



The James
Hutton
Institute



The Scottish
Government
Riaghaltas na h-Alba



Land Use Benefits Workshop Report

Workshop held at Linden Centre, Huntly 28th May 2014



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Executive Summary

- This workshop was the second in a series that sets out to explore how land use decisions can take account of the wide range of benefits the environment provides to society. Insights gained from this research will allow local knowledge to feed into the development of Scotland's Land Use Strategy through the Aberdeenshire Regional Land Use Pilot.
- Previously we looked at the benefits that current land uses in the Huntly area provide and what influences decisions about land use. In this workshop 14 participants explored the future, especially in relation to some of the Scottish Government policy goals contained in the Land Use Strategy and discussed the advantages and disadvantages of land use changes which may need to occur if these policy goals would be realised in the Huntly area.
- The workshop comprised two main activities. In the first, we asked participants to offer suggestions and comments on a diagram of the land use system in the Huntly area which depicts the influences on land use decision making as well as the consequences of this for the ecosystem services and benefits derived from the land. The Land Use Systems diagram was produced following input from participants in the first workshop.
- Feedback from the Systems Diagram exercise indicated that in general the group felt that the main influences and connections had been incorporated. However, there were some additional influences and linkages. These included: the feedback between ecosystem services and policy drivers; the effect of technology; public versus consumer demand; the importance of brand awareness and the effect of the age of land managers and their attitude to risk. Additionally the issue of connecting people to the land through education was highlighted as was the effect of scale and time on the system. Participants felt that some of the ecosystem services and benefits could be grouped.
- In the second exercise participants evaluated the land use changes that may result if certain responses to the five broad Land Use Strategy Goals were followed through. Maps were produced by James Hutton Institute researchers and Aberdeenshire Council using the best available scientific information and the participants discussed the advantages and disadvantages of these predictions for informing land use planning and decision making.
- Feedback from the Land Use Strategy Goals exercise demonstrated that integration of multiple land use is important but decisions need to be taken at a local, case by case basis incorporating local knowledge. The risks of working on a large scale may mean that suitability of certain areas is not matched by the reality on the ground, however, identifying zones where particular land uses can provide a range of benefits was potentially useful as part of a process for deciding on appropriate land uses.
- This information (and subsequent further analysis) will be fed back to Aberdeenshire Council and the Scottish Government Land Use Policy team to inform the review of the Land Use Strategy. Our next steps will be to conduct further analysis of data obtained from both this and the initial Huntly workshop along with data from a similar workshop held in the Upper Dee area to compare and contrast the benefits and land use decisions that feature in these two contrasting local focus areas.
- The research was undertaken using funding from the Ecosystem Services Theme of the Scottish Government Environmental Change Programme 2011-2016. The specific research was not directly commissioned or endorsed by Scottish Government.

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Introduction

As part of the national implementation of the Land Use Strategy the Scottish Government is running two pilots, one in the Scottish Borders and one in Aberdeenshire. One of the aims of the Land Use Strategy is to promote the delivery of multiple benefits from the land (such as food, timber, energy, landscapes, recreation and flood protection) based on the principles of the Ecosystem Approach.

A fundamental principle of the Ecosystem Approach is that decision-making should be devolved to the scale appropriate to the people who are affected by the decision.

This workshop is part of a sequence of activities where local people evaluate how the multiple benefits that land provides to society can be managed in a more sustainable and integrated way. The main objective of this second workshop was to seek input from stakeholders local to the Huntly area on a Land Use (or Systems) Diagram which attempts to show how the influences affecting land managers affect the way land is used and the benefits (Ecosystem Services) derived from these land uses. This was developed from the information participants provided at the first workshop. In addition the five broad Land Use Strategy goals were introduced and six of the many possible ways these policy goals could be realised in terms of land use change were evaluated by participants in more detail.

The insights from this workshop will feed into the development of Scotland's Land Use Strategy through the Regional Land Use Pilot which is currently being conducted in Aberdeenshire.

