aims to construct theories and discover laws in the behavioural sciences (Donald, 1995). It provides a method of formally defining a research area and making explicit its main concepts and hypotheses.

Facet Theory was developed by Louis Guttman to integrate both content design and data analysis (Shye, Elizur and Hoffman, 1994). In an effort to move scientific research away from the emphasis on the experimental method and reliance on statistical significance, Facet Theory focuses on cumulative science and developing laws of science (Canter, 1985; Donald, 1995). The cornerstone of Facet Theory is the Guttman scale, which is a distinct pattern of observations that can be hypothesised and then tested. If empirical evidence is obtained, a theory can then be postulated from the hypotheses and empirical data. In the world of research, Facet Theory provides ways of identifying the components of concepts and then describing their interrelationships. (Shye, Elizur and Hoffman, 1994).

In addition to the contribution that Facet Theory makes to the research approach, the Guttman Scale feeds into multivariate statistics, which work on the same principles of scientific discovery and knowledge accumulation (Canter 1985). In these programmes, the nature of the concepts and their interrelationships can be tested, and this allows not only a limited number of relationships to be tested, but whole theories and models within a theoretical framework.

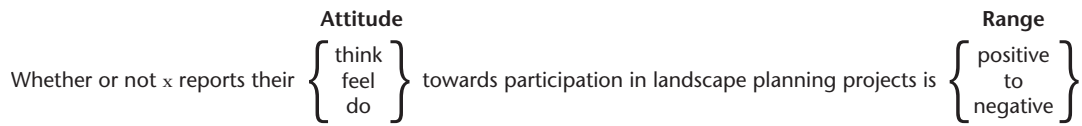
- **Facets** In Facet Theory, central issues are organised into facets, which comprise a number of elements. A facet is ‘a distinct conceptual category describing a discrete component of a particular object or area of research’ (p. 120, Donald, 1995). There are different types of facets. Background facets usually describe the population parameters. Domain facets are the central issues, and range facets describe the responses that could be provided for the domain facets. Within each facet are elements that are individual components of a facet. Each facet and the elements of which it is composed should be mutually exclusive in relation to the other facets and elements which are included in the research.
- **Mapping sentence** Once identified, these facets can be put together in a mapping sentence. A mapping sentence is a short and convenient method of specifying the facets that are involved in the research and the relationships between them. From this shorthand, a template (‘structuple’ in the language of facet theory) for questionnaire items can be generated. A full set will show all possible combinations of elements from all the facets. However, not all of the items need to be used in the actual research and, indeed, it may be the case that not all are able to be transformed into viable questions which can readily be asked and understood. The process helps, nonetheless, with the development and refinement of the mapping sentence.

Methodology

The methodology for the Strathdon project relied upon individual interviews followed by a broader postal questionnaire survey to sample a wider proportion of the whole community. The techniques were designed to elicit what was important to people about the landscape and what individuals’

- **Planning participation mapping sentence** The mapping sentence for evaluating participation in the planning process (Figure 3.2) was relatively simple as the aim was to explore the respondents' attitudes towards participation. As a result there was one domain facet (Attitude) and a Range facet.

Figure 3.2 | *Planning participation mapping sentence.*



Where x is from a population x of residents of Strathdon on the electoral register

Questionnaire items (Box 3.1) were developed based on the mapping sentences and the templates created from them. For example, Question A7, 'I live in Strathdon to enjoy a sense of history' is made up of Attitude 3 (do) and Place Quality 3 (history). The degree of positive and negative attitude is shown in the scale of agreement to the question by the respondent. The mapping sentences form the basis of the questionnaire (offering 15 possibilities for questions in all), but not all possibilities were used after piloting and refinement of the questionnaire. A few further questions were also added, such as A13: 'Forest and woodland are an integral part of this landscape for me', based on particular items raised in the interviews and the focus of the Crossplan project.

Box 3.1 | *Questionnaire.*

For Sections A and B, a 7-point attitudinal scale was used, from 'Strongly Disagree' to 'Strongly Agree'

Section A had 13 statements on Strathdon:

1. The quietness of Strathdon is a reason for me being here.
2. I am in Strathdon in order to be part of this community.
3. I take part in local activities.
4. I feel attachment to this place through family ancestry.
5. The landscape of Strathdon is a reason for me being here.
6. Strathdon is the place I feel most comfortable.
7. I live in Strathdon to enjoy a sense of history.
8. Strathdon is where I want to be.
9. Strathdon allows me to pursue what I enjoy doing.
10. I feel attachment to Strathdon through my friends.
11. I live in Strathdon to earn a living.
12. I don't intend to move away from Strathdon if I can avoid it.
13. Forest and woodland are an integral part of this landscape for me.

Section B had 3 statements on Landscape Planning:

1. I know about any plans for landscape in Strathdon.
2. I feel participation in local landscape planning projects is worthwhile.
3. I take part in landscape planning projects concerning Strathdon.

Section C asked for Background Information such as:

Age, gender, how long a person has lived in Strathdon area, main sources of income for household and current and past membership of local interest groups and pressure groups.

Questionnaires were sent to 101 people, based on every fourth person on the electoral register, and useable answers were obtained from 47 people, a 46.5% response rate.

Feedback to the community

The results from the interviews and questionnaire were fed back to the residents of Strathdon and members of the Crossplan programme at workshops and through a subsequent newsletter in Strathdon during 1999, as part of further community initiatives, which Crossplan entailed.

Interview results

Eleven male and eight female participants were interviewed, including two couples. Their occupations/lifestyles included pensioners, child carers, students, foresters, landowners, farmers and those involved in tourism. All lived in, or gained income in, Strathdon, with all but two living within the broad boundaries of the village.

What people like about Strathdon

Several key properties of place were repeatedly mentioned as making Strathdon special to people: community, remoteness, safety, landscape and family history and connections. Box 3.2 illustrates some of these properties with quotes from the interviews.

Box 3.2

What people like about Strathdon.

Community | Remoteness | Safety | Landscape | Family history and connections

Community

"Well to me there's a real community atmosphere here...there's just a real friendliness about it."

Young mother

Safety

"It's just the folk...nobody needs to lock their doors or anything, they can leave their car open and it won't be stolen."

Forester

Landscape

"To me, it's the scenery really and just the tranquillity of the place."

Local farmer

"Looking from Ben Newe or one of the other hill corners, you can look out, and it's such a patchwork of different land cover. You've got plantation forest, you've got arable ground, you've got the river, you've got built-up areas, you've got grazing; it's very bonny, it's a bonny area. You can see the different aspects of the culture of this part of the world: the background to the culture, what makes the people what they are."

Landowner

"Flowers, I really like wild flowers; lots of trees as well, very good to play hide-and-seek."

9-year-old girl

"I really like the forest."

Why is that?

"I just like all the places in it. And I like the river, I like swimming in it."

9-year-old

The overriding positive feature of Strathdon was the people and its community. The friendly, helpful and accepting nature of the inhabitants made Strathdon a good place to live for many. The accompanying feeling of safety was also a positive quality. The physical characteristics of the location were important and were tied to the economic life of Strathdon. While reaction to the planting and type of trees used locally was mixed, there was a general liking for the microclimate and landscape of Strathdon.

What people dislike about Strathdon

While most people liked a great deal about Strathdon (Box 3.3), there were also things that people did not like: isolation and remoteness, lack of economic opportunities, a perceived divide between incomers and locals. In many cases, the very things that people disliked were aspects of those that many had liked about Strathdon, e.g. remoteness and community.

Box 3.3*What people dislike about Strathdon.*

Isolation and remoteness | Lack of economic opportunities | Perceived divide between incomers and locals | For some, there was little to dislike

"Not really much that I can say that I honestly dislike about Strathdon, it's pretty typical in ways of much of the upper eastern highlands (and) rural communities. The only thing that I would say... is that it appears to have quite a strong community spirit, much more so than perhaps you might find in other areas."

Forester

What people would change about Strathdon

The wish to change anything in Strathdon centred on the economic and social life of the village (Box 3.4). Access to Strathdon, employment, its community and social places, and perception of forestry were key issues. The focus for many in the village during a time of financial uncertainty was how to maintain income. Traditional sources of income were declining. While tourism offered one source of income, and there were suggestions for ways to enhance this, there was unease that increased numbers of tourists would negatively affect Strathdon. People also wished to change the distinction between incomers and locals and how they related to one another. The effects of a separation between the people seemed to be reflected in how people took part in the life of Strathdon and its organisations and events.

Box 3.4*What people would change about Strathdon.*

Access to Strathdon | Social Places | Employment | Community | Perception of Forestry | Some would change nothing

Employment

"You've got to diversify up here, you can't rely on one thing. It's a worry to me how dependent we are on the government. I would say almost 40% of my income is now directly paid through various subsidies, rather than farming income that is, and that isn't a good position to be in, especially with changes in government ideas about how they want to do things."

Landowner

Community

"I think the main problem is...that people are no longer willing to run things in rural areas. I think 20, 30 years ago, 50 years ago, people gave up their leisure time to run organised groups. (Now) it's the same few people who are running everything and Strathdon is no exception, I would say."

Local mother

Perception of forestry

"Forestry has remained the realms of the land owners' remit and agriculture has been the tenant remit, and that has been where the link between the community and the forester's gone...We don't have enough community involvement in small woods management..."

Forester

What people would not change about Strathdon

The most important feature that people wanted to retain was the character of Strathdon as a place that was quiet, rural and with its own, local facilities (Box 3.5). Tourist development would ideally work within these current characteristics, and bring money to the area, but not damage it.

Box 3.5*What people would not change about Strathdon.***Tourism | Landscape | Local Amenities | Some acceptance of inevitable change****Landscape***"(I wouldn't like it if) all the trees had been cut down and scarred the landscape."*

Local teenager

Inevitable change*"One thing that is going to happen, come what may, is that there's going to be change. So long as it's treated carefully and fits in with the landscape as it is at the moment, then there's nothing wrong with that."*

Landowner

What sums up Strathdon for locals

People were asked to sum up what Strathdon meant to them in one thing (Box 3.6). For some it was a traditional social event, the Lonach – the famous local Highland Games and Gathering. For some it was the community, the physical environment, constancy in a place, or some special and particular moment in that place.

Box 3.6*What sums up Strathdon for locals.***The Lonach (Highland games) gathering | Community | Physical environment | A special moment | Constancy****Physical environment and community***"The solitude I suppose... well it's home now isn't it...Just away from the rat race. Yet if you want help, your neighbours through the wood, up the glen, they'd come."*

Local farmer

A special moment*"I think probably 1986 mid-summer day, June the 21st. We climbed to the top of Ben Newe at midnight ...and it was the most beautiful night and the sun was going down and all the sky was red with the sun going down, wasn't a cloud in sight, and the full moon was coming up red on that side and it was quite fantastic. And we had a little snack at the top, which included a little bit of [whisky], and then we discovered we were covered in frost. We were all white. All our anoraks and everything. But it was just fantastic. So we just sat up there until daylight. It was a marvellous view and a wonderful experience."*

Local teacher

The physical and social landscape

To summarise the results of the interviews, the physical and social environment were both important. The landscape around Strathdon was a defining feature of the village and its physical setting, including the relatively benign local microclimate, was well liked. As part of Robertson's interviews (Chapter 4), the landscape was generally described in terms of the hills, trees, heather, farmed land and the river.

While the abundance of certain commercial forestry species was not necessarily liked, people appreciated the forestry for providing shelter, jobs and visual interest, as well as a place for walks and picnics. They understood the economic demands and benefits of farming the land and the changes that happen when trees are grown for a crop. While the remoteness presented problems for getting to some amenities, this was generally seen as a trade-off with the perceived benefits of living in a remote place. People liked also being within reach of larger towns and amenities and felt that road access could be improved to encourage tourists to visit, which would then generate income. This needed to be balanced with maintaining the spirit of the community and was one of the central debates linking many aspects of the place evaluation: how to increase revenue whilst not spoiling the beauty and isolation of Strathdon or its community.

Village children enjoyed the ways in which they could use the landscape and how it looked. Adults focused on how it related to their social environment in terms of how it matched the character of local people and the isolation that it provided. The strong community, the friendly people, their helpfulness and acceptance of different behaviours were the main attributes of Strathdon and the reason that many liked to live there. However, the perception of a chasm between ‘incomers’ and ‘locals’ was of concern for the village’s cohesion and sense of community. Strathdon has a great sense of history and ancestry associated with it and, for many, this is their family home and where they belong. For others, it is a place where they have lived for over ten or twenty years and yet are still made to feel like outsiders and unaccepted in the established community. One issue that may force integration and acceptance is the economic state of the village. The struggle to make farming pay and the change in forestry and landowning practices may mean that some people will have to leave Strathdon, or that Strathdon will become dependent upon new sources of income. Without such renewal there is a likelihood that all the village services, such as post office and shops, will disappear and, with them, the heart of the village.

Questionnaire results

The demography of the questionnaire population showed that the age group distribution is slightly skewed towards the age groups of 55–65 and over 65. Nearly 50% of the respondents had lived in Strathdon for 10 years or less, while 15% had lived there for 50 years or more; over 27% could trace back their family ancestry in the Strathdon area for more than 100 years. Farming and tourism accounted for less than 13% of the sample’s income source, and 26% of the sample rely on more than one income source.

A correlation matrix between the 13 questions in Section A (Table 3.1) suggested four main categories of evaluation: physical environment, social issues, economic issues, and ‘being’.

Physical environment

For the majority of respondents, the landscape is important to them and forestry and woodland are important as an integral part of this landscape. For many, these are very important elements (Figures 3.3 and 3.4), with quietness being important also, but to a lesser degree.

Social issues

Social issues can be summed up by the importance of the community (Figure 3.5) and, to a lesser extent, friends, and most but not all respondents agreed that they take part in local activities. The divide between incomers and locals was reflected in a mixed response to the importance of attachment to Strathdon through family ancestry.

Economic issues

Only 34% agreed that they live in Strathdon to earn a living (Figure 3.6).

Being

Responses to a range of questions about a sense of being in Strathdon, its importance to what people enjoy doing and to their sense of history, confirmed that there is a strong place attachment to the village and its context (Figure 3.7).

Participation in landscape planning

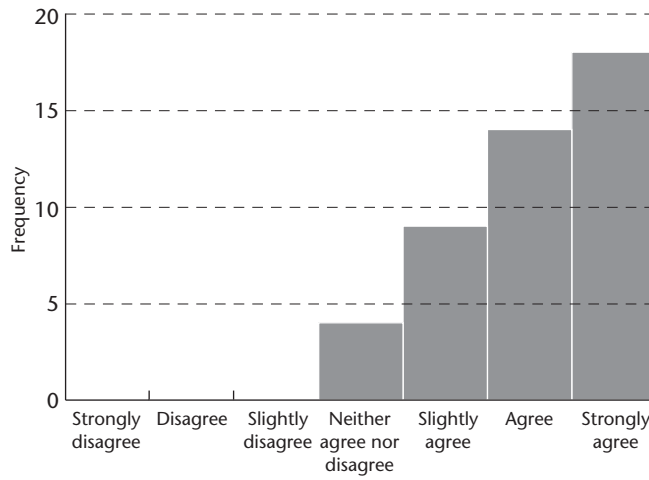
Table 3.2 shows the correlations between questions regarding participation in local landscape planning processes. The only statistically significant result at the 0.01 level is between knowing about and taking part in such projects. This implies (not surprisingly) that knowledge of a project has a direct relationship to whether a person will participate. There is also a statistically significant result at the 0.05 level between taking part and feeling that it is worthwhile. This implies that a belief in participation as worthwhile is linked to whether or not a person does in fact participate.

Table 3.1

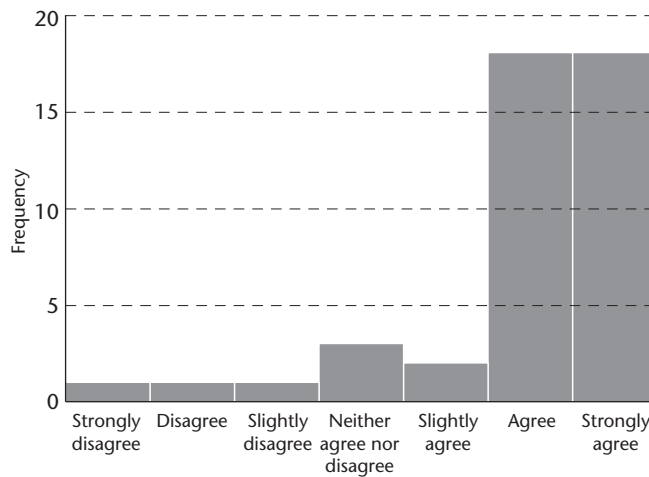
Correlation matrix for the place evaluation questions. Shaded areas indicate correlation is significant at the 0.05 level (2-tailed).

	Quietness	Part of this community	Local activities	Family ancestry	The landscape	Comfortable	A sense of history	Where I want to be	Pursue what I enjoy doing	Friends	Earn a living	I don't intend to move
Quietness of Strathdon is a reason for me being here	X											
I am in Strathdon in order to be a part of this community	.081	X										
I take part in local activities	-.234	.551	X									
I feel attachment to this place through family ancestry	-.025	.508	.281	X								
The landscape of Strathdon is a reason for me being here	.757	.004	-.206	-.029	X							
Strathdon is the place I feel most comfortable	.456	.167	-.106	.194	.473	X						
I live in Strathdon to enjoy a sense of history	.248	.443	.112	.478	.287	.505	X					
Strathdon is where I want to be	.299	.488	.074	.223	.123	.660	.446	X				
Strathdon allows me to pursue what I enjoy doing	.171	.245	.001	.038	.235	.390	.198	.407	X			
I feel attachment to Strathdon through my friends	.302	.377	.307	.308	.307	.122	.464	.019	.162	X		
I live in Strathdon to earn a living	.079	.390	.339	.478	-.094	.155	.223	.328	.324	.241	X	
I don't intend to move from Strathdon if I can avoid it	.100	.493	.088	.212	.085	.477	.365	.788	.331	-.056	.260	X
Forest and woodland are an integral part of this landscape for me	.083	-.250	-.085	-.405	.138	-.213	-.113	-.374	-.178	-.221	-.370	-.302

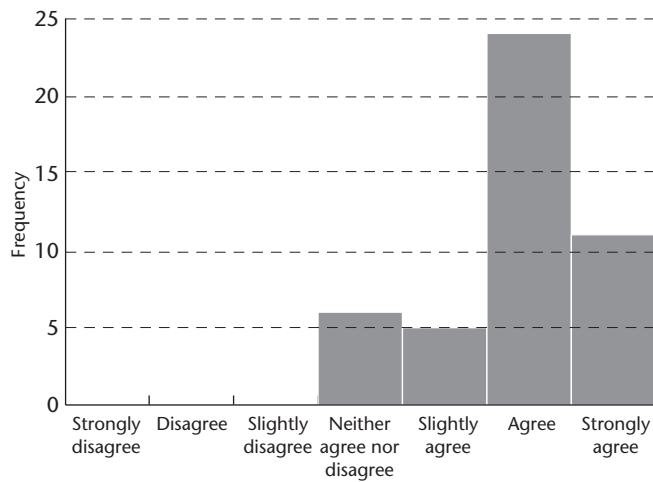
What these correlations also show is that there is not a relationship between believing that participation is worthwhile and knowing about any plans. Belief in participation does not mean that people will be active in finding out about plans, nor does knowledge of projects mean that people will believe participation to be worthwhile. This is reflected in the responses to individual questions, which revealed that, while at least half the respondents know about plans for Strathdon, and the majority feel participation in local landscape planning to be worthwhile, only a minority agreed that they do actually participate.

**Figure 3.3**

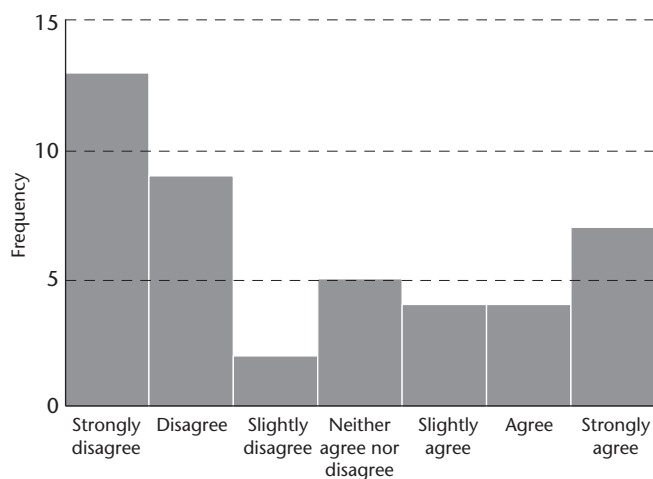
'The landscape of Strathdon is a reason for me being here.'

**Figure 3.4**

'Forest and woodland are an integral part of this landscape for me.'

**Figure 3.5**

'I am in Strathdon in order to be a part of this community.'

**Figure 3.6**

'I live in Strathdon to earn a living.'

