

# COLLABORATIVE FRAMEWORKS IN LAND MANAGEMENT:



## A Case Study on Integrated Deer Management

### Project Newsletter Number 4.

#### Editorial

[www.macaulay.ac.uk/RELU](http://www.macaulay.ac.uk/RELU)

Welcome to the fourth newsletter for the RELU Deer Project. As progress over the last year has been affected by changes in staff, prompted in part by the closure of CEH Banchory in October 2007, we have agreed with ESRC to re-schedule work phases and extend the end date for the project to December 2009. Good progress has been made in a number of areas as detailed in the reports below. A major feature of 2008 will be the submission of a number of papers from across the work phases.

#### Project aim

By using wild deer as a case study, this project aims to produce a framework for the development of effective, informed, inclusive, collaborative and sustainable management of rural resources in Britain. Through working closely with stakeholders we are developing a better understanding of the issues influencing deer management at national, regional and local scales, and what processes can be used to identify and manage similar issues for other rural resources. One objective is to identify how and when collaborative management can be a benefit to rural resource management. We also hope to identify how best to provide new information to different stakeholder groups. One thing we do not expect to achieve is to solve all the issues around deer management.

#### Stakeholder analysis

The interviews with core “deer world” agencies and institutions were supplemented in 2007 by interviews with other organisations identified by our initial interviewees as having an interest in deer but less involved in decision making and management. Preliminary analysis indicates that some core organisations have high “centrality” indicating that they have connections with a broader range of organisations and potentially have an important influence on information flow and decision making. This has potentially a strong effect on the ability of more peripheral organisations to influence policy and practice. This work suggests a need to develop structures that allow greater inclusiveness for more peripheral organisations, which may lead to increased consensus on deer management and an associated reduction in conflicts.

The next step is an in depth analysis of how national level collaboration affects collaboration at the local level. This forms an essential element of our case study sites and acts as a baseline for analysing the effects of collaboration over deer management in these areas. Results have already helped to inform our engagement with stakeholders at the local level.

### Legislation review

This work details the evolution of deer related legislation up to present times and the social, political and economic drivers that influenced its development. A paper (in draft) analyses the basis of current legislation and investigates the extent to which it is suitable for delivering contemporary public objectives. The paper questions the extent to which legislation has been complicit in the creation of current deer-related issues, and a 'barrier' to or 'driver' of collaboration.

### Venison Survey

We have completed interviews with venison producers and processors in Scotland and a slightly smaller range of people in England. Initial analysis reveals substantial differences in the importance of venison price.

In Scotland, most of the deer range is under the management of sporting estates where the number of venison carcasses produced is driven by other sporting management objectives because income from stalking is substantially greater than income from venison. Early indications from England suggest that stalker and recreational hunters view venison income as an important component of the economics of hunting and will respond if prices increase. A paper in draft discusses the extent this is to do with differing cultural patterns relating to hunting traditions between the two countries

Fallow and muntjac carcasses



### Integrating practitioner knowledge

Stakeholder knowledge about deer management, deer movement and habitat use has been shared using 'participatory GIS' techniques. Interviews with most of the key practitioners in the Balquhiddy and West Sutherland Deer Management Groups have been carried out and the maps used in these interviews have been digitised to allow the data to be integrated with ecological models of deer habitat use.

Practitioner weightings for the importance of factors such as shelter and habitat type, and local knowledge of fences and feeding sites, have been used to evaluate predictions from an ecological model under development. This has enabled the model to be adapted to provide more locally specific predictions about deer habitat use. This has demonstrated that shelter is a strong driver of habitat use by deer and should be weighted along with habitat preferences accordingly.



Example of map showing deer use

This work is also revealing the importance of the connectivity between estates at the landscape level and its implications for deer management at different planning scales. Workshops in April/May will complete the cycle of knowledge exchange with practitioners in these areas.

We feel the process has generated a greater degree of understanding and trust between practitioners and scientists.

### Perceptions of Woodland Landscapes

Different societal groups (foresters, landowners, the 'public') may value and perceive woodlands, and woodland management, differently. If so, this might present a 'barrier' to collaborative management due to a lack of mutual understanding and consensus. Furthermore, the provision of information may impact upon these values and perceptions. This study set out to investigate these hypotheses, using innovative qualitative methods.



Several small groups were taken to woodland sites with varied levels of understorey, asked to take notes and photographs and then discuss their preferences. Participants ranked these preferences and were then provided with information regarding woodland wildlife (bird and plant abundance and diversity), the impact of deer on understorey flora and deer management. Further discussion and rankings were then conducted.



The data is still under analysis but early findings suggest, interestingly there was little if any contestation of the need to cull or fence deer in order to achieve a more dense woodland under-storey, if that type of landscape was preferred. Furthermore, there was substantial overlap between the values and perceptions of the groups studied, suggesting a positive climate for collaborative management.