Participants

Facilitators from the James Hutton Institute ran two workshops on the 28th May at the Linden Centre in Huntly, one in the afternoon and one in the evening. As there were only 4 attendees at the evening workshop, 3 facilitators ran it on a more 'informal' basis, carrying out the same exercises but in one discussion group.

The 14 participants were joined by 3 researchers who had been involved in the production of the Systems Diagram and the land use area maps, and 4 facilitators from the James Hutton Institute. For more information on the participants, along with information on the people/organisations we invited but could not attend, please see figure 4 in the appendix. Reasons for these absences were varied but all those who were invited will receive the report and will have the opportunity to attend the final workshop.

	Numbers attending the workshops
Land managers	4
Community groups	2
National agencies/ NGOs	3
Local agencies/ NGOs	5
James Hutton Institute	3 (+4 facilitators)

Figure 1. The numbers of stakeholders who attended the workshop categorized by participant type.

As an 'ice-breaker', we asked participants to introduce themselves and talk about a photograph they had brought that held some meaning for them. Four of the photographs can be seen on the front cover. People talked about having a good quality of life and their desire to leave the land in good heart for future generations e.g. improving farm land, encouraging biodiversity and reinstating peatlands. Some

talked of ways in which they felt land had been misused and others of how the majority of the population is town dwelling, and may prioritise the services the land could provide differently e.g. hydro and wind power. The increasing numbers of wind farms in the area and their effect on tourism was discussed as was the diversity of land use round Huntly

Exercise One: Linking land use decisions and benefits from the land

Following input from participants at previous workshops where some of the links between land use decisions and the delivery of benefits from the land (ecosystem services) were determined, researches from the James Hutton Institute produced a draft systems diagram (figure 1). The diagram allowed us to explore the influences and constraints on the way land managers make decisions and how these decisions can lead to a variety of ecosystem services and benefits. Participants were asked for their feedback on the researchers understanding of the system and the consequences or options the policy goals could deliver through changing land use.

The systems diagram was split into Decision Making Influences (land manager objectives, business characteristics and actor characteristics) and the associated constraints) and Ecosystem Services and Benefits (land use, land capability and the services we expect from land). Participants were divided into 4 groups (3-4 per group plus a facilitator) and each group was given the opportunity to scrutinize and critique both sides of the diagram.