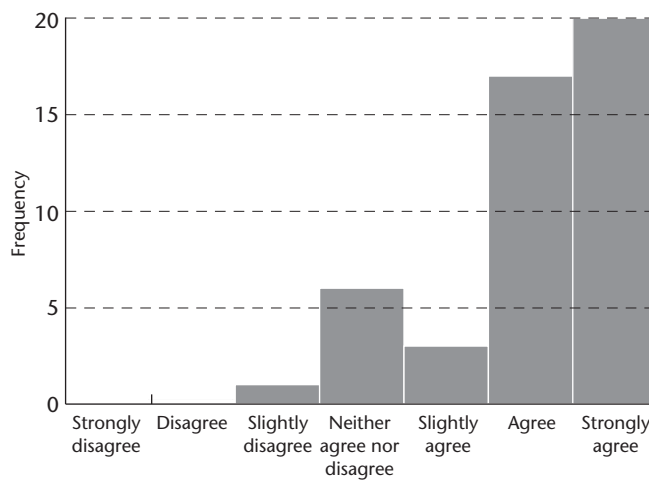


Figure 3.7

'Strathdon is the place I feel most comfortable.'

Table 3.2

Correlation matrix for the landscape planning participation questions. Shaded areas indicate correlation is significant at the 0.01 level (2-tailed).

	I know about any plans for landscape in Strathdon	I take part in landscape planning projects concerning Strathdon	I feel participation in local landscape planning projects is worthwhile
I know about any plans for landscape in Strathdon	1.000		
I take part in landscape planning projects concerning Strathdon	0.587	1.000	
I feel participation in local landscape planning projects is worthwhile	-0.045	0.335	1.000

Summary and discussion

To summarise the results outlined above, Strathdon is largely a place where people *want* to be; it is not a place where people *have* to be. Economic issues are not the driving force for living there. Indeed, some people seem to live there despite the hardships of the tenuous economic situation, isolation and demanding environment. But within this, there is a thriving social community, which binds together: the landscape provides a backdrop for the community, both physically and mentally, and is part of the cultural and individual identity of the people of Strathdon.

The results from the interviews highlighted two main themes: the physical environment and the social environment. Of these, the most dominant feature was the social environment. This confirms previous studies of place evaluation (Donald 1994; Scott 1998) where qualities of the social environment override many of the qualities of the physical environment. Indeed, within the discipline of environmental psychology it is generally accepted that, while the physical environment has a significant role to play in everyday life, this role is rarely explicit unless a feature of the physical environment obstructs, prevents or otherwise interferes with a person's objectives. In the context of understanding local community response to landscape change, therefore, it is important to understand that the role of the physical environment is largely to provide the setting for a social environment. Unless a place is evaluated in a superficial manner, such as by a tourist, the social environment will be the main feature of that evaluation. This is not to diminish the impact of the physical environment upon a community, but to make clear the mechanisms that are occurring in a place evaluation, and therefore to understand how a change in the landscape may or may not affect a community.

In the case of Strathdon, although many people recognised that the forest, and indeed the agricultural landscape, might change quite significantly over the next twenty years or so, they were often accepting of this as part of rural life. People were keen to see change in economic opportunities

but aware that this might have negative as well as positive effects on Strathdon's isolation and sense of self-sufficiency. What concerned people most was whether traditions in the village might change, and with them the mutual trust and support that are so important.

The relationship between the physical and social environments is transactional (Canter, 1985; Scott, 1998). In essence, if changes are made to the physical environment, whether people think that these are good or bad changes will depend on the extent to which they affect how they can carry out their jobs and tasks. Equally, if their jobs or responsibilities change, what they want to do will also change, and so will their perception of the suitability of the physical environment. In the context of Strathdon, this means that people will judge the success or failure of a planning project on the degree to which it brings them economic benefit and how it affects the community and personal identities. So the concerns about change in the landscape were focused on what visual changes might *mean* in terms of social change – would the forestry felling bring new tourists into the area (good for the economy) or lead to job losses and fracture of the community? Landscapes associated with memories of key emotional events were seen as important and this attachment reflects the way landscapes become part of people's personal identity. Changes to that landscape can lead to strong reactions of hostility or grief. This does not mean that people will oppose change, but that the change should be carefully considered and the reasons for it well understood, because changing a person's anchor point may trigger an intense and emotional response.

In this context, knowledge of the differences between the three components of attitudes to participation in the planning process is important for the management of participatory planning. People knowing about a project and the opportunity to participate does not mean that they will take part, nor that those taking part have a good knowledge of the project. Though people may consider the general idea to be worthwhile, this does not guarantee their involvement, nor that they will actively seek out opportunities to participate.

Conclusions

The issues discussed here cast doubts on the effectiveness of attempts to understand attitudes to landscape change which focus predominantly on static visual features and which assess their impact through a series of generalised preference judgements. Such psychophysical approaches have been popular in the past and may reappear with the increasing sophistication of computer visualisation techniques, but they provide only one window on the complexities of real judgements in practical situations. What the research points to is the importance of understanding people's beliefs, wants and experience in relation to the landscape, over time, if planners and designers are truly to anticipate how they are likely to respond to change.

Provision for effective stakeholder involvement in the planning process thus continues to be a challenge for those responsible. As a profession, landscape architects are involved very much with the visual and physical landscape but, in order to engage stakeholders meaningfully in decisions about change, it is necessary to employ methods, which explore beyond these dimensions. The methods described here can contribute to the process and provide an opportunity to clarify key issues but may not necessarily resolve all conflicts or satisfy the objectives of all interested parties. Expectations of the suitability of the final outcome may be raised through the participation process and if these expectations are not met, resentment may result. Management of this process is key to its success.

The methods described here can be used in other ways, to explore more specific aspects of a landscape context and more explicit possibilities for change. Personal construct psychology provides a sound basis for exploration of the transactional relationship which people have with their environment, and for eliciting core values in relation to that environment. Facet theory offers a useful tool in defining the basis for gathering qualitative, empirical evidence on people's behaviours and responses to issues within a clear structure of concepts and hypotheses. In this project, the combination of interview transcripts, giving detailed personal responses, and questionnaire results from a more representative sample gave a particularly powerful insight into people's perceptions of the landscape and their sense of place.

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The potential for participatory planning in rural communities in Scotland

Stephen Robertson

Introduction

This chapter looks at perceptions and possibilities regarding landscape planning and involvement within the community of Strathdon, Aberdeenshire. It is based on an MSc thesis, which aimed to explore the following questions:

- Who might be interested in participating in the planning of local forests and why?
- Who would not be interested, and why not?
- Is there likely to be active resistance to such an undertaking, and if so, from where?

The evolution and understanding of the terms *community* and *participation* are well-documented elsewhere (Govan *et al.*, 1998; Scottish Office, 1992; Bradley, 1984; Bryden *et al.*, 1995; Cohen, 1985), however, it is important to be clear about their use here.

Community

Rural communities conjure up, for many urban dwellers, an image of rural peace and conformity. In reality, of course, rural communities are as complex, dynamic and diverse as urban ones. The Rural Forum Good Practice report offers the following definition:

“Community is taken to mean a group of people who live in the same area, or share a particular feature (such as type of employment), have a common social or cultural identity, or a common aim or interest.”

Rural Forum, 1997

Within this definition, it is the geographical and social aspects of community that apply to Strathdon that are of particular interest in this chapter: those who live, work and share social activities and relationships, within the administrative and geographical boundary of the upper catchment of the river Don. Furthermore, the chapter examines issues arising from the potentially conflicting nature of the diverse interests, skills, abilities, political views, histories, needs and aspirations of the members of the Strathdon community in the context of their participation in forest landscape planning.

Participation

Participation, therefore, as used in this context, means much more than consultation. Participation involves a far greater commitment to the empowerment of a community in the decision-making process of planning, management and development. It does, therefore, mean a change in the traditional way of doing things and a shift in the *status quo*. The Forest and People in Rural Areas report (FAPIRA) describes participation in forestry as being necessarily:

“Any situation which intimately involves rural people in the planning and management of a forest or tree-related activity, when these activities are oriented principally towards increasing the benefits of forests and trees to present and future generations of local people.”

Dudley, in FAPIRA 1995

See also the definitions offered by Broadhurst in Chapter 2, in the wider context of forestry and public involvement.

Forest planning

Traditionally, forest planning has involved forest owners working with forest managers and planners (the experts). At one time, in Scotland, the landowners and their managers were also a part of the community, but this is increasingly less common, with many estates being owned by absentee landlords and few managers or even workers now living on the estates.

Participation in any aspect of forest planning must therefore seek to develop ways of reconnecting the interests of owners and managers with those of the community in the planning of a forest, for their mutual benefit. This provides many challenges to landowners, managers, agencies and local communities.

The key issues involved, therefore, are largely defined by the extent to which local people are willing and interested in coming to terms with three new areas of influence: participation with the landscape, participation with the experts and owners, and participation with themselves, the *community*.

Methodology

The research was carried out in the summer of 1999, interviewing the same people as those selected by Margaret Scott Myers (see Chapter 3), though asking a different set of questions, and one focus group, in order to engage people in a wider discussion. The research is therefore qualitative in nature and its applicability to places beyond Strathdon cannot be guaranteed.

Interviews and the discussion were recorded and some of the verbatim responses have been reproduced here in order to give a flavour of the comments that were made. This chapter is a distillation of the main work contained in the MSc thesis.

Results

The importance of forest and woodland landscapes

In this section the level of importance and interest in forest and woodland landscapes is examined. Clearly, if agencies expect local communities to participate, it is necessary to see to what degree people consider forest landscapes important enough to care about what happens to them. A large part of the original research looked at the strength of attachment to the land, landscape and trees amongst those interviewed, (Robertson, 1999 and Scott, 1999). It was clear from the interviews, that all of these distinct areas play an important role in the life of the Strathdon community. Indeed for many, the land, landscape and trees help define and reaffirm who they are, and were a large part of the reason they continued living there (see Chapter 3).

"Just wouldn't be Strathdon without the trees."

Local/Teenager/Male

"I wish there wasn't so many trees ...up on the skyline. Wish we had more heather. ...Some of the trees are quite beautiful, ...quite superb, but then you see all of the old stone dykes which have been built up over the last couple of hundred years, and you've got trees growing up either side of them, ...pretty extensively planted, with no thought given to it."

Incomer/Landowner/Male

Whilst detailed information, such as the above, is obviously relevant to planners seeking to involve the community, many respondents showed less willingness to express direct opinions. One of the most effective ways to draw out information about the landscape is to ask a question about personal experiences, such as, *What single thing from your experience sums up Strathdon for you?* The depth of feeling suggested by replies such as the following example, are very revealing, at least of the importance and acceptance of forests in the lives of many people.

"I expect it would be the night that my husband and I came home, I think it was a dinner dance. My mother-in-law was there, babysitting for the two girls. We woke the girls up... and we went for

a walk – this must have been about four, half past four in the morning – and we went round, you can go all the way round this sort of block [of mature conifer plantation around the house] and come back to the house. And we heard the dawn chorus coming in, but we couldn't see any of the birds [in the complete darkness]. So that'd be, yeah, that'd be quite good."

"The girls thought we were mad!"

Local/Housewife

Thus, it might be expected that in a fairly heavily forested landscape such as that of Strathdon, a reasonably large proportion of people feel that forest landscape planning is a sufficiently relevant issue in their everyday lives to take an active part in any project.

Can the community work together?

Two key constraints to community development were identified in the Cairngorms Forest and Woodland Framework (which includes Strathdon), these were: indifference to the process on the part of the community, and subversion of the process by individuals or vested interests (Cairngorms Partnership, 1999). These issues of active and passive resistance to change are obviously vital to identify and are clearly represented in the concerns and opinions expressed by respondents in this research.

The extent to which members of the community of Strathdon might be willing to work together were highlighted by issues such as a perceived lack of community support and a reluctance to contemplate change, either within the community itself, such as conflict between locals and incomers, or to accept change within the landscape of the strath.

Lack of community support

There were several comments from respondents that suggest that there could be no place for community landscape planning initiatives in Strathdon, as there were already too many under-attended initiatives underway. It was suggested that this was not necessarily because of the viability of the proposals or projects concerned, but rather that community involvement was not the modern way.

"You say to some of them...will you back me? 'Aye, aye.' But when it comes to the crunch they won't come with you."

Incomer/Businesswoman

"...people are full of good ideas, but when it comes to getting there and doing things they're not so keen. But I think it's just the type of people we are in this day and age."

Local/Businesswoman

This problem was compounded, it was suggested, by the fact that when older people who have traditionally provided facilities or organised activities, retire or die, no one is willing to come forward to replace them. Some of these activities would have traditionally been related to the Church, or to groups such as the Scouts or Guides, and have perhaps now evolved into something else. This could help to explain some changes, but there are many other possible reasons for a perceived lack of community support.

A key issue seems to be the time commitments necessary, especially within a sparsely populated rural area such as Strathdon¹. One relatively large group of people who find themselves in this situation are mothers of young children. Often the issue behind the non-representation of this group would appear to be the lack of the resources of transport, childcare and finances rather than simply that of already having too much to do. Therefore, rather than being the spirit of the age, the incentives for people to participate must evolve out of the traditional structures of community involvement, into something workable for the present day. Such an evolution means contemplating change, which itself can be divisive in a community with many conservative aspects.

¹The total population on the electoral register at the time of data collection was 400.

Social change

There was a general feeling of disappointment expressed by many of the individuals who were interviewed concerning the rapidity of social change in Strathdon. Many of the concerns, conflicts and differences present in rural society in general, were labelled as aspects of local/incomer² conflict. Whilst there was some clear animosity expressed regarding the dynamics of these two groups working together this tended to overlap with other perceived conflicts and problems, such as a general dislike of social and landscape change. Actual differences of opinion and community conflicts often appeared to be as strong between individual incomers as between individual local people or groups.

"I've no objection to what anyone else does, that's sensible...unfortunately as far as I'm concerned, there is a distinct divide in this district now: incomers and locals."

"...The incomers, an awful lot of the ones...are running away from the rat race, or from something anyway...and they've come up here to what I call 'the good life,'...and they tend to arrive, and they tend to start and dictate and interfere and one thing and another."

Local/Businessman

"People are nice...there's meetings been held and there's this people, you know, new people, that don't mix...they've each lot of people have nothing against the other, it's just that, well they're just so different."

Local/Businesswoman

"It's the incomers that are fighting to do something with the place and improve the place...But then the locals are so stuck in their ways they're not going to see it in these terms..."

Incomer/Forest Industry Worker/Female

Deeply seated and heartfelt feelings and beliefs mentioned by respondents under this heading touch on areas, which include: trees for profit, the work ethic, dynamic communities and landownership.

The incomer/local conflict is clearly an area of concern for planners, acting as it does as a focal point for the expression of anger or fear regarding change. A perceived apathy or indifference surfacing in a lack of community support is also real, relevant and addressable. Major areas that appear to be relevant here, include: communication, information dissemination, education and project funding and support facilities.

Landscape change

An important issue for forest and land-use planners, is the subject of landscape change. Attitudes towards changes in the forest landscape would appear to suffer from a (perceived) lack of accountability, transparency and available information regarding existing forest operations such as timber harvest or applications for Forestry Commission grants. This contributes to a lack of knowledge and therefore interest within the local community, and makes it difficult to identify the true value of initiatives such as forest landscape planning.

Many of the perceptions about landscape change convey a feeling that the landscape is good the way it is and that change is neither necessary nor desirable. This is obviously linked to the ability of forest planners and managers to involve people in planning when there must necessarily be changes to the landscape as part of the normal course of events.

"That's what I like about Strathdon, you see, everything's the same. No change."

Local/Businessman

"Well, I wouldn't like to see any [change]. I think that the landscape's fine as it is, quite honestly. It's got some forestry walks and things, I'd maybe like a bit more, somewhere I could go with my children for a picnic at the weekend."

Local/Businesswoman

²Incomers: new rural residents or counterstream migrants, who were born outside the geographical community. Other terms used to describe incomers during this research included: hippies, new-agers, good-lifers, new people, white settlers and English. These terms usually tend to carry an underlying negative connotation (see Shucksmith, 1996).

"It's not just about change though, is it? The place is full of trees anyway, it's just sort of more planned planting rather than just acres and acres of spruce...Gordon Woodlands have set up walks, set up car parks and things, and there's a load of people coming out from the towns, 'cause it's a great buzz to be able to walk in the country if you're a pavement person, and that's a good idea."

Incomer/Forest Industry Worker/Female

Participation with experts: distrust of the process

A further conflict expressed by respondents during this research was a distrust of or discomfort with the traditional consultation processes of development (in the local authority planning meaning of the word) as well as forest planning and with the experts who control them. The feeling that planners ignore the views of consultees may have deeper roots in the local or Scottish psyche. Public meetings in local village or school halls with a layout of furniture and power structures similar to what many interviewees remember from their school days might reinforce this feeling of powerlessness. Many people also feel intimidated at speaking in public meetings. The feeling of some respondents was that they might be laughed at for 'silly' or 'ignorant' replies. There is also cynicism that these meetings are only held to present proposals that are *fait accompli* and are only a ritual that has to be carried out because the Council or Forestry Commission insist on it.

"I'm not very good at voicing my opinion at that kind of thing. And I just think I'd say such...stupid things. That people would say: 'What? What you saying that for?'"

Incomer/Mother

"Who – the forestry bosses?...We were at a meeting the other week there about the forestry...Yes, they listened. But they more or less told you what they were going to do...They didn't say, 'Do you approve or disapprove?'"

Incomer/Businesswoman

These views relate to particular methods of or approaches to consultation and cannot be described as participation in the sense used here. However, such experiences mean that there is suspicion and distrust about any process where experts or authorities take the initiative.

Culture of experts

There is also a reluctance to participate in what was deemed 'expert' terrain, expressed by both male and female respondents from a wide variety of social backgrounds. This reluctance was also felt by some of the respondents who were already expert in various (particularly practical) aspects of forestry, planning, and community involvement. However, personal roles as well as gender roles still appear to decide what many individuals considered 'their business', particularly with regard to the perceived or stated roles of expert and non-expert. A perceived inflexibility and lack of accountability of agency and government systems can help to perpetuate this expert/layman stereotyping.

"I don't think it's my place really...I don't think it's for me to go to Tilhill or the Forestry Commission ...and say, 'Look here, that's not how you should be doing it,' because I'm not a forester...There's folk trained to do that job... just as I'm trained to do this...everybody to their own..."

Incomer/Landowner/Female

"To be quite honest, I don't think the local community has got enough knowledge of what they're talking about to get involved in it."

Incomer/Forest industry worker/Male

"I won't call it a recipe for disaster... but I think that if you get a whole lot of amateur input into what should be planted...you'll get somebody with a bee in their bonnet saying that surely the trees ought to go down there. And you'll have the most frightful argument...and you may have nonsensical things occurring because of lack of knowledge..."

"...The what, and how, and when, the sort of management thing, that ought to be left to the [owner]. ...Like trying to run a garden, they'll all have different ideas...but only a Pro can say, 'Well yeah, that's going to grow and that's not...' and that I think is the key to it."

Local/Landowner/Male

Community involvement does, however, appear to be very much the modern way, and is deeply embodied in the new millennium *Zeitgeist* that has started to confront the culture of 'experts'. Accessing and encouraging a willingness to contribute and translating it into action, would presumably involve successfully challenging this 'fear' of entering terrain where one 'must be an expert'. This would appear to highlight one of the biggest obstacles for planners wishing to involve rural people in planning.

"Public perception of forestry, is what I'd like to change...We don't have enough community involvement in small woods management."

"...I think that people who are involved in forestry tend to be much more accepting of change because they understand it as phase of a long-term process. I think this has problems with other people who have a more short-term perspective..."

Incomer/Forest industry worker/Male

A split, indifferent, apathetic community?

There is evidence that the community is to some extent split (between locals and incomers) and cynical and indifferent (to the idea of participation). Interviewees also suggested some solutions for overcoming this situation. These include a degree of risk-taking, particularly on the part of those who hold power at present, and confronting the issue of land tenure, areas which were repeatedly mentioned by respondents.

A general understanding of forest and land-use history seemed to be lacking in many respondents, both 'local' and 'incomer'. This level of ignorance amongst the inhabitants of Strathdon is at first surprising, given the long association with the land that many of the older residents have. It may be typical of the current situation in rural Scotland and is perhaps the result of an almost complete severance from, on the one hand, a forestry tradition and, on the other, of any sense with 'stewardship' of the land.

An example of this 'psychological distance' from the land, and from the planning process is seen in the annoyance expressed by many at what they saw as the poor planning and lack of foresight in the forestry plantings of the 1950s and 60s and distrust and suspicion towards the modern forestry industry. This inheritance is, perhaps unfairly, contrasted with the potential for forestry, and of the positive changes in forest practices over the past decade, represented here by Crossplan.

There was evidence of a widespread lack of understanding or acceptance of either the fact of, or the need for political, social and cultural changes, or of such factors as the longer timescales involved in forest operations compared to other land-use activity such as agriculture.

The suggestion is to restore this link, not necessarily through radical land reform, but by fostering a new sense of active participation by the community, with a wide range of benefits for both landowner and community as the outcome.

"I think we have had this century a natural drift away from the integrated use of land to a much more urban-based community, and also people who are in rural [land-use management]...have had less and less involvement in pure forest management. What information they have had...is...incidental to what is, basically, an agricultural enterprise...and that is as much to do with land tenure as anything else."

"...[This has led to a] separation between agriculture and forestry...and forestry has remained in the realms of the landowners' remit and agricultural tenant remit, and that has been where the link between the forest and the community has gone..."

Incomer/Forest industry worker/Male

However, there was concern as to how such participation is organised, in case it causes more problems than it solves. In any community there are some with a lot of energy and commitment to try to influence their environment. They may be seen as either troublemakers or community activists.