### Choice experiments

Using discrete choice experiment we tested the role that collaboration may play in affecting the trade-offs practitioners are prepared to make among the various



Animated discussions with Balquidder Deer Management Group. Steve Yearley standing.

objectives they may have. Initial experiments with Balquhiddy Deer Management Group were very successful with high uptake from local practitioners and a lot of quantitative data produced as well as a large amount of discussion as the experiments were taking place. Initial findings show that collaboration can affect the choices people make but interestingly, among the private sector practitioners, incentives to compensate people for the costs of collaboration are unpopular. This seems to be because the acceptance of compensation is perceived as to some extent relinquishing management control to the incentive awarding body. These results have potential implications for any incentive scheme that is aimed at achieving public objectives in areas outwith land designated for natural heritage objectives. Updated protocols are being developed for choice experiments in 2 other case study sites to test if the results apply more widely.

### Interdisciplinarity

Central to the success of the project is our interdisciplinary approach bringing together natural and social scientists and integrating knowledge from their different disciplines. This allows us to take a more holistic approach to the question of collaborative deer management. It also enables us to use a range of data collection methods from different disciplines, as outlined above i.e. choice experiments, public perceptions of landscape etc. In addition to the activities outlined in the original proposal we are monitoring the development of interdisciplinary working among the project personnel. This involves a) an annual survey of researchers attitudes and how/whether these change over the project period; b) annual narratives - in which the researchers reflect on the process and progress of their interdisciplinary working, and involvement with stakeholders in the project. Initial analysis of the development of interdisciplinary work indicates that project personnel feel that the novelty of the project is that it is working under a new or diverging concept which we call "Participatory Interdisciplinarity". We are currently working on analysing what this means and the extent to which our approach can add value over and above the benefits of working either in an "interdisciplinary" framework or in a "participatory" framework.

### Work shadowing and Fellowships

Mark Lazzeri from the Assynt Foundation took advantage of the opportunity provided by the Fellowship scheme and joined us during November 2007. The Foundation owns ~44500 acres of what was traditional deer forest, 11000 acres of which fall within SSSI and/or SAC designations. The Foundation is developing a deer management programme, in conjunction with Deer Commission for Scotland and Scottish Natural Heritage. The aim is to reduce the resident deer population to allow regeneration of woodland and recovery of other degraded habitats. Mark has kindly produced the following feedback from his experience.

#### **The Pros and Cons of a RELU Fellowship**

My initial thoughts on this topic were that there are no cons to taking up a RELU fellowship; I certainly had an extremely useful and enjoyable week. The downside is probably a direct result of my character rather than any intrinsic flaw in the Fellowship process. The problem is that I am now more frustrated and have more work. It is a number of years since I left the world of research and academia finally to become a practising land manager on an estate in NW Scotland. The time spent with RELU Collaborative Deer Management Project

(CDMP) helped to encourage me to tackle some of our practical problems in a more logical and perhaps scientific manner. It enabled me to establish contacts with a number of interesting and interested people whom I can contact for opinions and advice. There are so many things that I now want to incorporate into our estate management policies. From the way discussion groups were organised, through the process of the “choices analysis” work to the opportunities for involving other land managers (in the widest sense) in recording and research. My problem and I suppose it is actually a happy one, is that I can see so many potential benefits, that I want to start implementing everything straight away.

I cannot believe that anyone, other than perhaps the most hardened cynic would fail to benefit and enjoy the experience of a RELU Fellowship. The RELU-CDMP members made me feel welcome and were very supportive making participation in discussions easy. I am sure that the contacts I made during the Fellowship visit will strengthen and that more formal links may be established in the future. I am now an even stronger advocate of involving industry (particularly land management) with academic research and will actively promote this approach.

### **Work shadowing with the Royal Society for the Protection of Birds**

Rene, Justin and Stefano are looking forward to spending up to 3 weeks shadowing staff from the Abernethy and Inversnaid offices of the RSPB. We aim to gain a better understanding of how target ‘habitat states’ are being selected and defined and what monitoring is in place to evaluate whether management aims are being fulfilled.

For details about how you can be involved with work shadowing or fellowships please contact Brenda [brenda.mayle@forestry.gsi.gov.uk](mailto:brenda.mayle@forestry.gsi.gov.uk)

### **Stakeholder feedback**

We have had some very positive feedback from practitioners in the case study areas. The team has engaged with a broad spectrum of stakeholders, both individuals and groups, with a range of views and perspectives - and continues to do so. This includes, amongst others, stalkers, land-managers, members of the public, government agencies and membership organisations. By meeting people and joining them at their place of work project team members have gained a real appreciation of what their jobs entails. This also allows us to gain an understanding of individual objectives, types and sources of knowledge (of local landscape, deer and their habits, from books, scientific papers, articles, experience or discussions) and any 'barriers' to and 'drivers' of collaborative working people may perceive. These findings can then be taken into account by the project team both when designing the ongoing research and the final collaborative management framework. For example, the 'Perceptions of Woodland Landscape', reported above and below, had its genesis in early discussions with stakeholders in the 'Marches' case-study area. Similarly the PGIS work took advantage of inputs from Stakeholders in the Balquhider area and in the Deeside.