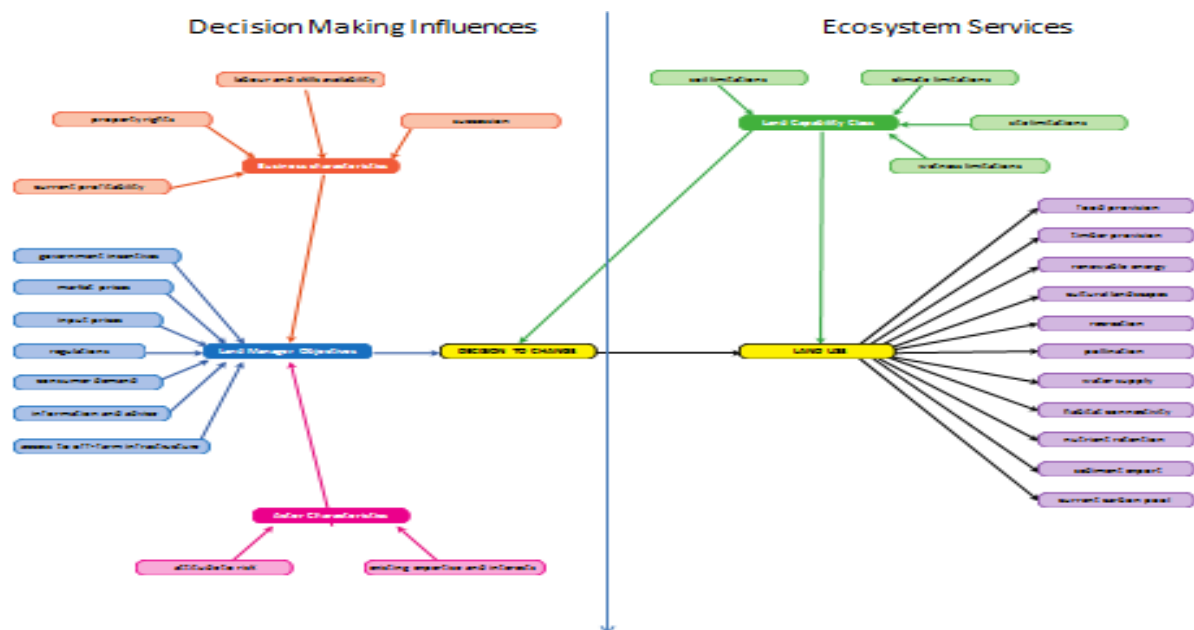


Figure 2- Systems Diagram: The left half represents the influences that affect land managers and their decision to change. These are clustered into categories relating to **Actor (personal) characteristics (Pink)**, **Business characteristics (orange)** and **External influences (blue)** that affect land management objectives. For example, a personal **attitude to risk** influences the land management decision as does the **labour availability** and input prices. The right side of the diagram starts with the **land use** which is influenced by the decision making factors and the **Land capability (green)** which together then influence the **Services and benefits (purple)** derived from this **land use**.

Decision Making Influences (left side of diagram): There was general agreement that the system diagram needs to recognise the influence (link or feedback) from *ecosystem services* to the *external influences* (right side of diagram) which are often policy related and that a combination of factors would ultimately influence decisions.

- Participants also commented that *sustainability* and *technological developments* are not being fully explored in the diagram.
- *Age* and *attitude to risk* will affect the land managers desired objectives
- *Government incentives* will influence choices but may not always lead to the right decisions e.g. the recent incentives to convert farmland into woodland are leading to short term decision making that could create long term problems as the future incentives and prices for finished timber are unknown. Another example of conflicting policy drivers is relates to the GAEC (good agricultural and environmental condition) requirements where land managers are required to strip out gorse, which is an important food source and habitat for birds (principally the Yellowhammer).
- Participants felt that there seems to be little direct relationship between *consumer demand* and *market prices*. Currently prices for finished cattle are falling even though demand for Quality Assured Scottish meat is strong.
- *Input costs* are a major consideration for many land managers so there is an increase in the use of renewable energy sources, particularly wind, in the Huntly area both as an effort by land managers to reduce input costs and by commercial companies taking advantage of political incentives.
- Niche tourism is economically important for the area but is perceived to be threatened by the continued expansion of wind farms and landscape policies do not provide protection for the area around Huntly.

Ecosystem Services and Benefits (right side of the diagram): The effect of scale and ratio between land uses was discussed at length. Both will influence which benefits are produced and how they may be perceived e.g. an area of 2 ha of woodland in a 200 ha landscape will have a different impact to an area of 2 ha woodland in a 20,000 ha landscape. In addition the time scale at which land managers operate will influence their decisions. A land manager on a limited tenure will have different priorities for land use to a landowner farming with succession in mind.

- Participants identified that there are interactions between the *services and benefits*. For example, participants recognised that there are many positive benefits from open access. However, the lack of understanding and ignorance of the consequences of actions may result in negative influences e.g. wildlife disturbance, farm stock disturbance and risk of disease. Some negative impacts can be regulated in part through judicious planning of pathways and routes but this is not always feasible. The issue of connecting people to the land through education in an effort to raise awareness of the countryside's multiple functions should be encouraged among its multiple users.
- Participants agreed that *land capability* will influence land use, but as land may be improved by the way it is used there should be feedback to land capability from land use.
- There was some deliberation regarding whether or not some of the descriptors could be combined to produce 'natural resources' e.g. food, timber and water. When asked which ecosystem services land managers would primarily recognise, the majority cited

food, timber and perhaps recreation. While they appreciated the benefits of pollination, carbon sequestration and reducing sediment export it appeared that these would be least considered given that most land managers principal aim is to make money.

- Sustainability- although not included on the diagram, was considered important by the group, however they did not think it figured highly on the list of decisions regarding land use by land managers in general.