"It's something I don't think you can dictate about. You have to let it happen naturally. And if there's things happening which are not right, then I think you have to try and stop it. But if you just say we'll do A, B, C, D and E, it'll totally backfire, because...you'll please one group and you won't please another..."

Incomer/Landowner/Male

Would you participate in forest landscape planning?

One thing common to many of the answers to this question, was that they touched on the issues of information and education: What has this got to do with me? How could I help if I was interested?

It was clear that overall there was an interest in participating in planning initiatives, but translating this into action involved finding out more about the community. Finding out what its needs, norms (Putnam, 1992) and expectations are, and fitting any future work into these areas and addressing existing needs is an important task. Some people see a role for themselves, others are not so sure.

"I don't see what it's got to do with me."

Local/Businesswoman

"Me personally? Oh help, ...I don't quite know how that would work."

Local/Landowner/Female

"Aye, I would like to be there, probably to balance the thing out and try and explain...It's all right for conservationists to say, 'shouldna hae this, shouldna hae that, but I would like to be able to say: 'Well, this is why they're daein' that.' There's a lot of them dinna understand why it's being done, and how the trees cannae be left for ever onywy..."

Local/Forest industry worker/Male

"I think I would definitely be interested in that...What I feel I can do is to improve people's education a little bit about what they have."

Incomer/Landowner/Male

An example of a possible norm influencing who would participate, is that of gender roles. These, particularly between partners/husbands and wives, were strongly defined for many. Although this did not appear to affect willingness, it certainly may affect the ability to participate. The case of young mothers being excluded from participating in community activities because it is their role to look after the children is one example which may seem old-fashioned in an urban context but is less so in rural areas. Thus, giving everyone an equal chance to participate means providing information, education and support, such as childcare.

How aware are people of opportunities to participate in landscape planning?

One reason people do not participate in activities is because they do not know about them. What has been the actual degree of contribution to existing participatory forestry or landscape planning exercises in the local area? How well have these been supported? What are the causes of success or failure?

There was a low level of knowledge about existing participatory processes taking place in Strathdon. These projects included a large Environmental Assessment³ for a new native pinewood restoration project that had been underway for some time, and the Crossplan project, which was, at the time of conducting the interviews, only just starting. This lack of awareness is perhaps as much a problem with the participatory process of Environmental Assessment, as a lack of knowledge or interest by the local community in participation in landscape planning.

"I've heard there's something going on in the forestry but I don't know what it is."

Local/Teenager/Male

³A formal Environmental Impact Assessment may be required if there is likely to be a significant impact on the environment, initiated under Directive of the Council of Europe No. 85/337. Owners need to submit an Environmental Statement to the Forest Authority for consideration, and copies of this are then displayed publicly. E.g. in this case, the local Forest Office 30 miles away, and the village Post Office.

"I remember about a year ago they were going to cut the trees behind...beside our house and we sort of got together and said don't do it, and so they left it for another twenty years...Because it's got a lot of shelter and that with the snow and..."

Local/Teenager/Female

"I'm nae too sure about that one that was held in the Colquhonnies [local hotel]...that was to do with landscape and the future...They never mention it until they're just about ready to go..."

Local/Forest Industry Worker/Male

"...there's plans for a big forestry thing on...that hill that was in the Piper [local paper] the other day...and they're wanting your views. It's all in the Post Office what they're intending to do. I don't see what it's got to do with me. I heard a comment in the post office the other day... '[The estate] will be making lots of money out of this...' But then it's their hill."

Local/Businesswoman

Thus, part of the problem is how to make people more aware of opportunities to participate in any projects that are started, and to ensure that they are invited to take part and made welcome by the project initiators.

Do people see a role for the community in forest landscape planning?

One answer to this question is: No, it is up to the landowner. Forests are for money, not people. A broad distinction can be made between those who saw the countryside in general and forests in particular, as first and foremost a working environment, and where the landowners should be able to decide what they do on their land, and those who saw commercial return from the land as of lesser importance, and where there should be a greater say in land management by the wider community. This was often revealed as a conifer versus broadleaved argument, or commerciality versus amenity.

Furthermore, the funding of this working landscape through agency grant aid, and a perceived lack of transparency in systems drawing on public funds were seen to contribute to the feeling of distrust and cynicism noted earlier, particularly in initiatives that could be perceived as non-productive (where the local benefit cannot necessarily be seen directly), such as landscape planning. Crossplan, for example, was criticised by some people, for wasting large sums of EU (public) money.

Should the community be involved?

"Not to my mind, no. I think that you buy your wood, you buy your land, and basically that gives you the right to do more or less what you like with it. If you invite comments, fair enough, but if you don't, so be it."

Landowner/Incomer/Male

"It's quite difficult because you must also look at...land ownership...You have a situation where you have someone who owns an area of ground, and whilst they may accept that community involvement is something that they wish to foster...you may also end up in a situation where the community's wishes and the landowner don't always coincide."

Incomer/Forest Industry Worker/Male

"I'm sure there should be. People don't own land up here you see, it's all rented property...so these people have always dictated what happened...in the landscape."

Incomer/Landowner/Male

"If the estates got a bit of an incentive just to do that [involve the community] I'm sure they'd be quite keen, because they're nae getting anything back frae their forestry just now."

Local/Forest Industry Worker/Male

What about you personally?

"Ah, that's nothing to do with me, it's whoever has the forest. They're using it to make money off the trees and what not...maybe it doesn't look very nice...the straight geometric set-ups...but they've got to get in there and harvest them so folk can make a profit out of it."

Incomer/Businesswoman

However, there is a different view. Initiatives like Crossplan, and the opportunity it presents, can be another way of meeting this challenge and empowering people who traditionally have not had a role.

"...In areas like this you must encourage initiative...whether its a big estate or a smaller...There is a very negative attitude in this area...where the ones that have had their chance and haven't taken it always come in, 'Oh, I know why he's doing it,' or 'She's doing it, they'll make money off it.' Well, why didn't they do it?"

Incomer/Landowner/Female

"A total change in the structure of society, really, is, I suppose, what you're reflecting, aren't you?...I think Strathdon is still a bit of a backwood, in that there are still a lot of people here who are still pretty humble in their approach to life...They just don't feel that it's their place to have anything to do with the land round about them. It's passable to grow tatties or things in the garden, but that's about it..."

Local/Landowner/Female

"We've got to have landscape planning, and I'd like to see a lot of broadleaved trees more, you know...And I think, where to put them, or what to plant, or what part of the landscape, its got to have a lot to do with the public to think...[It's] to everybody's benefit, not just to the Laird, that he wants a puckle trees plantit here...and I think the public, the inhabitants have to have a wee bit of a say...[However] some of them comes away with some fantastic ideas which I don't always agree with..."

Local/businessman

Landowners and participation

This issue was one of major importance for some of the respondents, particularly farmers and others who had managed to buy their own land. These respondents (none of whom were from traditional landowning families) saw greater freedom to buy land as a major contributing factor to a more accountable and dynamic rural community and landscape.

For the majority of non-landowning respondents, land reform was not mentioned as a key issue, however ownership of land, was seen as bringing with it a responsibility and duty-of-care for that part of the local landscape.

Outside of ownership, whether in state or private control, there was little real sense of a 'communal' responsibility expressed for the planning and management of landscape. This is likely to affect the degree of involvement in participatory planning projects by those who feel no responsibility.

Discussion and conclusions

This research has uncovered many facets of the local community of Strathdon and the attitudes of different members. The community is not homogeneous but contains a wide range of opinion, as would be expected. There are divisions beneath the surface, some of which emerge in different ways when contentious issues concerning change in the area are raised.

As a result of their experiences with forestry planning and land-use management there is a degree of cynicism about the motives for and the value of participation in forest landscape planning. Information dissemination has been poor, willingness to participate low and ability to take part limited amongst some sections of the community. Some people think that they have no real right to influence what takes place on private land, others that a shake-up is needed in the whole system of rural landownership and management.

While it is clear that not everyone wants to participate in projects, it is important that there should be no barriers preventing anyone who wants to from taking a full and active part. Thus, if participatory planning is to become a regular part of community life in rural areas, a number of issues that prevent participation need to be addressed.

- It is essential to increase confidence amongst local people that what they say is of importance and that their views will be taken into account in forest planning processes. The cynicism needs to be overcome by demonstrating that such processes can work and that people can have a say.
- People need to be convinced that it is their right to express opinions about what happens to the landscape around them, even if they do not own it, and landowners need to see that it is their duty to involve the community.
- There needs to be much better information provision and dissemination so that people know what is happening and how they can contribute.
- The mistrust of experts needs to be overcome. The role of experts and the way specialist knowledge is handled with a 'lay' community is particularly important. People have been unwilling to participate because they feel ignorant and stupid in front of experts. Equally, experts need to develop skills in facilitation and interaction and invest more time in participatory processes.
- Methods of participation need to be improved so that a more comfortable atmosphere and genuine exchange of ideas and information take place.
- If some of the community feel disenfranchised because, for example, they have to stay at home to look after the children, special efforts must be made to enable all who wish to attend special events. Alternatively, for those who feel uncomfortable about expressing themselves in public, small groups or one-to-one discussions may be more productive.
- Participation cannot proceed in an atmosphere of ignorance about what is being considered. Some education or at least factual information about the issues involved, presented in ways that are accessible to non-experts are needed.

It might, after all, be impossible to involve the whole community because of the inherent fault-lines running through it. Anyone leading or facilitating a process needs to be aware of the local politics and culture in the community, so that they are able to make the most of the opportunities that are present, but be realistic about the quality of the outcomes.

A final aspect is the value of participation to wider community capacity building, the accumulation of social capital and improvements to social inclusion. Planners are often more interested in the results of a participatory process, but the process itself can provide valuable benefits separate from those associated with the subject of whatever plan has been developed. These benefits can include:

Forging/strengthening historical and cultural links between people and place through education and the recording and dissemination of local knowledge, particularly through the generations.
Raising awareness of the unique attributes of the place, including how it sits geographically, the importance of particular viewpoints and landmarks and the part which landscape planning can play in contributing to a stronger identity of people with their place.

Finally, this research project has provided a snapshot view of one typical rural Scottish community where land-based activities are still a major source of income and where there is a distinct separation between the landowners and the rest of the community, in terms of the dynamics of land management and the control over what happens. While the results cannot be considered to apply throughout Scotland, they may reflect similar situations elsewhere and the conclusions may apply more widely.

Chapter 8 presents the conclusions derived from the whole project and many of the points noted here are included in the recommendations from Crossplan.

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The potential for
participatory planning
in rural communities
in Scotland

The workshops

Simon Bell

A participatory planning workshop was held over two days in September 1999. This coincided with the visit and meetings with the international Crossplan partners, which gave them the opportunity to experience the area and to offer their own, outsiders' perspective on the area.

Participants in the workshops included the representatives or members of a range of stakeholder groups. Many of the local people came and spent some time at the workshop but were not present for the whole time. They came to see what was happening, gave valuable information and expressed opinions that were recorded using a number of techniques. There were also displays of work made by local schoolchildren during art workshops. The stakeholders included:

- Local residents, some of whom operated businesses such as bed and breakfast or were farmers.
- Landowners, agents and managers, both private and public (Forest Enterprise).
- Agencies such as Aberdeenshire Council, Forestry Commission, Cairngorms Partnership.

The participants worked in groups, each looking at the same aspect, this gave a range of perspectives that helped to distil some of the key elements of the landscape, forests, community and possible futures. Maps and flip charts were available and one person in each group was charged with recording the deliberations of each group. Each group contained a range of stakeholders to encourage debate. The size of the groups (between four and eight) allowed discussion to develop that would have been unlikely in a large single group.

In order to focus discussion and give direction the groups were asked to carry out the following tasks:

- To describe the landscape and its character.
- To consider the important animals, birds etc. in the area and their habitats.
- To consider the values associated with Strathdon.

The purpose of these tasks was two-fold. Firstly, to supplement the perceptions about Strathdon as a place and a landscape and secondly to collect information about the area from local people, especially those working on the land who are knowledgeable about wildlife or aspects of history of the landscape. Figure 5.1 shows the main land-uses and major ownership divisions in Strathdon and Figures 5.2–5.8 show the character of the landscape.

Description of the landscape and its character

This section brings together the workshops' findings. It is interesting that the various groups tended to see the same aspects in the landscape but also focused on it in different ways. It is worthwhile noting that the initial division of the landscape into different zones is very similar to some of the descriptions obtained by Margaret Scott Myers in the results of her interviews.

Landscape zones

At the largest scale Strathdon can be divided into two major and one minor zones (Figure 5.1). These each encompass topographic, climatic, land cover, land-use and perceptual aspects. They have been given names as follows:

Figure 5.1 The main land-use components, ownership divisions and the landscape zones in Strathdon.

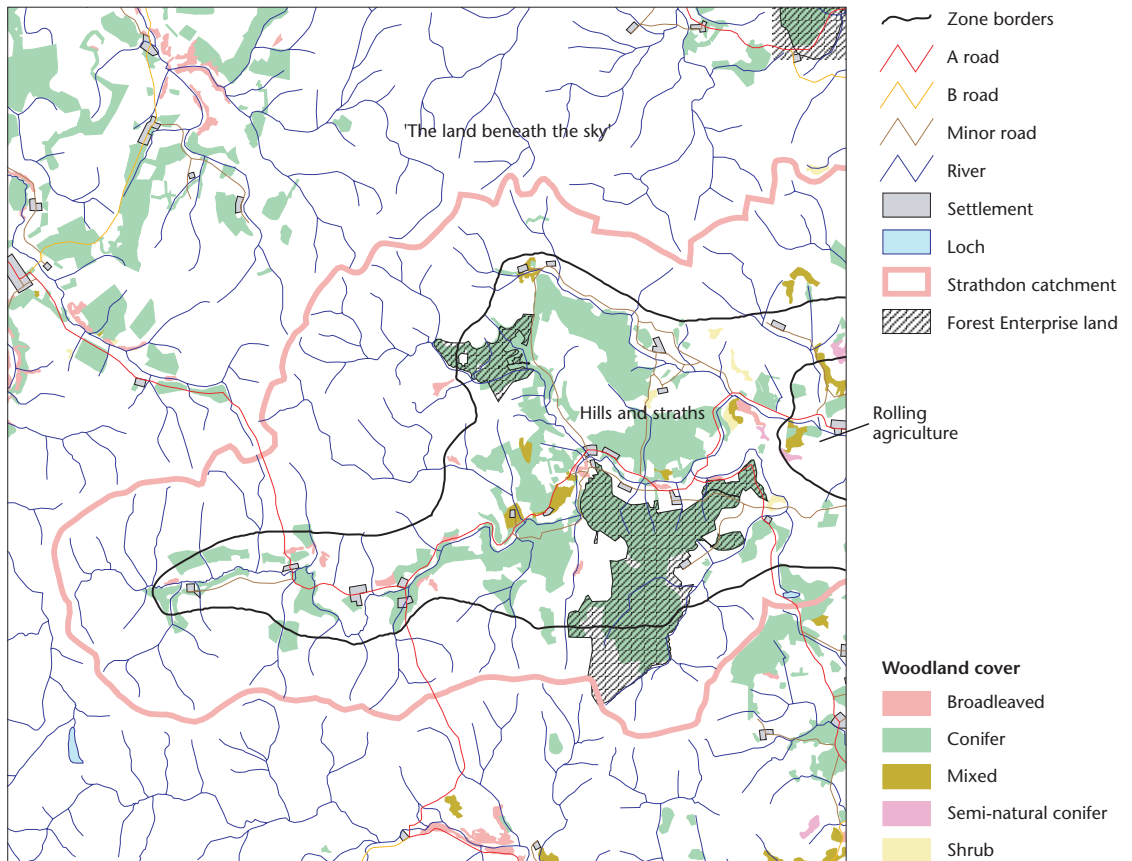


Figure 5.2

Strathdon village in Aberdeenshire.

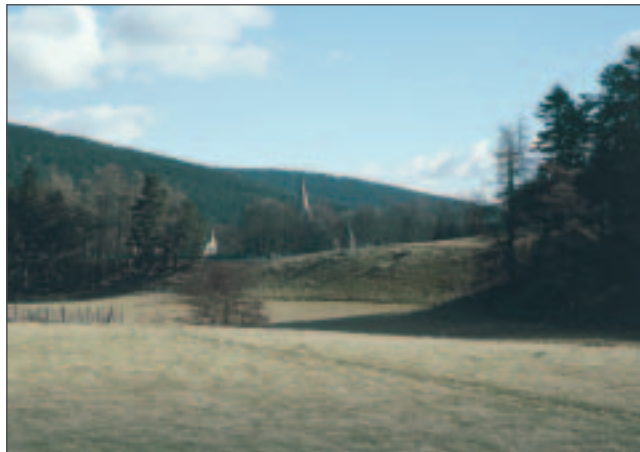


Figure 5.3

This view shows the Strathdon village church set in the valley bottom. Planted forest clothes the hills immediately behind the village.



Figure 5.4

The River Don flows through Strathdon. Here fields can be seen lying along the valley floor while forest covers the slopes above.



Figure 5.5

This view shows a geometric plantation on a prominent slope above fields.



Figure 5.6

In this view of the upper reaches of the valley of Strathdon the extensive open mountains covered in heather moorland dominate the scene, with forest concentrated in the sheltered valley bottom.



Figure 5.7

This view shows the character of the upper reaches of the valley, where the moorland dominates.

'The Land beneath the sky'

This is the continuous, open expanse of moorland that encompasses the higher elevations in the Strath. Landform is the dominant influence. The area is exposed to the elements: wind, rain and snow. It has a powerful sense of space, wide vistas which, from hilltop summits, continue for vast distances beyond the Strath itself. Landforms are rounded, simple with some subtle modelling that interacts with the play of light and weather to keep the landscape always changing and imparts a sense of wilderness and remoteness. This natural character is compromised where the geometric forms of forestry are overlaid on it.

The fast-flowing burns (streams) that are the source of the River Don also contribute to the wild feeling. They are the 'juvenile' upper reaches of watercourses that become more sedate lower down.

The vegetation/land-use pattern is uniformly that of heather moorland managed for grouse shooting. The simplicity and 2-dimensional nature of this pattern allows the detailed modelling of the landform to be seen. The patterns of burning for grouse management add to the textures and colours of the landscape. Seasonal changes, such as the colour of heather flowers also occur.

This type of landscape, while extensive in Scotland, is unique within a European context. Change to this landscape is unlikely in the foreseeable future while grouse shooting remains a valuable economic asset.

Hills and straths

The landform comprises rounded hills and broad straths (wide valleys) and is accentuated by the land-use pattern. Land-use is diverse:

- Forests: dense, with a sudden transition, low variety and visual conflicts between geometric and organic shapes.
- Policies (estate woodlands managed in relation to the house, farm and gardens). Open, accessible, containing big trees, few broadleaves. They enclose space and dominate over landform.
- Agriculture: a small-scale, complex, intensive, patchwork pattern overall. (Geometric shapes are not seen as a problem at this scale.)

This zone has seen major landscape change over the last 30–40 years with large-scale forest planting that is now maturing and appears to fill up the valley bottom, to block views etc. It is seen as a continuing source of change.

Rolling agriculture

This is less elevated, more intensively managed with arable production; it contains winding glens; it is peripheral to the study area – it only comes into it at the lower end of the strath and is not perceived as part of Strathdon. It provides strong contrast with the strath. It comprises an extensive character type in the Aberdeenshire lowlands.

This pattern of land-use is not atypical for Scotland and can be described as the 'Scottish Land Management System'. Land-use is integrated, especially on the larger traditional estates, with farming on the better, lower ground, forestry on the mid slopes and sporting – either grouse shooting or deer stalking – on the hill tops. The management is usually split between the farming being carried out by tenant farmers (although there are also some owner-occupiers in Strathdon), and the forestry and sporting being managed by the estate factor directly (or via agents).

As well as the major land-use zones it is also possible to define the landscape in terms of the water drainage system. Strathdon is composed in fact of five separate glens whose rivers or burns converge and join the main river. Thus it is possible to define Strathdon as the 'Strath of the Five Glens'. These burns or waters are: the Water of Buchat, Water of Nocht, Ernan Water, Water of Carvie and Deskry Water. Each of these side valleys has its own character and tends to be hidden from the point of view of most passing visitors. This description probably helps convey a better sense of the local distinctiveness of the area than anything else.

Perceptually, the landscape of Strathdon appears to be more forested than it actually is. This is because of the location of the forests along the slopes of the valleys and their occupation of the summits of some of the nearer hills. This sense of enclosure is seen, by many of those who participated in the workshops, as a negative quality: the 'walls of trees' being impenetrable and dark, especially along the banks of the river in places. Generally, however, the mixed, diverse landscape is an attractive one. Since most people live in the valley bottom settlements and travel along the valley bottom routes, this smaller scale, enclosed landscape dominated by short distance views should be one of the first elements for attention by forest managers.

The following figures were prepared by one of the workshop groups to try to convey the difference between the actual and perceived proportions of land-use.