In the case of the “Perceptions of woodland landscape” work initial discussion with practitioners indicated that the woodland landscapes were an important feature. However, many people from across different groups of society did not consider the connection between landscapes and deer because of the effect of

grazing in shaping biodiversity and woodland landscape types. This work led to a structured approach where different groups of people were invited to participate in outlining their preferences for different woodland landscapes. We investigated whether people who experience and connect with woodland in different ways (foresters, general public, landowners) change their preferences when presented with information about wildlife and deer management associated with the different woodland landscapes. The results illustrate what people consider important about, and how they engage with, woodland landscapes and what effect management actions may have on these perceptions. This is important for understanding how future management is likely to be received by landscape users and managers.

#### Science Week 7-15<sup>th</sup> March

The project team is presenting some of our research to a wider audience as part of the ESRC 2008 Festival of Social Science. Nowadays woodlands are used increasingly for recreation as well as being important for wildlife and timber production. We will provide information on the biodiversity value of different woodland types and the management that is required to maintain these woodlands and provide for these multiple uses. We are interested in the preferences that the public has for different types of woodland landscape.

Visit us at the Virtual Landscape Theatre at the Macaulay on 12th March in Aberdeen, or at The Hub in Edinburgh on 15th March. People will be invited to express their preferences for different woodland landscapes. The event in the Macaulay's "Virtual Landscape Theatre" will take place every hour, on the hour and will last about 20 minutes per session

#### **Science into Policy**

Members of the project team met with the RELU Land Use Policy Analysts in mid February to discuss the research and consider any findings relevant to policy. We are still at a relatively early stage in terms of providing feedback to RELU on results, which may be of relevance to policy development.

#### Feedback from you

We would like to know whether a database of deer related reference material from academic, governmental and other organisational sources would be useful for individuals and groups interested in deer management. Please reply at: [http://www.macaulay.ac.uk/RELU/dg\\_poster.html#Poster](http://www.macaulay.ac.uk/RELU/dg_poster.html#Poster)

We would also welcome feedback on the presentations we have given so far. Please see the questionnaire at [www.macaulay.ac.uk/RELU/presentations\\_questionnaire\\_July2007.doc](http://www.macaulay.ac.uk/RELU/presentations_questionnaire_July2007.doc)

Hard copies are available from Stefano Fiorini, Socio-Economic Group, Macaulay Institute, Craigiebuckler, Aberdeen, AB15 8QH [s.fiorini@macaulay.ac.uk](mailto:s.fiorini@macaulay.ac.uk)

## The Project team

Zoë Austin will be joining the team in April 2008 as a research assistant working with Piran and Jim at the University of York. Originally from the Isle of Wight, Zoë moved to York in 2001 to study for a BSc in Environment, Economics and Ecology. She completed a PhD on deer management and impact in the UK with particular relevance to the environmental impact of wild deer species in the East of England.



Her role within the team will be to contribute to the development and implementation of the choice experiments and bio-economic modelling work.

Contact details for the Project team can be found at the individual university and institute websites or [www.macaulay.ac.uk/RELU](http://www.macaulay.ac.uk/RELU)

Macaulay Institute: Justin Irvine Stefano Fiorini	Forest Research: Brenda Mayle, Liz O'Brien, Robin Gill, Norman Dandy, Helen Armstrong
University of York: Piran White, Zoe Austin, Jim Smart	DICE University of Kent: Douglas MacMillan
University of St Andrews: Rehema White	University of Edinburgh: Steve Yearley
University of Aberdeen:	René van der Wal, Amy Turner

Sharon Phillip left at the end of December 2007 to study a PhD at Aberdeen University evaluating agrotourism's contribution to rural development and sustainable tourism.

We would like to thank everyone who has supported the project so far especially practitioners in the field study sites and look forward to this continuing and productive dialogue throughout the project. If you know of others who would like a copy of the newsletter please let us know. If you no longer wish to receive this newsletter or have any comments on it please contact **Brenda Mayle, Ecology Division, Alice Holt Lodge, Wrecclesham, Farnham, Surrey GU10 4LH** [brenda.mayle@forestry.gsi.gov.uk](mailto:brenda.mayle@forestry.gsi.gov.uk)

This research is conducted as part of the Research Councils' Rural Economy and Land Use (RELU) Programme (Project: RES 227-025-0014). RELU is funded jointly by three Science Research Councils, Defra and SEERAD. The Forestry Commission is also supporting this project. Details about RELU can be found at [www.relu.ac.uk](http://www.relu.ac.uk)