Exercise Two: The Land Use Strategy Policy Goals and implications for the Huntly Area

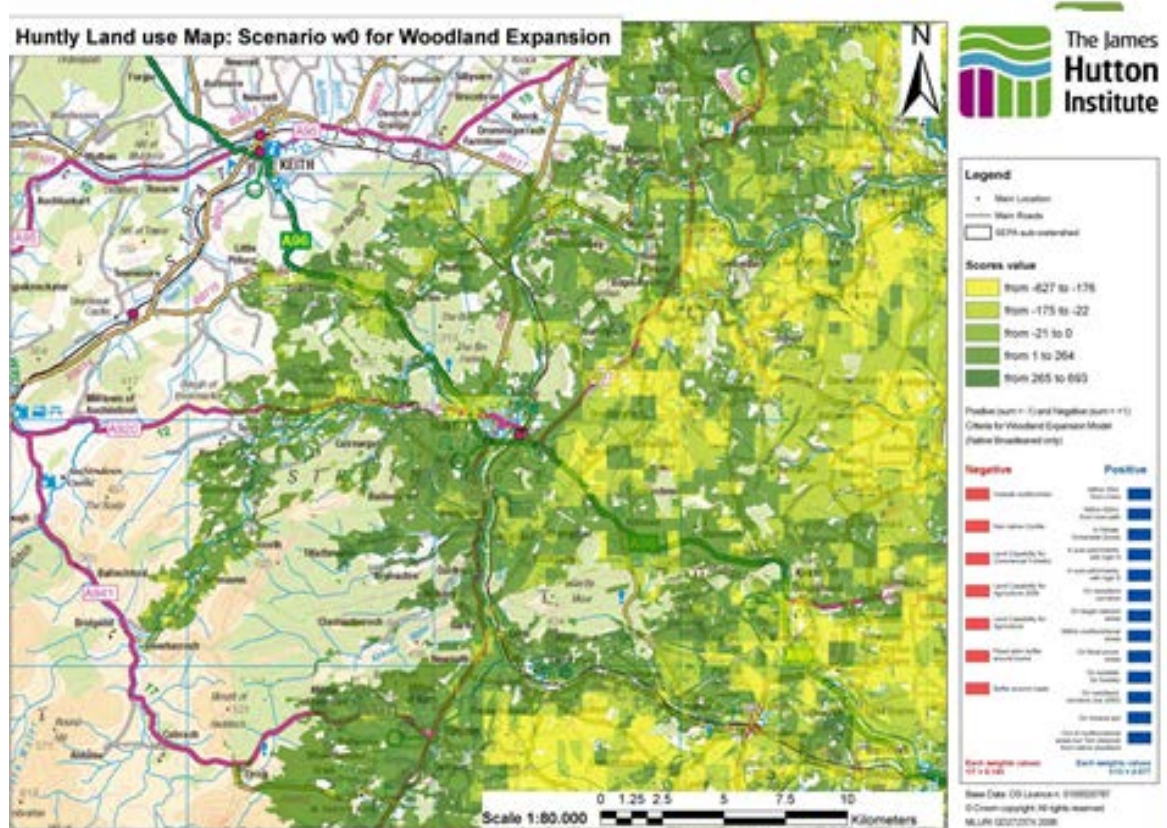
Exercise two involved looking in greater detail at the five Land Use policy goals (*Low Carbon Economy, Safeguarding Food Production, Halting Biodiversity Loss, Enhancing Recreation Opportunities and Sustainable Water Management*) and their implications for the Huntly area.

There are a number of ways that these Policy Goals can be realised. For example, a Low Carbon Economy could be achieved by planting more trees and/or increasing renewable energy and/or restoring peatlands. Safeguarding Food Production could be accomplished by protecting arable land against inappropriate use and/or dealing with pests and diseases and/or planting appropriate crops.

We asked the participants to discuss and feedback their thoughts on how the following options would impact on the Huntly area:

- the consequences of *Woodland Expansion* and the *Impact of Wind Turbines* in response to the Low Carbon Economy goal.
- the consequences of *protecting Prime Land* in response to the Safeguarding Food Production goal.

- the consequences of *Increasing the Network of Paths around Huntly* in response to the Enhancing Recreational Opportunities goal.
- the consequences of *increasing Broad-Leaved Woodland Connectivity* in response to the Halting Biodiversity Loss goal
- the consequences of *Surface Water Availability* in response to the Sustainable Water Management goal.