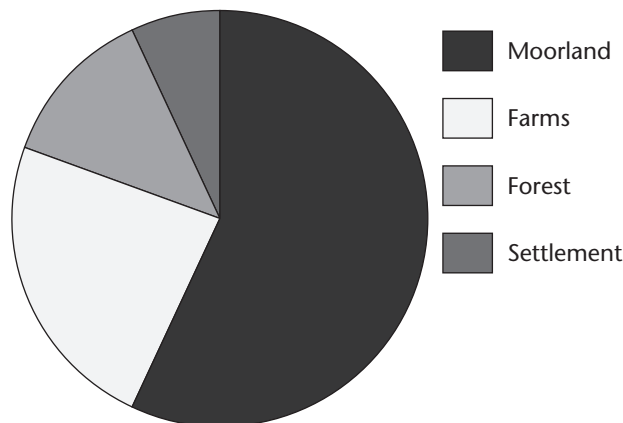


Figure 5.2

This diagram shows (roughly) the actual percentages of different land-uses by area.

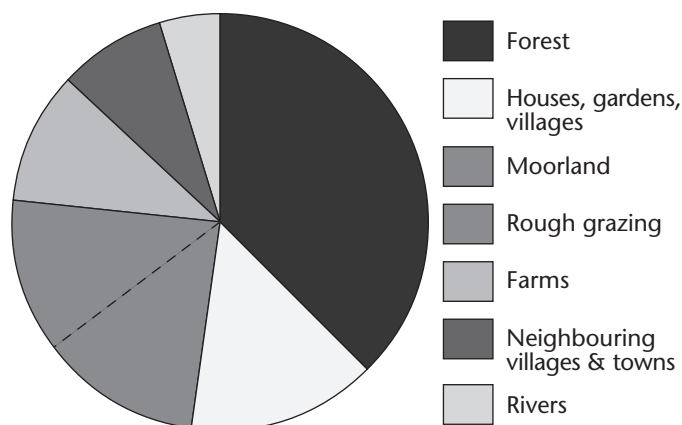


Figure 5.3

This diagram shows the perceived proportions of land-uses/landscape elements (from the point of view of Bellabeg, part of Strathdon).

Finally, a lot of detail about the area was recorded on 1:25 000 scale maps of the area. This is where the local knowledge is helpful, but not always easy for planners to access because it often goes unrecorded.

The important wildlife values in the landscape

Each of the landscape components has a range of wildlife species associated with it. Local knowledge is important here, and the presence of people such as foresters and gamekeepers is very valuable for identifying locally important areas. Due to the large expanse of open moorland there are a large number of bird populations associated with this land-use in the area. The forest, being composed of mainly non-native conifers, is less rich, although valuable and generally set to improve as the forests are restructured.

The main wildlife species associated with landscape components are as follows:

- **Forests:** this depends on the type of forest or woodland.
 - Plantation (spruce, pine, fir etc): rabbits, foxes, beetles, flies, spiders, osprey, goshawk, pine marten, rooks, sparrow hawks, voles, mice, fungi, red squirrel, woodpeckers, goldcrests, red deer, roe deer, warblers, crossbill.
 - Native pine: osprey, herbs, crested tit, capercaillie, pine marten, lichens, red deer, roe deer, rabbits.
 - Native birch: red deer, roe deer, rabbits.
 - River broadleaves: rabbits, red deer, roe deer.
 - Rivers: salmon, brown trout, sea trout, minnow, stickleback, eels.
- **Moorland:** red grouse, curlew, lapwing, wheatear, linnet, eagle, hen harrier, peregrine falcon, red and roe deer (most of the above should benefit from management of the moorlands in traditional ways).
- **Woodland/moor margin:** black grouse, rabbits and birds. (This type of area was overgrazed in the past but is now, in part, being fenced to promote natural regeneration of trees and other vegetation.)

Changes to the landscape should, as far as possible, be done so that there are beneficial effects to the wildlife and ecology as a whole.

The values that people place on Strathdon

There was a round-table free discussion at the workshop, where those present (not a representative sample) were able to define the values they placed on the landscape and community of Strathdon and also the issues they felt face the community as a whole. Much of what emerged is very similar to the findings of Margaret Scott Myers.

The living environment

A very positive aspect is the strong sense of community in Strathdon. In fact, there are many small communities that each form a part of the overall Strathdon identity. This is partly due to the geography – the ‘sense of place.’ There is a balance between ‘locals’ and ‘incomers’, although the tensions typical of rural communities also exist to some extent. There is a strong sense of neighbourliness and there is good working co-operation between the farmers, again typical of remoter, rural communities. The presence of the school is a key aspect and its maintenance seen as vital to the community. ‘Incomers’ build their community connections through the school.

The fact that Strathdon is a fair distance from Aberdeen means that there are few commuters who live there, although a number of people do not work in the strath. This means it is not a bedroom or retirement community, unlike Alford, not far down the road.

The church still acts as an important focus for the community although attendance is low and there have been amalgamations of parishes. School and church are linked through the children.

Another asset of Strathdon is the presence of skiing at The Lecht, so that the local people can go there easily whenever the snow is good enough.

Problems with the living environment include a lack of affordable houses for young people in the area. There are remains of abandoned houses and cottages around the strath from when more people worked on the land, but these are not easy to re-use due to access and provision of power, water and drainage.

Quality of life is also good because the area is a safe, crime-free one, tending to be self-policing.

The landscape in general provides a livelihood for at least some of the community and there is potential to enhance the community if this can be expanded. However, traditional land-uses such as

farming are currently in decline. The forests will produce more timber over the next few years, markets permitting. There could be scope for more of the Strathdon timber to be harvested by local contractors and also the subsequent replanting and stand tending work. However, modern timber harvesting is capital-intensive and some exploration of the possibilities of community ownership of equipment, some farm/forest interaction, for example using farm equipment in the forest and providing part-time contracting work to local farm staff is needed, possibly through the local enterprise company. Tourism is static and could grow, although many jobs are low quality and low-paid.

The River landscape

This is, in many ways, what defines Strathdon – ‘the Strath of the Five Glens’. The river defines and channels settlement, transport and communication. Access to the river is an issue, partly due to land-ownership and partly because of forest areas that are planted close to the river. The bridges are important features – there is something special about them, in particular the old drovers’ bridge. Some people noted that it was once possible to see the river, and its confluence with some of the side glens, from the church, but not any longer since the forest has grown up. The water itself has properties – purity from its sources high in the moorland areas. The possibility of bottling it was suggested as a potential economic venture (consumption of bottled water from natural sources is a growth market).

The Forest landscape

Many people at the workshops felt that the forest in Strathdon was, on balance, a negative element. This did not mean that it lacked positive qualities, but that it needed to be improved quite significantly. However, it was also recognised that there is a lot of potential to make the forest a more positive place and element of the landscape. As the forests enter their harvesting phase there will be some quite dramatic changes as large areas are felled. This may be negative in the short-term (some unfavourable comments have been received about recent fellings in the strath) but also presents opportunities to improve structure and composition. The study on forest expansion potential also gave food for thought. In particular there is the scope for some continuous cover silviculture on sheltered areas on good soils (maps produced by the Forest Research Agency show where these areas are). People also recognised that expansion of forests in the right places could enhance many values and create work in the long-term.

Apart from timber production there could be other economic gains, albeit of a smaller scale, perhaps fruit and berry production (income from licences or rents). However, recreation and tourism present greater potential. The forests, though in many different ownerships, are largely connected into a few large, contiguous blocks. If questions of public access are resolved there is enormous scope to create a number of linked activities that are all away from public roads. The potential is developed further in the ‘Vision Plan’ section.

Recreation and tourism

It was recognised that this value is not yet fulfilled to its maximum potential. People who visit do not stay long. In order to attract longer stays it would be necessary to develop a wider range of more diverse activities and more places or features to visit. Strathdon at present tends to be by-passed, yet it also happens to be very central for access to Deeside, Speyside, Aberdeenshire and the coast, so its location is not a problem. At present there is a tendency to get ‘curious passing trade’, mainly foreign in origin, visitors who are touring around and may return once they have sampled the area. Some of these repeat visitors become regulars.

Most people agreed that Strathdon is linear, unfocused and many potential visitors pass through it without realising they have been anywhere. This lack of identity is a key aspect to improve, in order to create a focus and a place on the map. However, too many attractions on the road would spoil the ambiance, so development should be dispersed, though well-signed.

A view emerged that there is a need for a camping/caravan site located strategically in the strath. This could be an opportunity for farm development, with some financial support for infrastructure.

The existing cycling routes in the Bunzeach forest managed by Forest Enterprise could be marketed more and if links into it from the village were developed, access would be improved. A number of

people felt that Forest Enterprise, as major public landowners in the strath who encourage public access, have a key role to play here and should take the lead with some early action to get things moving.

It can be seen from this summary that the workshops provided a combination of factual information of use to planners, and valuable perceptions about the area and the participants' feelings for it. While Margaret Scott Myers was able to sample a more representative sample of the community, it is remarkable how similar the views expressed by the workshop participants were. This may not always be the case, but it perhaps gives some reassurance that methods of participation such as workshops can be worth-while. There are also great benefits from professional 'experts' working together with local people.

Options for expanding native woodland cover in Strathdon: an ecological analysis

Jonathan Humphrey, Chris Quine, Karen Purdy and Duncan Ray

Background

Ecological processes are an important consideration in forest landscape planning. Climate and soils exert a constraint on site-suitability for both native and non-native woodland types, and natural disturbance processes affect woodland development, structure and dynamics. There have been a number of initiatives which have attempted to integrate landscape ecological analysis techniques into forest design planning both in the US (Diaz and Apostol, 1992), and the UK (Bell, 2003). In September 1999, a workshop was held in Strathdon (Aberdeenshire, NE Scotland) under the auspices of a Crossplan project funded by the EU Northern Periphery Programme. The main aim of the workshop was to integrate an ecological analysis with socio-economic and cultural analyses and to explore mechanisms for improving public participation in the design planning process. Here we present the results from a site-suitability analysis for woodland expansion in Strathdon. The aim was to provide baseline information on climate, soils and natural disturbance processes which could then be used to predict the possible extent and composition of new woodland, and future dynamics in response to disturbance. The specific objectives were:

- To produce native woodland suitability maps for the Strathdon study area showing the potential distribution of different woodland types and predicted rates of colonisation and expansion.
- To produce suitability maps for commercial tree species.
- To assess the potential ecological effects of wind disturbance on an expanded forest resource.

Strathdon – general description

The study area comprises the totality of the upper Don river catchment as far downstream as Glenkindie (NJ 405147). Altitude ranges from 200 m above sea level in the east to over 800 m in the west. The climate is continental with cold winters and cool summers. Late, cold springs are a feature, and the growing season is short but intense. The climate is more severe at higher elevations in the west and more benign in the lower margins. Snow cover is a problem on the upper margins of plantations. There is a lot of evidence of snow damage, e.g. basal sweep in lodgepole pine etc. Wind speeds are generally lower than in the exposed west of Scotland, but there is some localised funnelling (e.g. Tom 'a Churaich – flagging of isolated SP). Extensive damage was experienced in the 1953 storm (26–60% of growing stock).

The topography is characterised by flat valley bottoms and rounded hills. There are few steep slopes, but some rocky outcrops and scree. Geology is largely basic rocks and quite complex, with local exposure of serpentinite, which can cause poor tree growth. Soils are generally good with agricultural brown earths on the lower margins of the Strath (200–250 m). Woodland brown earths, and podsol brown earths predominate between 250–400 m elevation. Above this podsol occurs as well as some iron-pans. Peat is restricted to > 650 m elevation, with gleys on some alluvio-glacial terraces.

Strathdon is a highly managed landscape. Land-use is strongly compartmentalised, probably linked to soil fertility. Agriculture (mainly silage) is very productive on the lower portions. Above this there is a zone of forestry, and more marginal pasture. At the highest elevations there is moorland intensively managed for grouse. Plantations are post-war and mostly privately owned. The main estates are

Newe, Candacraig, Eidenglassey and Allargue. The Forestry Commission owns large blocks at Ballacailloch/Bunzean, which have been restructured, with removal of some riparian stands. The privately owned stands have not been restructured, except for removal of some Norway spruce from alongside the river Don, where 'tongues' have been planted into the meanders. The main tree species within the Strathdon plantations are Scots pine, larch, Norway spruce, with some Douglas fir and noble fir. Lodgepole pine has been planted copiously but is performing poorly and obviously of the wrong provenance. Sitka spruce is frequent, but does not do particularly well because of drought during the growing season, *Elatobium* infestation and locally, heather check. The Scots pine has been planted on good soils, which might otherwise have yielded excellent Douglas fir.

Native woodlands are sparse, and are restricted to the forestry zone, where there are no plantations. There are three native birch woodlands, all grazed by sheep and deer which have ground floras typical of W11 and W17 NVC woodland types. Natural regeneration is evident but outside the woodland boundaries onto open heath. There is evidence of suppressed seedlings in heather, grazed back in most cases by roe and red deer, although the latter is less common. There are no original Caledonian Scots pine stands, the nearest are in Glen Avon. Scottish Natural Heritage are keen to encourage expansion and linkage of these Glen Avon fragments with Strathdon, Strathspey and Deeside woods (Ratcliffe *et al.*, 1998). However, scattered 'granny-type' pine might be the descendants of original pinewoods, but equally they could have arisen from plantations established in the 18/19th centuries and felled during the First World War. A new native pinewood scheme has been put forward for challenge funding, between Glens Naughty and Buchat.

There are small pockets of richer woodland in riparian zones, with ash very common. Oak is largely absent from the Strath, but juniper is a key feature of the landscape. It is most common in prostrate form on semi-improved ground above the main agricultural zone. Large stands could mark former woodland, or merely exist in their own right. Juniper is also very common within existing birchwoods. A number of different age classes of birch stand were observed, younger stands do not have the full suite of woodland herbs e.g. chickweed wintergreen, wood anemone and oak fern, but there is plenty of evidence to suggest that these can survive in heath and grassland ready to colonise new stands when they get into the right state.

Wildlife issues in Strathdon centre around birds and red squirrels. In the absence of suitable native woodland, red squirrels are dependent on mature Norway spruce and other conifer areas for habitat. They can cause a lot of damage in these stands, but their protection remains a priority especially since there is the constant threat of grey squirrels colonising from the Aberdeen area. There are various raptors present (such as ospreys nesting in Scots pine). Rabbits are everywhere and grazing pressure is severe in many areas.

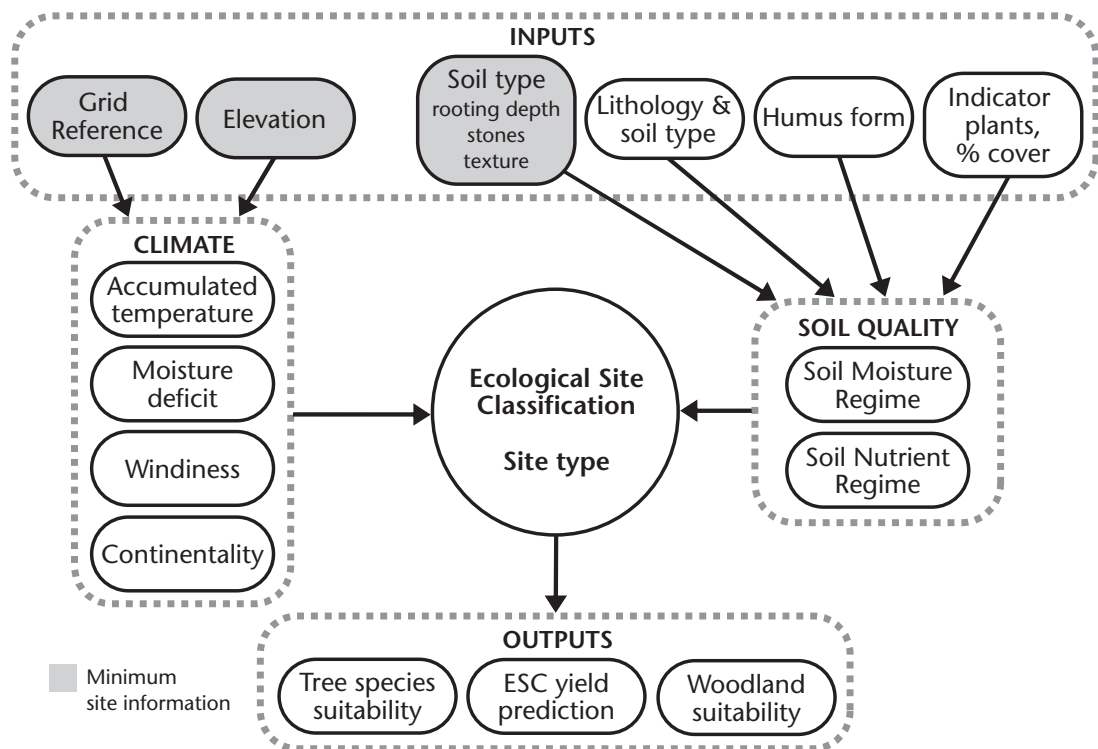
There are extensive tracts of *Calluna*-dominated heath, intensively managed for grouse. This is above the current forestry zone at 400–600 m. Burning is very regimented and extensive, and trees have little chance to get established. The regular burnt strips give a very artificial visual effect. A contrast can be seen where grouse moors have not been burnt and there is scattered juniper, regenerating trees and gorse etc. At the highest altitudes 600–750 m, there is less evidence of burning, and more sub-alpine heath with species such as *Lycopodium*, *Arctostaphylos* etc. Prostrate juniper is common with considerable scope for expansion of montane scrub.

Methods

Ecological Site Classification

Ecological Site Classification (ESC) is a methodology for objectively assessing and classifying a site in terms of its ecological potential for the suitability and yield of a range of tree species or of native woodland communities (Pyatt and Suárez, 1997), Figure 6.1. Site-suitability is determined by a combination of climate and soil variables. The four variables used to describe climate are: Accumulated Temperature (AT), Moisture Deficit (MD), Windiness (DAMS) and Continentality (Conrad Index). The two soil quality variables are Soil Moisture Regime (SMR), describing soil wetness

Figure 6.1 | The process of Ecological Site Classification.



and Soil Nutrient Regime (SNR), describing nutrient availability. Climate and soil datasets were assembled for the Strathdon study area and individual layers produced in ARC-VIEW GIS.

Generating climate maps

At the local scale, warmth (AT) varies approximately with elevation, but at the national scale latitude, longitude and elevation affect AT. A threshold temperature of 5°C is used above which growth in plants is stimulated. For each 10 km square, 5°C has been subtracted from the monthly mean temperature and multiplied by the number of days in the month. Months with a mean below the threshold temperature have been ignored. In Strathdon, AT ranges from over 950 in the eastern lowland river valley to 250 in the cooler upland areas.

Moisture Deficit is an index of climatic dryness. It is expressed as the accumulated monthly excess of evaporation over rainfall, and so indicates the dryness of the growing season. The measure of evaporation used in the calculation of MD comes from the Meteorological Office Rainfall and Evaporation Calculation System (MORECS), supplied as mean values over 40 km squares. The data have been interpolated across Britain using elevation in a digital elevation model (DEM), latitude and longitude. MD values for Strathdon range from +75 to -75 mm.

The 'Detailed Aspect Method of Scoring' (DAMS) is an index developed by Quine (1993), which measures the physiologically constraining effect of wind on tree growth. Wind is the most likely constraining factor at modest elevations and close to the west coast of Scotland. DAMS calculations involve a windiness map, elevation, topex (topographical exposure) and aspect. The DAMS values for Strathdon range from 6 to 24.

Continentality expresses the seasonal variation or range of climate. Oceanic areas tend to have cool summers and mild winters, whereas continental areas exhibit more extremes of warmth and cold. The factor helps shape the length of the growing season and is related to atmospheric humidity and windiness. Continentality is an important factor influencing the development of field and ground layer plants, which determine some NVC woodland communities and a few sub-communities.

Generating soil quality maps

Soil nutrient regime (SNR) can be predicted from soil type, humus form, and/or when available, from the presence and abundance of field layer vascular plants as indicators (Hill *et al.*, 1999; Wilson *et al.*,

1998). Soil moisture regime (SMR) can be calculated from soil type and other measurements. A soil wetness index of SMR has been derived initially using a rule-based approach from soil classification. The system can therefore operate at different scales providing differing degrees of precision and accuracy in an ESC assessment. The soil quality methodology within ESC links to Soil Survey of Scotland classification, (Avery, 1990) and to the Forestry Commission soil classification. It is also ideal for interpreting soil descriptions gained by field survey.

One of the constraints in this current study was the lack of digitised soil information for Strathdon. Soil maps were obtained for some of the FC areas, but for the wider study area, soil quality was estimated from the Land Cover of Scotland dataset (LCS88) (Table 6.1). This dataset contains digital information on vegetation community cover at the 1:25 000 scale for the whole of Scotland, interpreted from aerial survey. In previous studies SMR and SNR values have been ascribed to various land cover classes, using a combination of ground survey of soils and indicator plants, and interpretation of soil maps (Ray *et al.*, 1998; Hufschmidt, 1999). These values were re-calculated for Strathdon (Table 6.1). SMR ranges from Fresh to Wet and SNR from Rich to Very Poor.