Woodland Expansion

any incentive scheme would need to recognise that not all areas are appropriate for planting. Additionally there should be support for removing trees that have already been inappropriately planted on prime land.

People felt that the map was not detailed enough to identify small scale opportunities (riparian zones, unworkable corners, shelter belts etc.) and as it only represented woodland and prime land, other land uses were not considered, e.g. grassland.

The Impact of Wind Turbines

When asked to think about the wind turbines in the Huntly area participants considered low carbon power generation, tackling climate change, community benefits and revenue and local skills development as advantageous. However they felt that there were many negative aspects to them e.g. degradation of landscape character, creating conflicts within communities, impacts on biodiversity, loss of tourism income, increase in feudalism, cost/benefits not proven and watershed disruption. All agreed that turbines should generate more community benefits while some people would prefer large groups of turbines to many small turbines spread across the countryside. It is believed that compensation to people living near turbines is insufficient or badly managed and that turbines are not producing the electricity promised or reaching the potential expected by the EU. Participants thought that Low Carbon Economy should be looked at much more broadly including other electricity options (e.g. Thorium nuclear reactors). With regard to carbon mitigation, participants felt that it should be explicitly recognised that turbines should not be installed on peat because the increased CO₂ emissions from doing so outweighs the benefits from the turbines.



The Expansion of Prime Land.

There was little discussion regarding advantages or disadvantages of the Expansion of Prime Land. However some time was spent considering the map. Participants noted that there was an increase in the area of land categorised as prime but that not all the potential prime land is likely to be cultivated due to factors such as topography or local features and these are not captured by the map based modelling approach. In general people agreed that prime land and potential prime land should be protected from alternative land use. When asked how else a low carbon economy could be achieved or how best to safeguard food production, participants focussed on improving grassland management practices through increased knowledge from research and awareness of alternative systems e.g. zero cultivation. They believed the main factor preventing or enabling woodland or prime land expansion would be land managers attitudes which are likely to be affected by levels of incentives, age and succession. There was concern over using the predictions at the field scale as a basis for approving incentives or subsidies. However, there was some acceptance that they can be used to help illustrate areas where the potential for prime land expansion is likely to be high: i.e. the models may be useful in identifying zones where there will be particular major land uses.

Increasing the Network of Paths around Huntly

Access to benefits from the land in the form of physical and mental wellbeing, greater understanding of nature, mutual respect and an appreciation of the countryside were cited as major advantages to increasing the network of paths around Huntly. However participants felt that many of these advantages relied on responsible behavior. They believed that inappropriate behavior would result in disturbance to wildlife and farm stock and result in conflict with other users and land managers. Paths need to lead somewhere, to a view point or through areas of interest. The way paths are used depends on where they are situated. Paths near towns are likely to be highly appreciated and well used whereas more isolated paths may see less use (although may be just as highly valued). The cost of building and maintaining paths to avoid degradation and erosion must be properly considered. If such networks aren't adequately funded the participants predicted that such a policy was unlikely to succeed.

Broad Leaved Woodland Connectivity for Biodiversity

Developing woodland corridors for biodiversity was seen by the participants as an essentially positive action. Advantages included increased connectivity and shelter for wildlife, shelter for farm stock, increased genetic and bio-diversity and additional areas for recreation. However narrow corridors can be seen as commercially unviable, unproductive and restrictive. There is a risk of increasing the spread of invasive species e.g. giant hogweed in riparian plantings, and narrow belts may not be suitable for some species and could lead to increased predation of ground nesting birds and farm stock. Participants agreed that the implications for managers of smaller holdings should be considered as the demand for more woodland might impact on grants they rely on to keep farming. Access to grants was discussed quite extensively. Participants felt that in some areas which would be ideal for increased tree planting e.g. large areas of gorse or scrub the land owners (very often smallholders or hobby farmers) were either unaware of the grants available to them or couldn't afford the initial cost of setting up a scheme. It was noted that existing forestry schemes already look for diversity and promote native woodlands but farmers are often more interested in getting the best return on their grant not what is best in terms of habitat. Although large stands of predominantly Sitka are often perceived to be sterile habitats they have their own biodiversity (red squirrels, crossbills,

crested tits) so decisions have to be made about the species that corridors are being planted for, e.g. planting oaks is good for grey squirrels but not red squirrels.