LCS(88) Vegetation types	SMR	SNR
Dry heather moor	Fresh	Very poor
Smooth grass/rushes	Very moist	Moist
Undifferentiated heather moor	Fresh	Very poor
Undifferentiated smooth grass	Fresh	Moist
Blanket bog/peatland	Wet	Very poor
Montane vegetation	Moist	Very poor
Open canopy	Fresh	Moist
Improved pasture	Moist	Rich
Conifer plantation	Fresh	Moist
Undifferentiated broadleaved	Fresh	Moist
Recent felling	Fresh	Moist
Wet heather moor	Wet	Very poor
Undifferentiated mixed woodland	Fresh	Moist
Smooth grass/low scrub	Fresh	Moist
Undifferentiated low scrub	Fresh	Moist
Arable	Fresh	Rich
Undifferentiated Nardus/Molinia	Very moist	Poor

Table 6.1

Soil moisture regime and soil nutrient regime values ascribed to Land Cover Scotland LCS88 vegetation types.

Table 6.2 *Climate and soil rules for determining suitable native woodland communities.*

Woodland community	AT	MD	DAMS	CON	SMR	SNR
W4	>500	All	<20	All	W or VM	P or M
W7	>800	All	<19	All	W, VM or M	R or VR
W9	700–900	<120	<20	<11	VM, M or F	R or VR
W11	700–1800	>20	<19	<11	M or F	P, M or R
W16	>1200	>70	<16	All	M, F or SD	P or M
W17	>700	<100	<20	<16	M, F or VM	P or M
W18	>400	All	<20	1–10	VM, M, F or SD	VP
W18 (krummholz)	>400	All	20–24	All	All	All
W19	600–1400	All	<19	<16	M, F or SD	P or M
W20	<800	<80	<20	<16	VM, M or F	P or M

Values: VW = Very Wet, W = Wet, VM = Very Moist, M = Moist, F = Fresh, SD = Slightly Dry, MD = Moderately Dry, VP = Very Poor, P = Poor, M = Medium, R = Rich, VR = Very Rich, C = Carbonate.

Criteria for native woodland communities

The rules for determining suitable native woodland communities are shown in Table 6.2. These rules were sourced from Hufschmidt (1999). After the climatic factor data (AT, MD, DAMS, CON) and the soil quality data (SMR, SNR) were stored inside the GIS, the 'Map Query' tool was used to find the areas, which matched the woodland community criteria. In instances where areas were judged to be suitable for more than one woodland type, a hierarchy was developed based on field observations within Strathdon of the remaining woodland fragments. The basic logic was that the most important factor was soil nutrient regime, followed by warmth, and wind tolerance. Thus in areas where W17 and W11 (oak/birch communities, see Appendix) were both suited edaphically, W11 was chosen on warmer parts. Similarly for W17 and W18 (Scots pine communities) in similar areas climatically, W18 was chosen on the very poor soil types, and W17 on the slightly better soils. Maps showing potential native woodland extent and composition were generated (Figures 6.2–6.3).

Criteria for forest structure

The structure and composition of many natural forests is determined by the disturbance regime (whether abiotic or biotic). Disturbance regimes are characterised by the frequency, magnitude and intensity of the disturbance agent. Frequent and large-scale disturbance creates a mosaic of even-aged patches, with a relatively simple stand structure, and a predominance of early seral (successional) stages. Infrequent and small-scale disturbance permits the development of structurally diverse stands through creation of small gaps. In practice, most forests experience both forms of disturbance – and the character of the forest is determined by relative frequency of the different disturbance regimes.

In Strathdon, both wind and fire are potential disturbance mechanisms. However, in this study we focused initially on wind using the ForestGALES model (Dunham *et al.*, 2000) to predict wind damage to a hypothetically expanded forest resource. ForestGALES calculates the threshold wind speed required to break or overturn a typical tree, based on mechanical properties of the stem form and the species. The likelihood of the threshold wind speed being exceeded was assessed for the whole of Strathdon. The forest was assumed to comprise Scots pine yield class 8, planted at 1.8 m spacing and unthinned. The wind climate was assumed to be static (i.e. no climate trends).

Five disturbance-related structure classes for Strathdon were interpreted from the frequency (and implicit scale) of likely disturbance, following the methodology of Quine (2003), (Table 6.3).

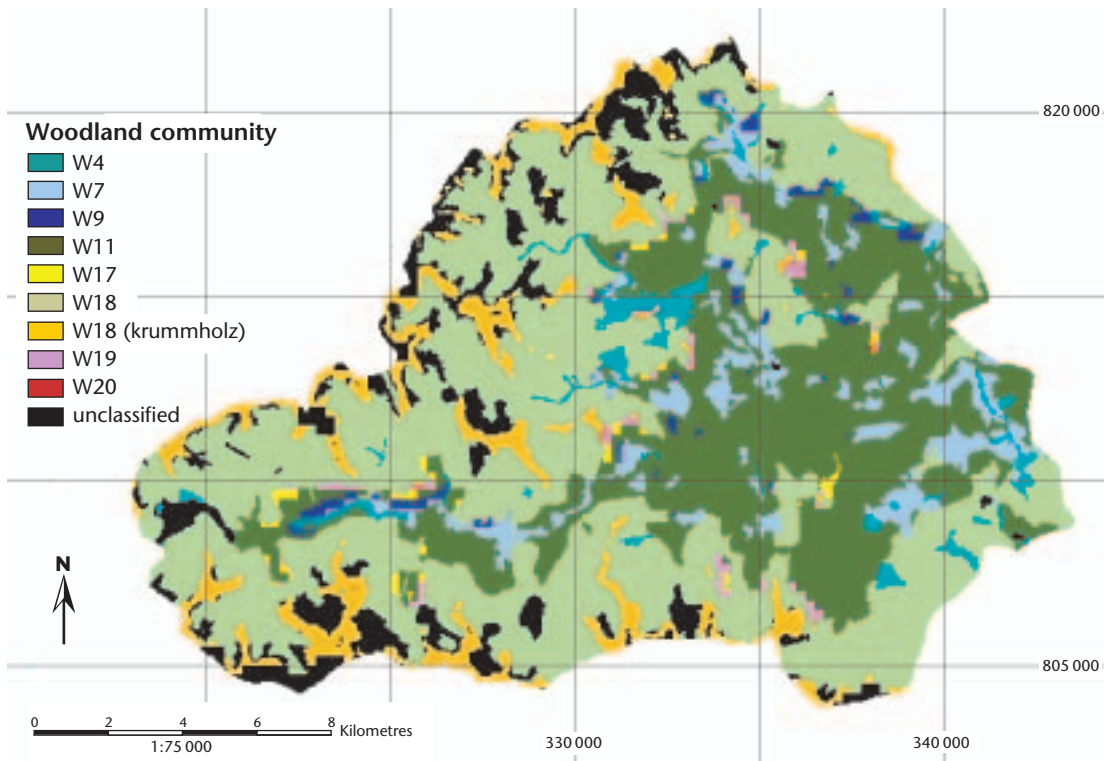
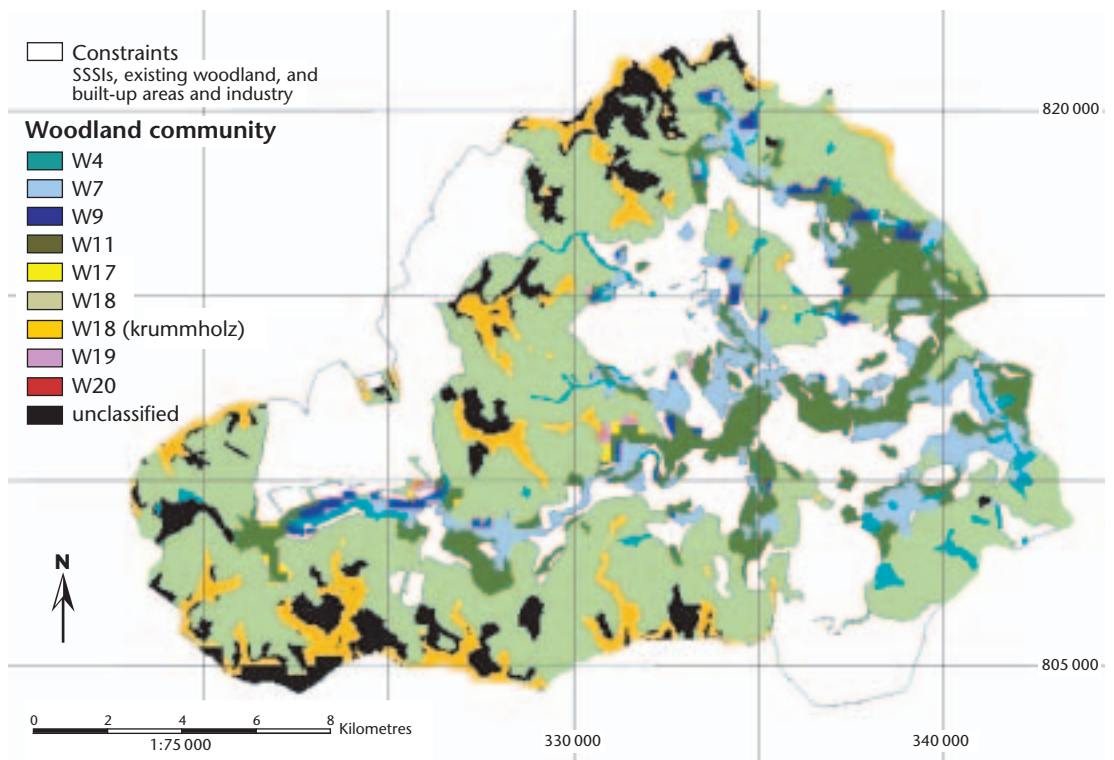
Class type	Definition	Rule – DAMS score
Above treeline	Beyond the limit of known woodland growth	>24
Krummholz	Between limit of productive woodland and treeline	>20 and <=24
Stand replacement	Cumulative probability of wind-throw >0.5 within 100 years	>15 and <=20
Shifting Mosaic	Cumulative probability >0.5 within 300 years	>13 and <=15
Gap phase	Cumulative probability <0.5 within 300 years	<=13

Table 6.3

Disturbance-related structure classes for Strathdon based on DAMS score.

Criteria for woodland expansion

There has been continued interest in developing methods for predicting the rate of natural colonisation of open ground by native woodland. A number of hypotheses on the types of open habitats that are colonised by different tree species and rates of expansion have been put forward in the literature (e.g. Cairngorms Partnership, 1999). These hypotheses were synthesised into a number of decision rules for predicting woodland expansion in Strathdon using the existing semi-natural broadleaved and pinewoods fragments as initial focal points. It was assumed that browsing and burning were controlled to such a level as to allow regeneration to occur. For simplicity, it was assumed that the woodlands were either dominated by birch or Scots pine.

Figure 6.2 Map of potential native woodland cover for Strathdon.**Figure 6.3** Map of potential native woodland cover for Strathdon, including constraints.

Key to Woodland Communities (see Appendix to this chapter for detailed description).

W4	Birch woodland with purple moor-grass	W18	Scots pine woodland with heather
W7	Alder-ash woodland with yellow pimpernel	W18 (k)	Scots pine retarded to shabby form
W9	Upland mixed broadleaved woodland with dog's mercury	W19	Juniper woodland with wood sorrel
W11	Upland oak-birch woodland with bluebell/wild hyacinth	W20	Woody willow scrub with wood rush
W17	Upland oak-birch woodland with bilberry/blaeberry	Unclass.	Tree growth impossible due to climatic reasons

For **birch woodland** the following rules were adopted:

1. Assume a maximum expansion distance of 500 m from the boundary of each broadleaved woodland polygon (expansion means filling of space with trees mature enough to produce seed for colonising a further expansion zone).
2. Rules for colonisation of LCS Polygon types:

Dry heather moor:	30 years to fill 500 m colonisation zone
Undifferentiated heather moor:	30 years
Smooth grass/low scrub:	30 years
Undifferentiated low scrub:	30 years
Wet heather moor:	60 years
Montane vegetation:	60 years
Smooth grass/rushes:	90 years
Undifferentiated smooth grass:	90 years
Undifferentiated nardus/molinia:	90 years
All other LCS classes:	No colonisation

For **pine woodland** the following rules were adopted:

1. Assume a maximum expansion distance of 500 m from the boundary of each semi-natural woodland conifer polygon.
2. Rules for colonisation of LCS Polygon types

Dry heather moor:	60 years to fill 500 m colonisation zone
Undifferentiated heather moor:	60 years
Undifferentiated low scrub:	60 years
Wet heather moor:	90 years
Montane vegetation:	90 years
Smooth grass/low scrub:	90 years
Blanket bog/peatland:	150 years
All other LCS classes:	No colonisation

These rules were incorporated into ARC-VIEW and a 300-year time series generated. Circumstances arose where an expansion zone progressed onto more than one type of open-ground polygon. In these circumstances, the relative area covered by each polygon within the zone was calculated, and the rules for the more common polygon were used. For example, if 60% of the expansion zone covered dry heather moor and 40% wet heather moor, then the filling rule for dry heather moor was used.

Criteria for productive woodland

The ESC criteria for predicting site-suitability for a list of tree species for possible planting in commercial woodlands are given in Table 6.4. After the climatic factor data (AT, MD, DAMS, CON) and the soil quality data (SMR, SNR) were stored inside the GIS, the 'Map Query' tool was used to find the areas which matched the species criteria.

Results and discussion

Native woodland suitability maps

The predicted native woodland cover for Strathdon is shown in Figure 6.2. Given current climate and soil constraints it is estimated that over 90% of Strathdon could be wooded given freedom from grazing and conversion of plantation and agricultural land (Table 6.5). Only a very small proportion of the landscape is predicted to be unwooded – the main constraint to tree establishment and growth being warmth. On the extensive upland heaths, it is predicted that W18 pinewood is the most suited woodland type. Indeed in many parts of the Strath, there is abundant scattered regeneration of both pine and birch, too sparse to be recorded on the map of existing forest types, but nevertheless

Table 6.4*Rules for optimal (O) and suitable (S) species conditions for productive woodland (source: Hufschmidt, 1999).*

Species	AT	MD	DAMS	CON	SMR	SNR
Douglas Fir (O)	>1 400	>40	<13	>3	M, F or SD	M or R
Douglas Fir (S)	>900	<40	13–16	All	VM, MD, VD	P or VR
Sitka Spruce (O)	>1 000	<140	<16	<10	W, VM, M or F	M, R or VR
Sitka Spruce (S)	<1 000	140–180	17–20	>10	VW, SD	P
Scots Pine (O)	>900	>60	<13	>5	M, F, SD or MD	P or M
Scots Pine (S)	500–900	0–60	14–18	<5	VM, VD	VP, R, VR
Japanese Larch (O)	>1 000	>20<150	<16	<9	VM, M or F	P, M or R
Japanese Larch (S)	750–1 000	<20 or >150	16–19	>9	W, SD	VR
European Larch (O)	>1400	60–180	<13	>4	M or F	M, R, VR
European Larch (S)	800–1 400	<60 or >180	13–17	<4	VM, SD, MD	P, C
Norway Spruce (O)	>1 200	40–180	<15	>4	VM, M, F, SD	M or R
Norway Spruce (S)	>600	<40 or >180	15–18	<4	MD, W	P, VR, C

Values: VW = Very Wet, W = Wet, VM = Very Moist, M = Moist, F = Fresh, SD = Slightly Dry, MD = Moderately Dry, VP = Very Poor, P = Poor, M = Medium, R = Rich, VR = Very Rich, C = Carbonate.

Woodland Community	Area (ha)	% land area
W4	786	2.8
W7	1 783	6.3
W9	283	1.0
W11	7 150	25.2
W17	189	0.7
W18	13 416	47.3
W18 (krummholz)	2 145	7.6
W19	221	0.8
W20	15	0.1
Unclassified	2 404	8.5
Total	28 391	100.0

Table 6.5

Area of predicted NVC woodland communities for Strathdon (not including constraints). A description of woodland community types can be found in Table 6.8 at the end of the chapter.

providing an important reservoir of seed sources for future woodland expansion. A particular point to note is the potential for extensive krummholz or sub-alpine woodland to develop possibly both Scots pine and juniper (covering 7.6% of the land area, Table 6.5).

As might be expected, it is predicted that W11 is the most suited type to the better soils of the lower valley slopes (25% of the land area), with birch likely to dominate given the lack of oak within the Strath (Table 6.5). The other wetter and richer woodland types (W4, W7 and W9) could form minor (<10 % of the land area), yet important, components of habitat diversity.

A preliminary analysis was undertaken to look at the effects of adding political and conservation constraints to the woodland distribution map. In Figure 6.3, woodland is excluded from built-up and industrial areas, commercial forests and open-ground Sites of Special Scientific Interest. The effect is to reduce potential woodland cover by about half from the ecological maximum. Further constraints analyses could be undertaken to look at the possible effects of a range of different land-use scenarios.

Maps of woodland structure classes

The area of Strathdon falling into the different disturbance-related structure classes is shown in Table 6.6. The highest DAMS scores represent a zone where wind exposure and lack of warmth

Class type	Area (m ²)	Area (ha)	% land area
Gap phase	70 827 500	7 082	24.9
Shifting mosaic	77 475 000	7 747	27.2
Stand replacement	109 967 500	10 996	38.7
Krummholz	23 645 000	2 364	8.3
Above treeline	1 992 500	199	0.7
Total	283 907 500	28 390	100

Table 6.6

Area of Strathdon falling in different disturbance related structure classes.

makes tree growth impossible. Surprisingly this zone covers less than 1% of the Strathdon area. Below this zone is the krummholz zone where woody growth is possible, but will be limited to dwarf or other highly adapted forms; these trees are unlikely to be overturned by strong winds as the canopy of the stand is streamlined.

The other three zones of good predicted tree growth make up the vast majority of the landscape (over 80%). The 'stand replacement zone' is a zone where catastrophic disturbance is likely to occur very regularly and lead to a mosaic of even-aged patches of several hectares. In the sheltered 'gap-phase' zone, catastrophic disturbance is extremely rare, and this fosters the development of an uneven-aged stand structure with 'old-growth' characteristics such as variability in tree size, many large trees, horizontal patchiness and large volumes of standing and fallen deadwood (Spies and Franklin, 1991). Between these zones there is an intermediate zone, where a mix of even-aged patches and old growth may emerge.

The spatial distribution of these zones is shown in Figure 6.4, where the strong effects of elevation on wind speed are obvious. Figure 6.5 overlays current woodland area on the structure map, and figures for coverage are given in Table 6.7. Whilst these figures emphasise the paucity of current woodland cover in Strathdon as a whole (at just over 5000 ha), the almost complete lack of woodland in the krummholz zone is striking, and supports observations elsewhere in Britain. The majority of the remaining forest area falls within the gap-phase and shifting mosaic structure classes, and it would be interesting to try and use historical wind damage in these zones to validate model predictions.

Figure 6.4 *Map of forest structure types for Strathdon, based on DAMS scores.*

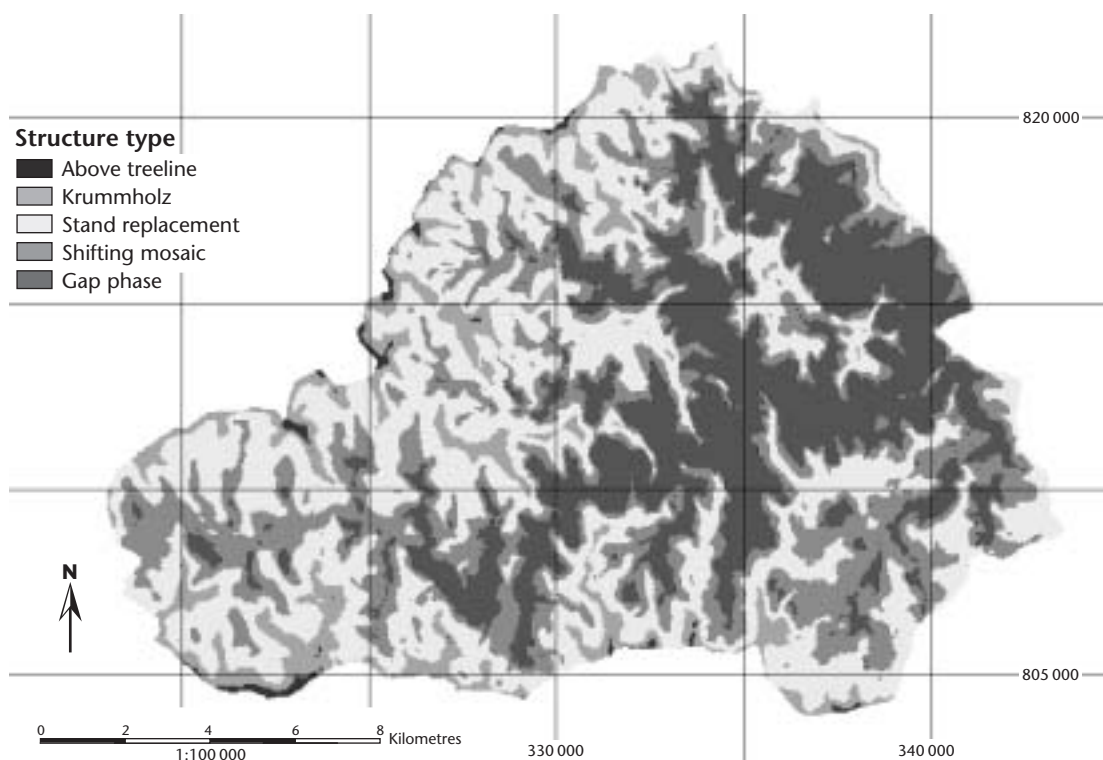
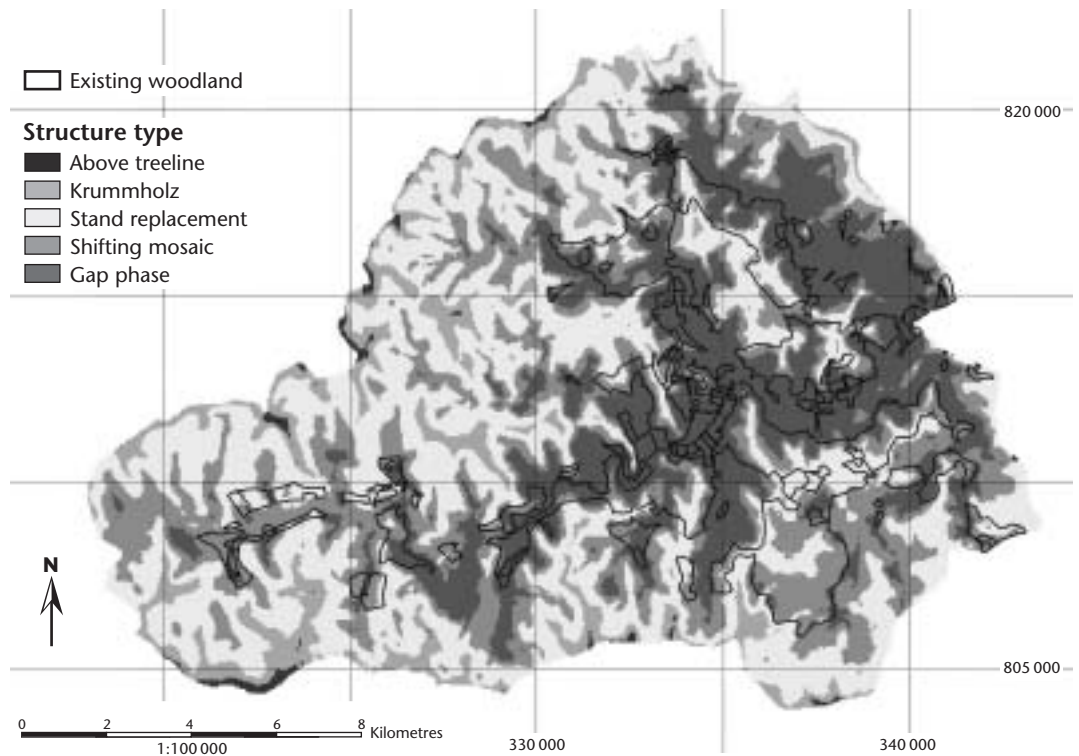


Figure 6.5 Map of forest structure types for Strathdon, showing areas of existing woodland.**Table 6.7** Area of current woodland cover falling into different disturbance-related structure classes.

Existing woodland types	Structure Class (ha)				
	Gap phase	Shifting mosaic	Stand replacement	Krummholz	Total area
Coniferous	1 594.2	1 478.5	920.2	2.50	3 995.5
Mixed	130.2	19.0	11.7	0.00	161.0
Young trees	300.5	233.2	251.7	0.00	785.5
Ground prepared for planting	7.2	63.5	0.0	0.00	70.7
Shrub	39.2	20.5	1.2	0.00	61.0
Felled	77.5	32.5	36.0	0.00	146.0
Other	126.7	12.2	0.0	0.00	139.0
Broadleaved	60.7	34.7	13.2	0.50	109.2
Semi-natural conifer	0.00	6.7	4.7	0.00	11.5
Total area	2 336.5	1 901.0	1 239.0	3.00	5 479.5

Native woodland expansion zones

Some examples of the outputs from the modelling of native woodland expansion over a 300-year period in Strathdon are shown in Figures 6.6–6.9. There is an initial period up to about 60 years where woodland expansion is relatively slow. After this expansion shows an exponential increase as the ‘expansion front’ extends offering increasing potential for expansion. By the 300th year, colonisation of the western part of Strathdon is complete, but parts of the lower reaches remain uncolonised due to the presence of a number of bottlenecks such as the commercial plantations which woodland was prevented from colonising. Again different rules and scenarios could be generated using this methodology, and a more detailed breakdown of different potential woodland types included.

Commercial conifer suitability maps

Suitability maps for the 'top 6' commercial conifer species are shown in Figures 6.10–6.15. Not surprisingly given the dominance of the W18 pinewood community in the native woodland analysis, Scots pine is the most suited to the Strathdon area, with a greater 'suitable' and 'optimal' area than the other species. Of the other species, only Sitka spruce and Japanese larch achieve an 'optimal' scoring and then only for a very limited area at lower elevations.

Conclusions

One of the main conclusions of this study is that substantial proportions of Strathdon could be potentially wooded. However, the range of both native and commercial woodland types is limited by climatic and edaphic factors, namely accumulated temperature and soil nutrient regime. Both gap phase and stand replacement disturbance are likely to occur in established woodlands and any future management will have to take into account the risks of windthrow, although fire could also be a major disturbance agent. Whilst increasing the native woodland cover in Strathdon might be a laudable aim, there are potential conflicts with the needs of species of open-ground habitats and the need to conserve the best examples of these habitats (e.g. upland heaths). These are issues which go beyond the ecological analysis – woodland may be the 'climax' vegetation for much of Strathdon, but successional processes are currently held in check by management such as burning, grazing and agricultural production. The participatory planning process should facilitate the integration of economic and social factors with an ecological analysis, and highlight a range of options for future land-use within Strathdon.

This current ecological analysis does have some limitations. The scale and quality of soil mapping is insufficient to give accurate predictions of woodland development at a fine-scale resolution. For example the location of serpentine outcrops are not known. Herbivory is also an additional factor, which we have not considered. Estimates of deer numbers in different parts of the Strath could be used to refine woodland expansion models.

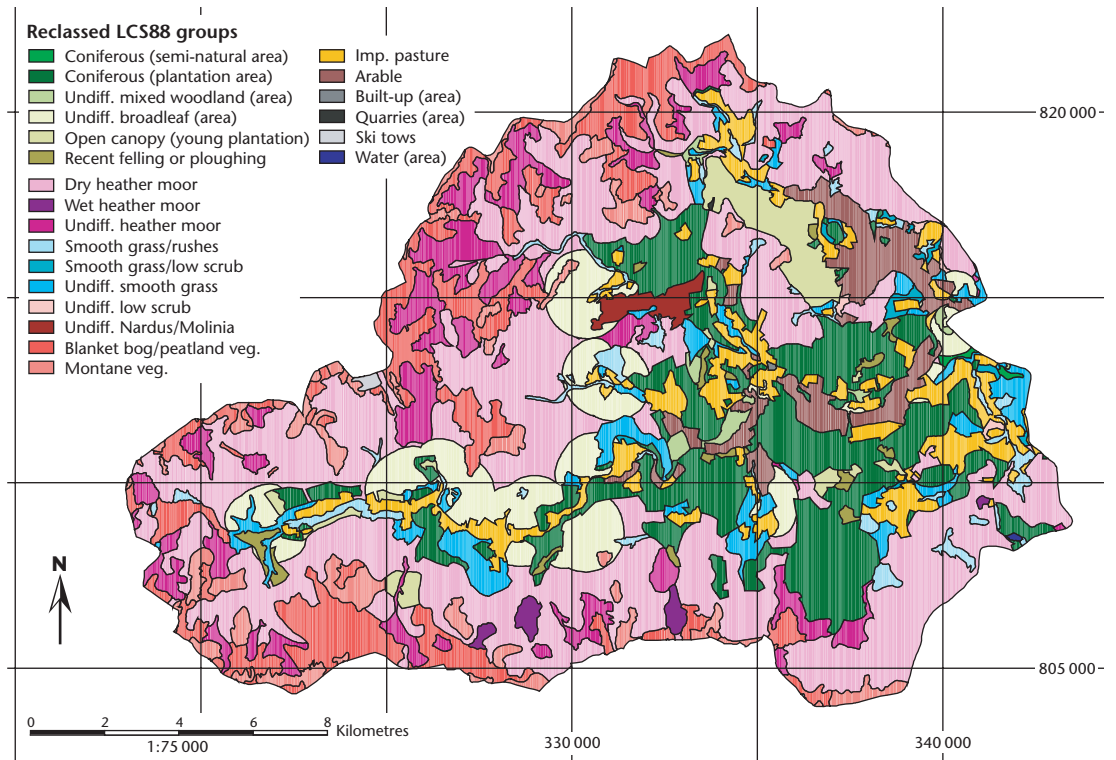
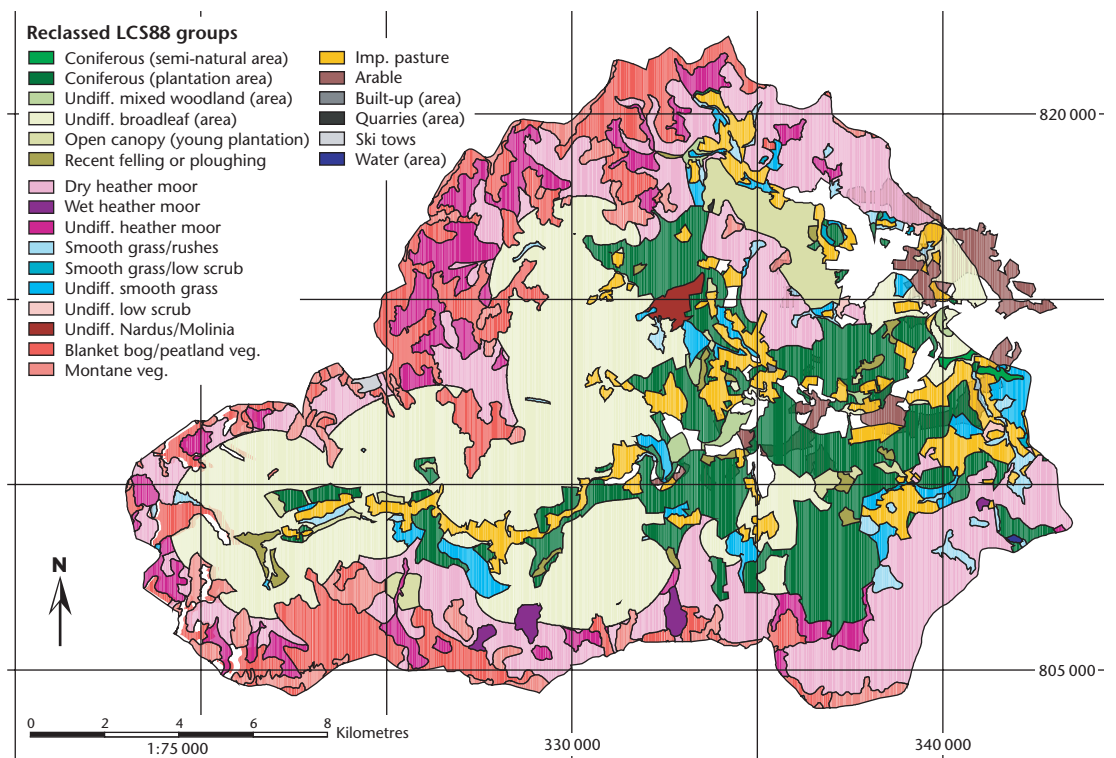
Figure 6.6 *Semi-natural woodland expansion in Strathdon – year 60.***Figure 6.7** *Semi-natural woodland expansion in Strathdon – year 150.*

Figure 6.8 *Semi-natural woodland expansion in Strathdon – year 240.*

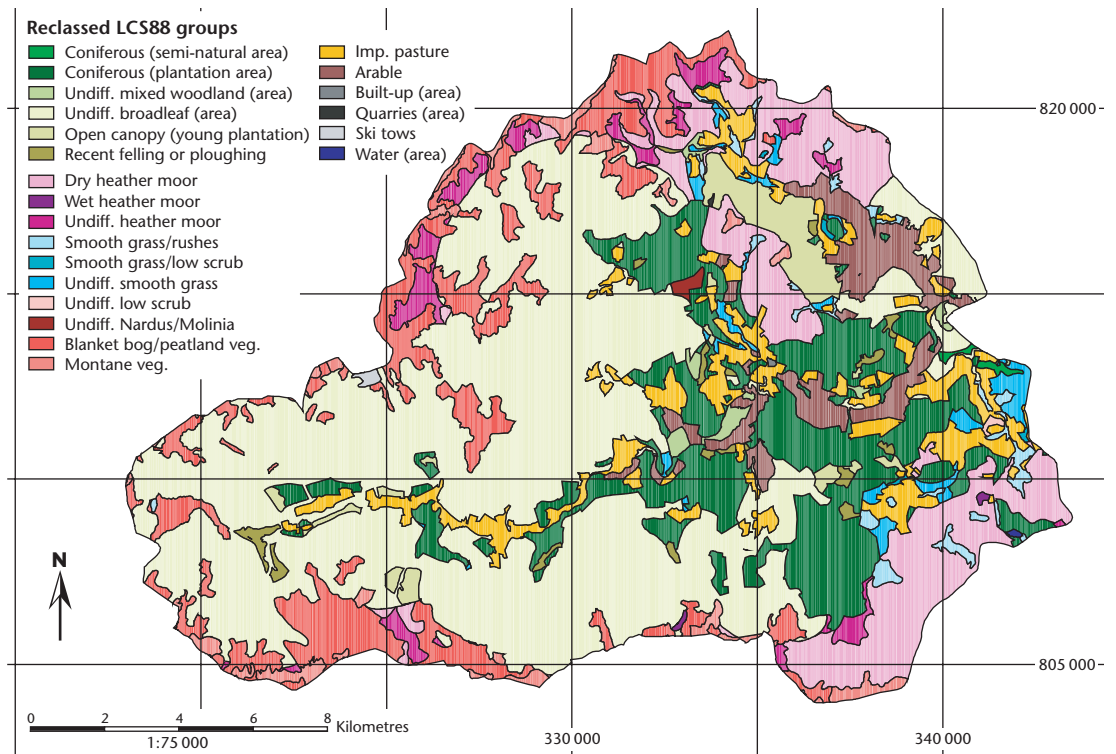


Figure 6.9 *Semi-natural woodland expansion in Strathdon – year 300.*

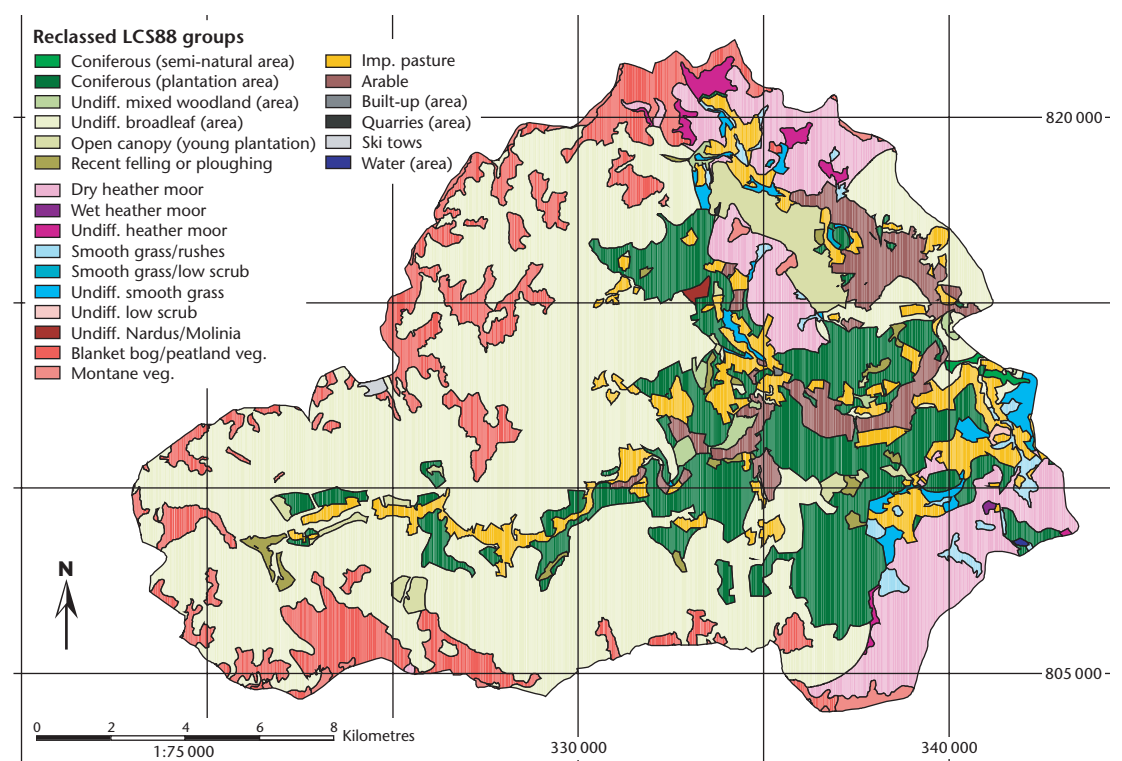


Figure 6.10 *Map of suitability of Douglas fir for Strathdon.*

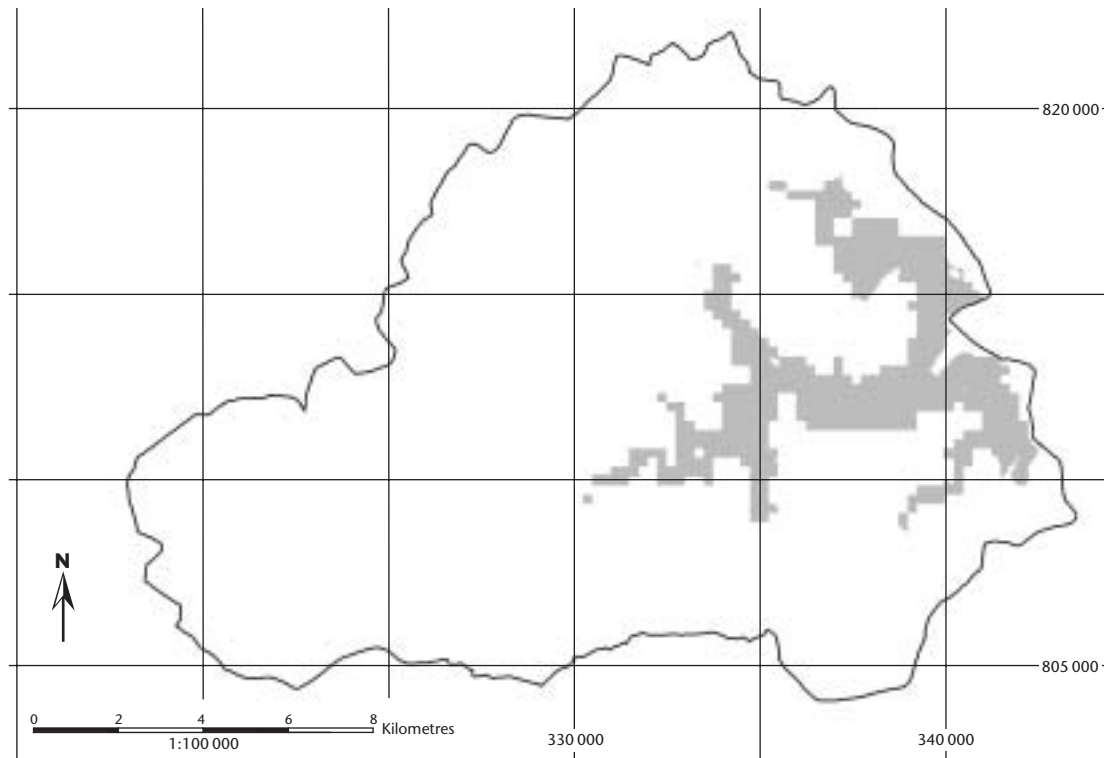


Figure 6.11 *Map of suitability of European larch for Strathdon.*

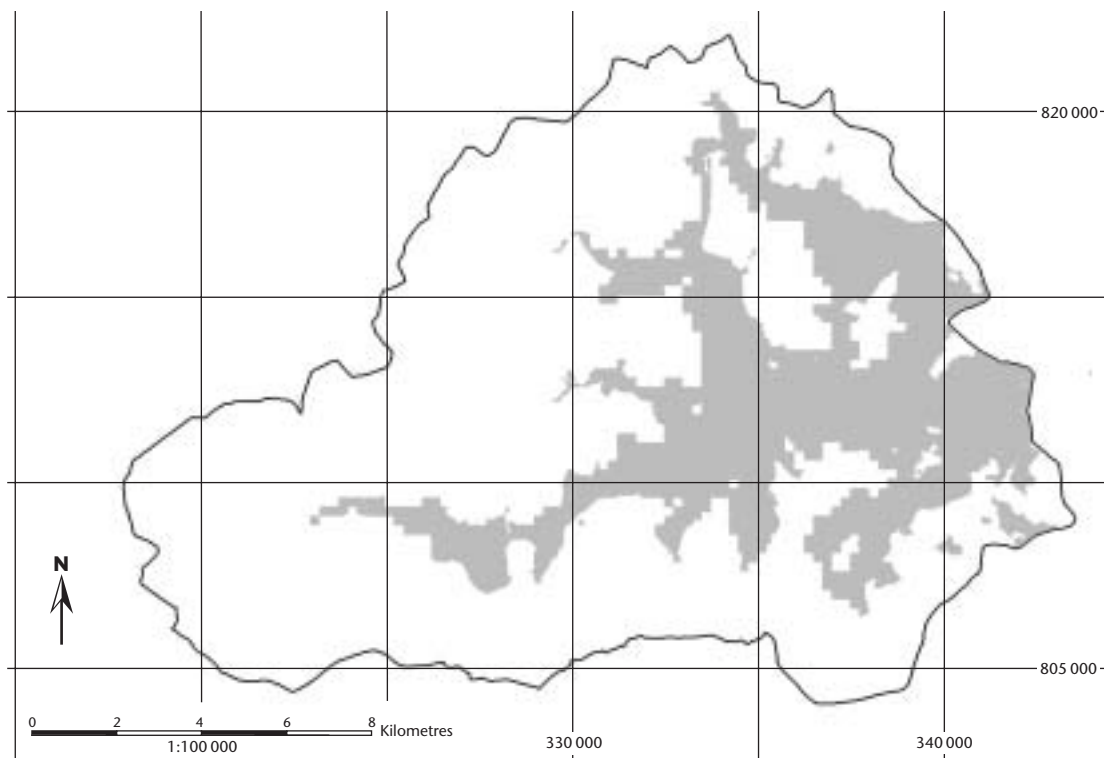


Figure 6.12 Map of suitability of Japanese larch for Strathdon (light grey = suitable areas and dark grey = optimal areas).