Surface Water Availability

It is unlikely that surface water runoff will affect people in the Huntly area who are on the mains water supply as Scottish Water have technological solutions to water storage and can transfer water between resource supply zones. However there are many private water supplies in the area fed by springs that already dry up in the summer months. Participants noted that rural development and the pressure placed on water supplies (increase in people taking more showers, washing machines, dishwashers etc.) is increasing but rural water supplies are not keeping pace. There were fears that changes in surface water could, in time, affect ground water reservoirs and may impact on local livelihoods particularly salmon and trout fishing on the Deveron, and an increase in arable production could lead to further demands on water supplies which in turn may impact on hydroelectric schemes downstream.

Reduced surface runoff may influence the species of trees planted in the area. For example pine does well on drier soil but is slower growing than spruce which is favoured by saw mills. Forestry needs site specific planting and it is difficult to generalise and plan for an uncertain future.

The group agreed that extreme events (drought and summer floods) are difficult to forecast. Erosion caused by flash floods is an issue, exacerbated by an increase in tarmac and concrete involved in building new towns and villages, and housing development removes trees affecting both the water supply and water quality. Participants felt that new housing schemes should include or maintain trees but this in turn can lead to problems from wind blow if these are not properly maintained

Next Steps

The James Hutton Institute is collaborating with Aberdeenshire Council in the Regional Land Use Pilot (RLUP). The aim is to test and evaluate how the Land Use Strategy can be used to guide decision-making to optimise the benefits from land when there are often competing or conflicting objectives among and between policy and private interests. One of the roles of the James Hutton Institute within this is to gather stakeholders' perspectives on current and future land use, to identify the factors influencing land use changes and decisions to obtain a better understanding of the benefits that the land provides. This information will be fed back to Aberdeenshire Council and the Scottish Government Land Use policy team to inform the review of the Land Use Strategy in 2015-6. Our next step is to plan the final group of workshops, in both the Upper Dee and Huntly areas to be held in autumn 2014. We will also collate the information obtained from this workshop with previous Huntly workshops to compare the results. The final round of workshops will focus on evaluating the trade-offs in benefits from different possible future scenarios. We would encourage all those who attended previous workshops to attend the final workshop, along with invitees who were unable to attend the earlier workshops. We also welcome suggestions for other participants.

Since the initial workshops we have been analysing the information provided by the activities in the workshops. The views and suggestions gathered from this workshop will be communicated to the James Hutton researchers to enable development of the systems diagram and to the RLUP team for use at their next steering group meeting. Further information on the workshop analysis will be available in due course, however if you would like any information in the meantime please contact Anja Byg on 01224 395411 (Anja.byg@hutton.ac.uk). We may also, if the participants are willing, be in contact with them for more individual information in the future.

Appendix. List of workshop participants and the organisations/ farms they represent

Alex Scott	Dukewell Farm
Angus Smith	Mains of Mayen Farm
Fiona Manson	Huntly and District Tourism Action Group
Gillian Forbes	Scottish Natural Heritage
Gordon McKilligan	Aberdeenshire Local Outdoor Access Forum
Hywel Maggs	Royal Society for the Protection of Birds
Iain Anderson	Forestry Commission Scotland
Irina Birnie	Aberdeenshire Council
Joss Allen	Deveron Arts
Liz Jones	Balloch Riders Action Group
Maria Perkins	Networks of Wellbeing Now
Mary Scott	Huntly Development Trust
Sharon Scapens	Huntly Development Trust
Steve Wright	Loanend Farm

Stakeholders who were invited but could not attend include; Scottish Land and Estates, other Estate owners/managers, Marr Area Partnership, Scottish Wildlife Trust, Scottish Water, agricultural consultants, the local distillery and Huntly Cattle Mart.