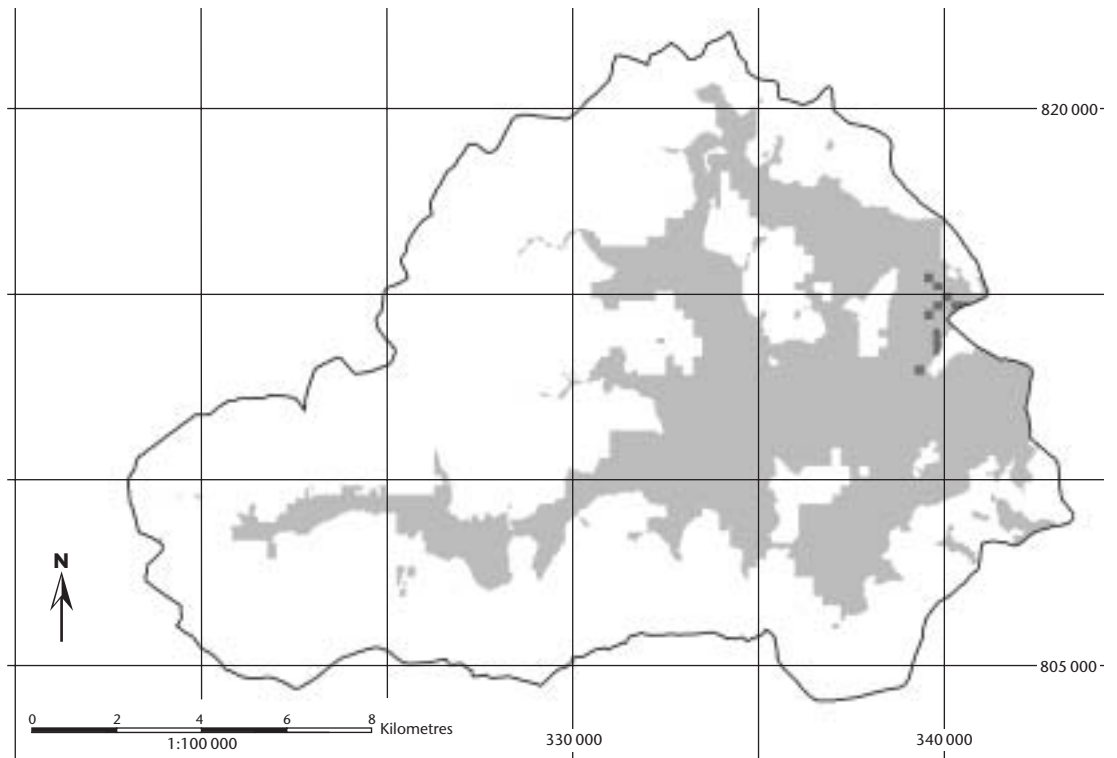


Figure 6.13 Map of suitability of Norway spruce for Strathdon.

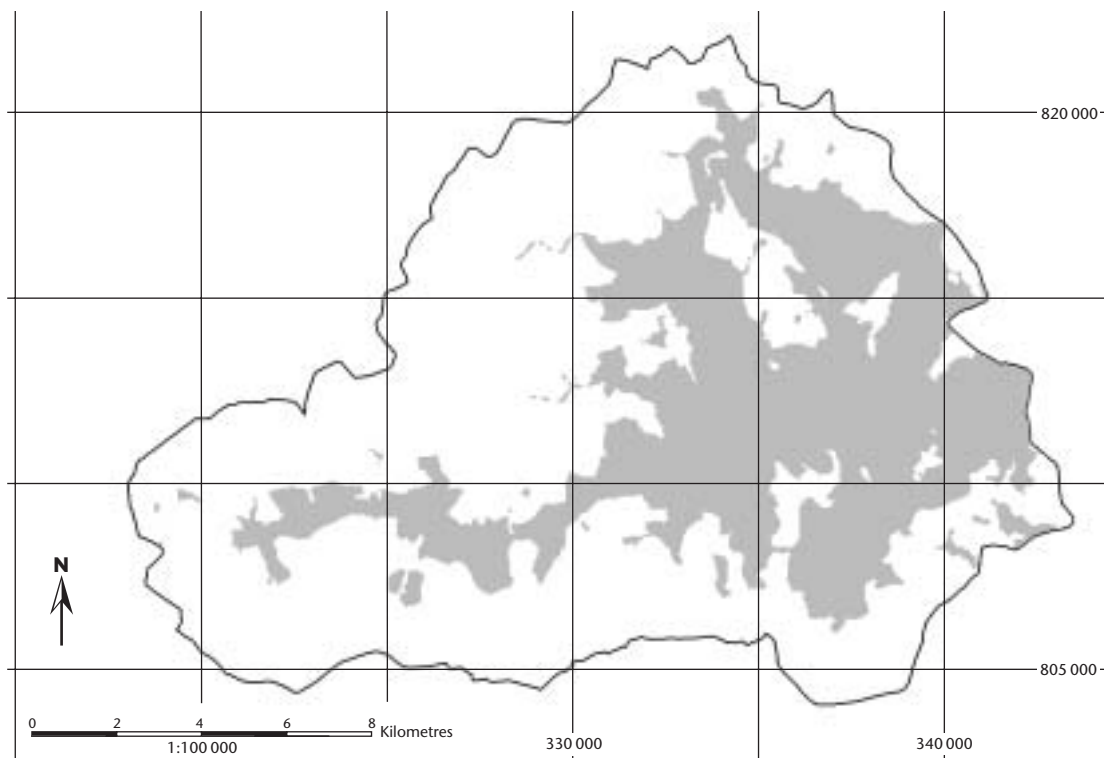
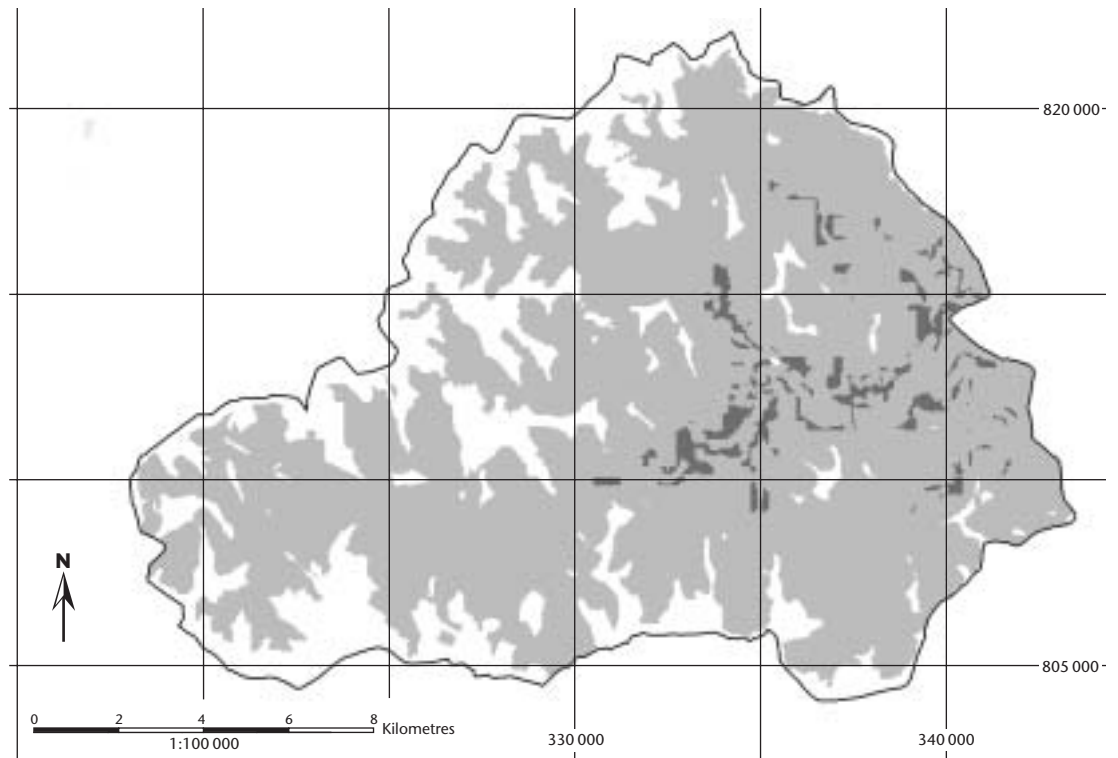
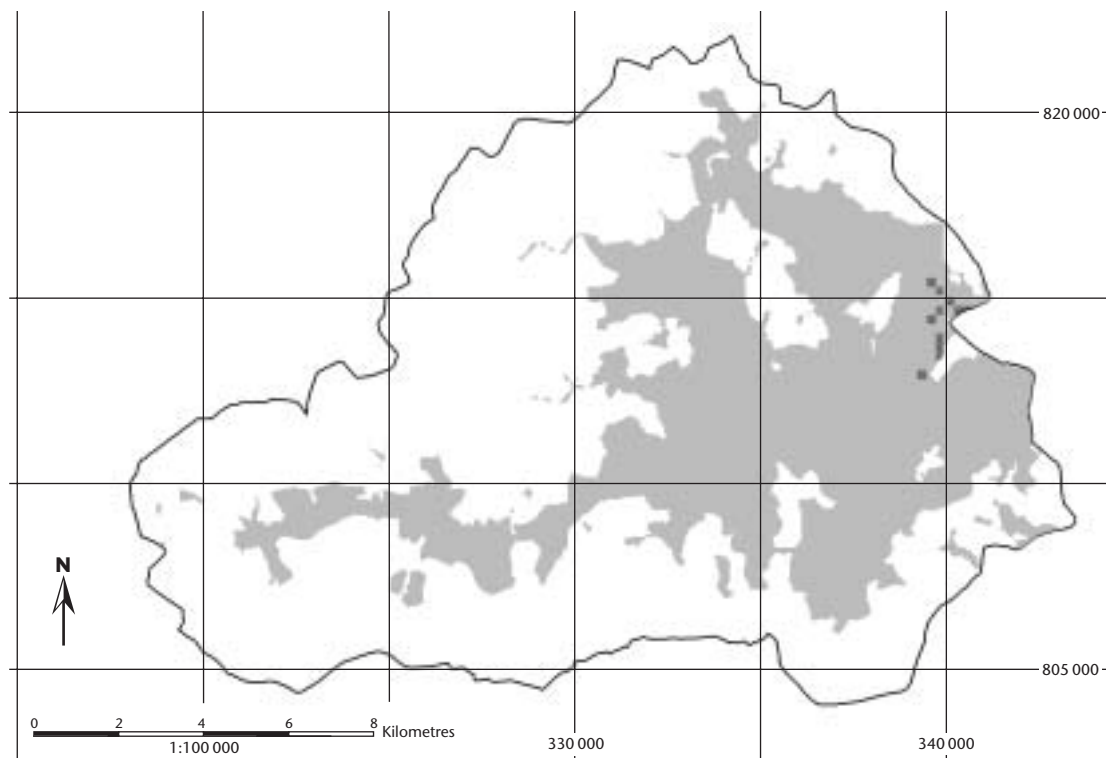


Figure 6.14 Map of suitability of Scots pine for Strathdon (light grey = suitable areas and dark grey = optimal areas).**Figure 6.15** Map of suitability of Sitka spruce for Strathdon (light grey = suitable areas and dark grey = optimal areas).

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Table 6.8

Native woodlands of the National Vegetation Classification (NVC) and their characteristics (source).

NVC type	Typical location	Canopy composition	Field layer	Other details
W4 <i>Betula pubescens</i> – <i>Molinia caerulea</i> woodland	Moist moderately acidic peaty soils, and also found on flushed peaty gleys.	<i>Betula pubescens</i> or rarely <i>B. pendula</i> on drier sites with <i>S. cinerica</i> the most frequent understorey.	<i>Molinia caerulea</i> with <i>Sphagnum</i> spp. and other mosses carpeting between tussocks.	Characterised by an abundance of <i>Molinia caerulea</i> tussocks.
W7 <i>Alnus glutinosa</i> – <i>Fraxinus excelsior</i> – <i>Lysimachia nemorum</i> woodland	Moist-wet mineral soils, moderately base-rich, not very eutrophic.	Open irregular canopy, <i>Alnus glutinosa</i> can be overwhelmingly dominant, <i>Fraxinus excelsior</i> , <i>S. cinerica</i> and <i>S. caprea</i> can be locally dominant.	Low-growing cover of herbaceous dicotyledons and grasses, e.g. common species are <i>Lysimachia nemorum</i> , <i>Poa trivialis</i> , <i>Holcus mollis</i> , and <i>Ranunculus repens</i> .	Bryophyte layer patchy. Differences between sub-communities are due to extent of waterlogging.
W9 <i>Fraxinus excelsior</i> – <i>Sorbus aucuparia</i> – <i>Mercurialis perennis</i> woodland	Moist brown earth soils derived from calcareous bedrock, climate cool, wet, windy with mild winters.	<i>Fraxinus excelsior</i> and <i>Corylus avellana</i> are most common with <i>Betula pubescens</i> and <i>Sorbus aucuparia</i> less common.	Complex vegetation mosaics with few dominants.	Well-developed bryophyte layer and abundant ferns.
W10 <i>Quercus robur</i> – <i>Pteridium aquilinum</i> – <i>Rubus fruticosus</i> woodland	Found to a large extent on the base poor brown earths of southern Britain.	<i>Q. robur</i> and some <i>Q. petraea</i> with <i>Betula pendula</i> abundant in younger stands. <i>Acer campestre</i> and <i>Fraxinus excelsior</i> tend to be rare.	<i>Hyacinthoides non-scriptus</i> and <i>Anemone nemorosa</i> are spring dominants but <i>Pteridium aquilinum</i> , <i>Rubus fruticosus</i> and <i>Lonicera periclymenum</i> common.	A wide range of others species occur locally and bryophyte cover is low.
W11 <i>Quercus petraea</i> – <i>Betula pubescens</i> – <i>Oxalis acetosella</i> woodland	Moist free-draining base-poor brown earths in the cooler wetter NW of Britain.	<i>Quercus petraea</i> dominant with <i>Betula pubescens</i> more common at altitude.	Grasses inc. <i>Holcus mollis</i> , <i>Deschampsia flexuosa</i> , <i>Anthoxanthum odoratum</i> , <i>Agrostis capillaris</i> . <i>P. aquilinum</i> vigorous.	<i>Rubus fruticosus</i> and <i>Lonicera periclymenum</i> may be common in ungrazed stands.
W16 <i>Quercus</i> spp.– <i>Betula</i> spp.– <i>Deschampsia flexuosa</i> woodland	Very acidic oligotrophic soils in lowlands and upland fringes. Free-draining, sandy and podzolic.	<i>Q. robur</i> more prominent in south and <i>Q. petraea</i> in the north. <i>Fagus sylvatica</i> , <i>Castanea sativa</i> , <i>Sorbus aria</i> and <i>Populus tremula</i> occur sporadically.	Generally species poor with <i>Deschampsia flexuosa</i> and <i>Pteridium aquilinum</i> . <i>Rubus fruticosus</i> and <i>Lonicera periclymenum</i> . Ericaceous shrubs when ungrazed, more grasses when grazed.	Dryness limits bryophyte community but they are more abundant to the north and west.
W17 <i>Quercus petraea</i> – <i>Betula pubescens</i> – <i>Dicranum majus</i> woodland	Very acid shallow soils in cooler wetter NW Britain, soils tend to more accumulation and strong leaching in wetter areas.	<i>Quercus petraea</i> and/or <i>Betula pubescens</i> although <i>Quercus robur</i> locally abundant. <i>Sorbus aucuparia</i> scattered.	Grasses, <i>Pteridium aquilinum</i> and ericoid shrubs common. <i>D. flexuosa</i> , <i>Holcus mollis</i> , <i>Agrostis capillaris</i> , ferns (e.g. <i>Blechnum spicant</i>) abundant.	Bryophytes particularly abundant esp. in ravines. They include <i>Dicranum majus</i> , <i>Rhytidiadelphus loreus</i> , <i>Polytrichum formosum</i> , <i>Pleurozium schreberi</i> .
W18 <i>Pinus sylvestris</i> – <i>Hylocomium splendens</i> woodland	Strongly leached, lime free, podzolic soils of the cooler parts of Britain (Highlands of Scotland).	<i>Pinus sylvestris</i> with <i>Betula</i> spp. (<i>pubescens</i> in west, <i>pendula</i> in east). Rowan may be locally common.	<i>D. flexuosa</i> abundant where ericoid shrubs reduced by shade/ grazing. Bryophytes can be the most prominent ground cover.	Variation is due to the density and age of canopy and climate, soils, browsing and grazing.
W19 <i>Juniperus communis</i> spp. <i>communis</i> – <i>Oxalis acetosella</i> woodland	Community of the high altitudes of the colder and drier parts of NW Britain.	<i>Juniperus communis</i> spp. <i>communis</i> with <i>Betula pubescens</i> .	<i>Agrostis canina</i> , <i>A. capillaris</i> , <i>Galium saxatile</i> , <i>Luzula pilosa</i> , <i>Oxalis acetosella</i> .	Bryophyte constants include <i>Thuidium tamariscinum</i> and <i>Hylocomium splendens</i> .
W20 <i>Salix lapponum</i> – <i>Luzula sylvatica</i> scrub	Ungrazed high altitude rocky slopes and ledges with wet mesotrophic and base-rich soils.	<i>Salix lapponum</i> is the most common willow dominating this woodland type.	<i>Deschampsia flexuosa</i> , <i>D. cespitosa</i> , <i>V. myrtillus</i> , <i>Festuca ovina</i> , <i>Agrostis canina</i> , <i>A. capillaris</i> .	<i>Dicranum scoparium</i> <i>Hylocomium splendens</i> <i>Rhytidiadelphus loreus</i> .

Towards a vision for the future of Strathdon

Simon Bell

From the information collected and the views expressed in the interviews, questionnaires and workshops, there are a number of aspects to incorporate in any vision for Strathdon. One of the first questions, however, has to be: is it possible to define a single vision? So much depends not only on the personal views of those who participated in the project, but also on the views of the landowners. Thus it is not possible, or appropriate, to produce some kind of master plan for Strathdon. Instead, a number of key features that were consistently raised by the community can be addressed in terms of a number of guiding principles for the future management of the landscape, and also a number of more concrete proposals that need further exploration before they can be developed.

The development of this vision plan started with the physical and ecological potential of the strath as the basis with which to work. To this was added the various community aspirations and following from this an assessment of some of the issues likely to affect the implementation of the vision plan.

The physical and ecological potential of Strathdon

Strathdon differs from many areas in the Cairngorms due to its topography, rocks, soils and climate. It is a much softer, less harsh landscape than parts of Deeside and is noticeably drier than Speyside. The rocks are less acidic and the soils better. The ecological site classification suggests that over 90% of Strathdon could be 'naturally wooded', although the historical and current pattern of management restricts this. The Forestry Framework for the Cairngorms (Cairngorms Partnership, 1999) presents some very broad-brush priorities for woodland expansion in Strathdon and Glenlivet. These include:

- The management of existing native broadleaved woodlands and their expansion by natural regeneration or planting.
- Management and small-scale expansion of riparian woodlands
- Focusing non-native species on their existing areas with consideration given to species diversification.
- Strategic and phased planting of new native pinewoods.

The general principles presented by the Forestry Framework are vague enough to be flexible in their interpretation, although the map accompanying the framework shows a degree of specificity. However, this map only deals with the potential, not the means of achieving this nor any other ecological, social or other factors.

The types of woodland that are native to Strathdon include Scots Pine (W18) and oak–birch (W17) with smaller areas of wetter woodland of birch, oak, willow etc. These zones occupy particular places in the landscape. Expansion could be by planting or some natural regeneration. Major ecological obstacles to expansion in Strathdon include land already occupied by another land-use (such as commercial forest or settlement) and browsing by deer or rabbits. Agriculture and grouse management, if contained in their present form, also prevent expansion. Thus, natural expansion in any form can only take place if:

- Large reductions in browsing animals, especially deer, take place
- Areas are fenced against deer
- Grouse management ceases on substantial areas

- Farming ceases and land is abandoned
- Commercial forest is felled and at least some parts are left to regenerate with native species.

Otherwise, all expansion has to be through planting.

The work arising out of the ecological site classification also demonstrates that if land-use changes and browsing pressures are reduced it will still take a long time for expansion to occur naturally. Thus, any expansion desirable to meet shorter-term policy/landowner/community objectives will require a helping hand of fencing, cultivation, planting, pest control etc.

The Ecological Site Classification (ESC) analysis (see Chapter 6) also presents some commercial tree species options. This may provide opportunities to diversify the current plantations following felling and may indicate where past species selection was unsuitable (such as areas of lodgepole pine). Furthermore, there are distinct possibilities for the application of continuous cover silviculture instead of traditional clear felling, although some refinement may be needed before such systems are implemented. Equally, there are locations where clear felling will remain the most appropriate option regardless of other factors or values, due to the wind regime.

Wildlife values in Strathdon are dominated by bird life as opposed to other fauna. In particular, the species that use the open moorlands and natural forest/forest edges are the most ecologically significant communities. Expansion of forest onto heather moorland will obviously displace some of this, although a number of species will colonise native pinewood. A balance has to be struck between the values of the two habitat types, although the picture is not a simple one. If forest expansion is slow the development of different forest successional stages and forest edges is likely to result in a more varied set of habitats. These will continue to support some of the moorland fauna for at least part of the forest life cycle, while the eventual clear felling or natural patch disturbance will restore temporary open space conditions. Unfortunately, the modelling of the potential effects of such dynamic scenarios is not yet sufficiently enhanced to be able to predict the precise effects.

Some of the effects on moorland birds are also likely to be offset or balanced by improvements to the existing forests. Temporary open space provided by felling, permanent open spaces introduced after felling, broadleaved networks and structural development (both in terms of patches of different ages and within-stand structure through continuous cover management) will all increase the ecological value.

One of the strengths of a broad-brush plan that encompasses a complete landscape is that important landscape elements and linkages, such as broadleaved and riparian corridors, can be identified that may run across the ownership boundaries of the estates. This level of landscape connectivity can be achieved over time as long as all the parties follow the same general strategy. This is reflected in the guiding principles and strategy map presented below.

The community's aspirations for Strathdon

From all three elements of participation several common themes emerge (see Chapter 3 and Scott, 1999). Some of these are important to the community but have little direct relevance to forestry and landscape planning. The following points summarise the main findings:

- People do not separate the *place* from the *community*: the two go hand in hand. Many of the strongest views related to aspects of community life – a good, friendly, strong community with a sense of safety and security. The physical landscape with its relative remoteness and rural or even wild character is integral to this view and is also linked to the economic well-being of the area (through farming, forestry, sporting, tourism etc.). People value the landscape as the setting for their community.
- The main areas for change in Strathdon focused on the economic aspects of being able to continue to live there and make a living. People recognise that the main scope for economic development lies in tourism but wish to ensure that the character of Strathdon is not spoiled

both for themselves and for visitors. The lack of identity as a place in the tourist itinerary is a major problem to be addressed.

- The physical landscape is a defining feature and generally liked by everyone. The element of the landscape that most defines Strathdon turned out to be the river (or several rivers that join up lower down the strath). This identity 'the Strath of the Five Glens' suggests that quite a lot of the activity in terms of landscape, ecology, forestry, tourism and recreation should be concentrated here. Perceptions of the proportions of different land-use types as experienced by members of the community differed from what the map shows. In particular, the amount of forest is seen to be proportionately greater, due to its location in the valley bottom and the visual effect of tall trees enclosing space and blocking views.
- The community have a very realistic view of life in Strathdon. They recognise the economic realities of land management, including forestry. There is no demand or desire for romantic but unrealistic changes to practices in general. This does not mean that opportunities for improvement in the landscape are not recognised. People felt that the forests are dark, gloomy, unattractive in some places, yet also possess some attractive qualities, such as providing shelter. Generally, most people understand forestry less well than say, farming, and are unlikely to be prepared for the kind of changes large-scale fellings bring. One aspect of forests was their dominating presence along some stretches of the river bank.
- People's views of landscape change are likely to depend on how those changes affect what they want. Thus, if local people can be employed in forests, say, they are more likely to accept changes arising from timber harvest. Equally, those who derive an income from tourism may be concerned about changes that may be unfavourable to landscape quality. If tourism development is to be the mainstay of the future, the visual effects of management, particularly along the valley bottoms and sides, will be a major aspect.
- Forests are seen as places where access is to be expected to some degree – freer than the moors and farms. This is in part because of the existing access to Forest Enterprise and some private forest areas. The linked nature of many of the forest areas presents opportunities for a network of recreational routes to be developed if landowners are willing to work together.

Visions for the future

From the findings summarised in the previous two sections it is possible to describe a number of components that could act as building blocks for the future of Strathdon. The first of these will concentrate on the existing forests, the second on forest expansion and the third on economic and infrastructural developments.

Management of the existing forests

These, as already significant elements in the landscape, present a number of problems and possibilities, which could be addressed by the following guiding principles, none of which require hugely radical or novel approaches.

- Species composition should reflect both a need to maximise diversity in some places and to replant with more productive and site-suitable species in others. The ESC grid should be used as a general guide to this. Conifer species that provide landscape diversity, such as larch, should be used in the most prominent locations where its effects will be greatest, such as on slopes seen from houses and the road. Broadleaves should be expanded, especially forming a connected network including riparian woodlands. These may need to be supplemented by additional planting to connect separated areas. Existing conifer planting along the river banks should be replaced by broadleaves after felling. Norway spruce should be kept as a small element of benefit to red squirrels.

- Forest structures across the landscape should incorporate both patches of even-aged stands and areas of continuous cover. The most suitable places for continuous cover as the appropriate silvicultural system should be guided by the ESC with some closer site examination. The clear felling of different patches should be repeated over time so that adjacent coupes achieve a height difference of at least two metres. Some co-operation between adjacent owners would help ensure that fellings are balanced across the landscape. Some areas should also be designated for 'old-growth' development.
- Open spaces should be introduced to aid nature conservation, deer control and recreational use, especially into the larger forest units. Concentrating these alongside streams would help to create a smaller-scale mosaic in the more intimate valleys.
- External shapes should be redesigned where these are most unnatural and present visually intrusive elements. This should be done following felling and may be linked to expansion of forest out from the existing areas (see below). Edges should also be developed to present less of a wall-like appearance, especially against the lower moorland or rough grazing. Geometric shapes in the vicinity of the fields and shelterbelts do not need redesign, although the edges should be made more diverse.

Forest expansion

This, in order to meet the broad objectives of the Cairngorms Forestry Framework, depends on several factors and so a number of scenarios are presented.

- If the economies of grouse shooting collapse, or some estates give up, and assuming, therefore, that heather burning ceases, natural forest expansion will take place or can be encouraged. This can be modelled using the ESC as described in the 'Visions of the future' section. However, browsing and grazing animals such as deer, sheep and rabbits will affect the rate and extent of expansion depending on their numbers, location and any protection measures. The presence of highly valued heather moors with SSSI status for birds also affects where expansion should, as opposed to could, take place. Thus the targeted areas should, in the short term, be areas that are not actively managed for grouse, not of SSSI status and easy to fence or otherwise control herbivores. The expansion should connect to existing forest areas and link into networks of broadleaves, riparian forest and other forest elements.
- If extensive areas of agricultural land and rough grazing become abandoned, or otherwise surplus, a combination of native and commercial forest can be planted or allowed to develop. This scenario assumes that agriculture remains in the doldrums and that poorer land, at least to start with, is not worth farming. Forest expansion should link with existing areas and incorporate elements such as riparian woodland, open space and be designed to blend into the landscape. Species choice for commercial planting should follow the ESC.
- Gaps in riparian linkages should be filled with native broadleaved woodland where this is important for landscape and nature conservation reasons.
- Significant parts of the landscape should not be afforested either by native or commercial woodlands. These include major ridge tops of ecologically valuable and scenically important moorlands and good quality farmland that is part of the intimate, small-scale valley landscape.
- Some places should actually be opened up following felling, to restore views and feelings of openness in key places along the strath.

Economic and infrastructural developments

There is a desire to improve the economic base through the development of income-generation opportunities in forestry and tourism. All these ideas need further feasibility and market research studies before being taken further.

- Forestry work could, if carried out by local people on a contracting basis, provide some local income generation. A lot of timber is due to be produced from Strathdon so that harvesting work is one type of activity. Planting, fencing and stand tending are other types of work. Several options could be pursued. Feasibility studies, before any investments can be made, should include:
 - A study of the patterns of wood production and other forestry work to find out how much, over what timescale and how many people could be employed.
 - The feasibility of integrating farm and forestry work, including the use or adaptation of farm equipment.
 - The potential of a forestry contracting business based in Strathdon, including the possible acquisition of a processor using a locally based company (a community shareholding scheme).
 - The potential for commercial harvest of blaberries and mushrooms.
 - The potential for a wood-processing facility e.g. a sawmill based in Strathdon.
- Other commercial production based in Strathdon such as bottled water, 'Strathdon Water from the Land Beneath the Sky in the Strath of the Five Glens'.
- Tourism infrastructure and marketing:
 - Accommodation, such as a caravan/campsite, ideal for a farm diversification project but needing some financial support for capital works (roads, drainage, toilets etc.).
 - A café/tea room in the village, with information point.
 - A network of routes in the forest suitable for walking, bicycles, horses, accessible from different points along the valley and from tourist accommodation. This could support a mountain bike hire franchise, a pony trekking centre, activity holidays, 4x4 vehicle driving, clay pigeon shooting etc: all outdoor pursuits that appeal to a range of people and which could be put into a holiday package.
 - The development of a Strathdon 'logo' to help create a marketing identity e.g. 'Strathdon – the Strath of the Five Glens'. (An image could be used as an entrance sign to the strath, on leaflets, the website and on products e.g. water.)

Implementing the vision(s)

In order for things to happen on the ground a number of related activities need to be initiated. These activities could be coordinated by a group or committee, representing the community and the landowners (including Forest Enterprise), supported by Aberdeenshire Council, the Forestry Commission, the Cairngorms Partnership and the local enterprise company (LEC). This could be known as the 'Strathdon Development Committee' (SDC). Someone to act as a coordinator or convenor is needed, ideally from the community and funded for time and expenses (by the LEC?). The other projects on the go in the area could be brought under this umbrella. In more detail the elements of the vision can be got underway as follows:

Management of the existing forests

The following elements of forestry planning should be set in place:

- The Forestry Commission should agree that the guiding principles laid out above form the basis for a strategic plan and that Strathdon should be a focus area for Forest Plan Preparation grants, as long as the landowners also agree the principles. The Forestry Commission should also agree that part if not all of the scoping and community involvement elements of Forest Plans have already been fulfilled.
- Forest Enterprise should incorporate the guiding principles into the next revision of the forest design plans for its areas and show by demonstration the implementation of the principles outlined above.

Expansion of the forest

This is more complicated because of the uncertainty over future land-use. However, initial work can proceed as follows:

- The Cairngorms Partnership should follow up the local interpretation of the Forestry Framework with the Forestry Commission, Scottish Natural Heritage and Aberdeenshire Council together with the landowners and the SDC in order to identify, within the ESC model, suitable sites for the first phase of forest expansion.
- Forest Research should make available copies of its work to all relevant parties for planning purposes.

Economic and infrastructural developments

The lead here should be taken by the SDC with the various agencies and authorities who can provide help and support:

- The LEC/Aberdeenshire Council should consider commissioning specific feasibility and marketing studies in forestry production, contracting and processing potential.
- The LEC/Aberdeenshire Council/Tourist Board should also consider commissioning studies into the tourism potentials outlined above.
- Forest Enterprise should start some concrete action within the next two years in terms of the development of cycling and other recreation in the Bunzeach Forest, creating access links directly to the valley.
- The SDC should work with all landowners to identify and establish a comprehensive network of routes for use by a range of recreational activities. Some of these activities will be better suited to some areas than others.
- This vision plan was presented to the local community at meetings and widely circulated. It was welcomed and felt by local councillors that it fitted very well into the processes of local consultation about other aspects of development underway at the same time.

References

- CAIRNGORMS PARTNERSHIP (1999). *Cairngorms forest and woodland framework. Volume I: the framework*. Forestry Commission and Scottish Natural Heritage, Edinburgh.
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Conclusions and recommendations

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The project area of Strathdon is typical of many locations, landscapes and communities throughout the northern and western parts of Scotland. Thus, the recommendations apply well to many other locations. However, the methods may also apply to numerous other situations because they are not necessarily dependent on a single type of setting or community.

There are some characteristics of Strathdon, and of remoter locations that lend themselves to the particular approach adopted for Crossplan:

- The landscape can be physically defined on the basis of landform and water catchment. This is easier in mountainous areas where deep valleys separated from each other tend to determine the boundaries of places more than in lowland areas. Since these physical characteristics are typical of the northern periphery of Scotland it makes sense to use them to define boundaries. They also happen to coincide with ecological units, which makes the physical and ecological data gathering and subsequent planning easier. This kind of boundary definition also often coincides visually and emotionally with the place identification of the communities involved.
- Communities, due to the lower population, land-use and communication patterns tend to be spatially well-defined. It is practical and convenient to identify, firstly 'communities of place' where the residents see themselves as belonging to a particular place. This connection between people and place was particularly strong at Strathdon and there is no reason to suggest that it is not similar elsewhere in the northern periphery.
- While a community of place may be a practical starting point, it is important to recognise that, even when the population is quite small, there are sub-communities of interest and other divisions. These may be between 'locals' and 'incomers', between landowners and everybody else, between those who work on the land and those who don't etc. These are not distinct divisions and individual people may be grouped into different ones at different times and for different purposes. It may be most relevant in the Scottish setting to divide the community into landowners and non-landowners because of the different economic and decision-making power present in the two groups. The other divisions must also be recognised and taken into account in the methods used in participation.
- The scale of the landscape, the range of different ownerships and the potential for landscape change due to economic and other factors, means that detailed, site-specific planning is not appropriate, nor desirable. Landowners are unwilling to see their flexibility to manage reduced, and the sheer work involved in preparing detailed plans would be too costly. Nor are such plans likely to last very long due to changing circumstances. It is much better to develop plans that provide a local set of guiding principles that are supported by the landowners, as well as relating national and regional land-use and forestry policy objectives to a more local level. The Strathdon experience showed that such plans are feasible and can satisfactorily include realistic community aspirations, and be supported by landowners.

The strength of the Crossplan approach at Strathdon lay in the multi-stranded techniques of participation and information collection. No one single method is universally appropriate; a combination of active and passive participation works best. It is not necessary to employ trained psychologists to carry out interviews, but Crossplan has been ideal for transferring these techniques

to make them useable by professional planners. The key elements that made the participation so successful are as follows:

- Sufficient resources in terms of a project leader who is a professional planner (forestry, land-use, landscape etc.) to co-ordinate all aspects over a period of time. There is no point in rushing this process.
- Identify and pay (if necessary) a local person who is active in the community and who knows everybody to liaise between the community and the planning team. This is invaluable for raising interest, for identifying a sample of people to interview, for arranging meetings, for facilitating questionnaires and generally keeping the community on side.
- Only use public meetings as ways of presenting, firstly, the objectives of the participatory process, and secondly, the final results. Do not use such meetings as vehicles of participation in any other way.
- Interview a range of people selected as typical of the community using the four questions:
 1. What do you like about (the place)?
 2. What do you not like?
 3. What would you change?
 4. What would you not change?

These interviews may take between 30 minutes and an hour and are best held at the home or office of the interviewee. Record the interview and take notes. This will ensure an initial cross-section of the community, not necessarily the same as those who will attend meetings or workshops, where a self-selected, possibly biased sample may turn out (usually more of an issue where controversial plans are being consulted upon). The interviewer should be trained in interviewing techniques and be one of the planning team.

- Questionnaires developed from the interviews should be produced and sent out or distributed to a random or systematic sample taken from the electoral roll. With some follow-up prompting a high return rate can be obtained and valuable quantitative information obtained. The analysis of this data can be achieved using simple computer spreadsheet software and some bar charts produced. Devising the questions using the Facet approach may take more skill but it should not be too difficult to produce some guidance on how to do this.
- Workshops are better than meetings because they permit a freer interchange of information between expert planners and the local community. Working in small groups allows a more individual, face to face, discussion, which many people seem to prefer to large gatherings. The latter can often be intimidating to many people. Basic materials such as maps and flipcharts are not high-tech, so can be used in remote village halls. The use of low technology reduces the need for equipment and technical staff and is possibly less intimidating. Allowing people to come to a workshop for as long or short a time as they want can also encourage more of the community to drop in. The local co-ordinator also has an important task in encouraging participation.
- The provision of factual background information to the community enables the quality of discussion and the generation of ideas to be higher. This information should relate to the type of planning being undertaken. For example, in the Crossplan context, ecological information about woodlands and forest expansion was needed. The availability of the relevant information should be considered at the outset of a planning project. If the project is set up by an agency such as the Forestry Commission or the local council it should be possible to provide much of it from existing sources. Otherwise, resources should be identified to assemble the information from scratch.

- In order to control the process of participation it is advisable to use a skilled facilitator. Guiding everyone, be it experts or members of the community, through a series of key steps requires skill, both at handling a large number of people, but also knowing the planning and design processes. This combination enables time efficiencies and cost-effectiveness to be achieved.
- The different sources of information and its sheer quantity must be carefully collated, assimilated and synthesised into the final plan. This is nearly impossible to achieve by a working group or committee. The facilitator, as a planning or design professional, should be capable of fulfilling this task, producing the eventual draft plan which is then presented to the community as the results of their work and participation. Framing the plan so that it recognisably contains material supplied by the community, so that it expresses 'their voice' is very important. They will then see that it accurately reflects their wishes and is not a plan merely arising out of consultation.
- Crossplan at Strathdon aimed to engage the local community in developing plans for the future. There were no proposed developments, no contentious issues of the moment and work is unlikely to start for some time. This is very different from many projects where specific, often contentious developments are under debate. This has both advantages and disadvantages. The advantages are that it is possible to plan in an absence of acrimonious debate or polarisation of the community into pro- or anti-factions, and there is the greater possibility of a consensus being obtained. The drawbacks are that because there may be few short-term tangible outputs that will be visible on the ground, people may feel less interested in participating and may see little in it for them. They may feel that they have more pressing or productive things to do with their time. It is easier to overcome this if there is already an atmosphere in the community where they want to work together and perhaps already do so in relation to other community projects.
- It is important to be able to identify the benefits arising out of the participation process. These are likely to be different between say, the landowners and the non-landowners. The benefits for landowners are that they will have already fulfilled some of their requirements for, for example, Forest Certification or for meeting the requirements of a Forest Plan under the UK Forestry Standard. They will receive valuable background information of great use in their estate plans and will know where they need to liaise with their neighbours. The remainder of the community will know that their views and opinions have been comprehensively taken into account and that their local knowledge has been treated with due respect by the 'experts'. These benefits need to be demonstrated at an early stage in the process, for example at the first meetings.
- If communities wish to start this kind of process themselves, it would be advantageous if they can be given support from the relevant agencies to help facilitate all aspects of the process. No one should think that participation planning is easy, quick or necessarily cheap. If it is worth doing, it is worth doing well.

Finally, the following step-by-step process is recommended for the type of project that was undertaken at Strathdon.

1. Project initiation. Someone must initiate a participatory plan, be it one or more agencies or some members of the community.
2. Hold a general meeting (or meetings) to gauge interest, to describe and develop the scope of the plan and to identify the resources needed. At this time the planning area and community(ies) involved should be specified, sources and availability of information ascertained and any gaps identified, so that specific survey and analysis can be carried out.
3. Once the planning process is established, find a local community liaison person who can start raising awareness, identifying people to interview and arrange further meetings.

4. A professional facilitator/planner should be given the responsibility of guiding the project, perhaps under a steering group comprising members of the community and the relevant agencies. This project leader should then co-ordinate the participation activities, the information assembly and be responsible for drawing up the final plan(s).
5. The person responsible for carrying out interviews and questionnaires should be identified, perhaps someone working for one of the agencies, and, if need be, given training. Together with the local liaison person, the interviews and questionnaires are completed and the results written up in terms that the community can understand.
6. The information about the area is assembled, by the project leader, and presented in a way that can be understood by non-technical experts.
7. Planning workshops are set up for convenient times, perhaps over a couple of days, including a weekend, at which the technical experts and local people exchange information, views, ideas and values with each other in small sub-groups. The workshops should follow a set structure, perhaps answering a set of pre-defined questions. One person in each sub-group should be responsible for recording the information as it is assembled.
8. The project leader/facilitator takes all the material from the workshop, the results of the interviews and questionnaires and the factual information, and draws it together into a draft 'vision plan'. This is presented at meetings and made available to all participants and the whole community for comment. The plan should contain a series of actions to ensure that it does not sit on a shelf gathering dust.

There are many potential future developments that could make participatory planning more integrated into all kinds of land-use planning. A key example is the greater use of Geographical Information Systems in ways that enable the local community to interact with data and plan options. They include developing the ways in which data provided by the community can be recorded and incorporated. There is also the question of how members of the community can look at the area in terms that are relevant to their individual needs, for example how proposed developments affect the view from their house, or their livelihood.

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