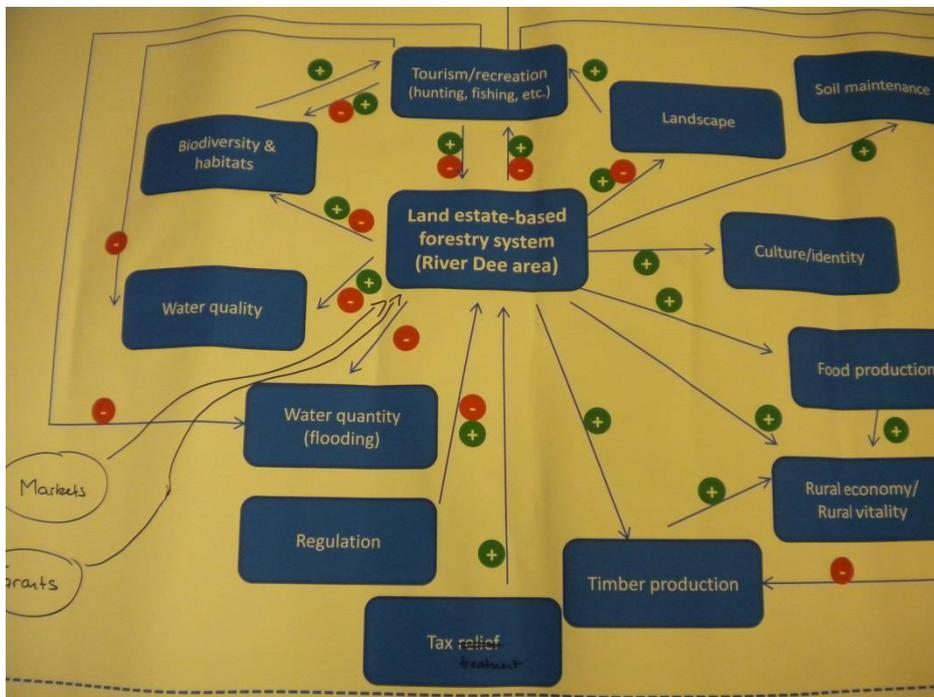# Public good hotspots, governance and information needs from agriculture and forestry in Aberdeenshire: a workshop report

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1. Introduction

This workshop, which was the second in the series of regional workshops within the PROVIDE project organized and implemented by researchers from the James Hutton Institute, took place on the 7th June 2016 at the Thainstone Centre in Inverurie (Aberdeenshire). PROVIDE is an EU-funded Horizon 2020 project which runs for three years from September 2015 with 14 partners from 13 EU countries[1]. PROVIDE (PROVIding smart DElivery of public goods by EU agriculture and forestry; www.provide-project.eu) focuses on identifying smarter mechanisms for the provision of public goods by agriculture and forestry in EU countries, both at the EU level and at regional and national levels.

The first round of workshops took place in early 2016 (by way of a similar format in all partner countries and subsequently at the EU level in Brussels) and aimed to collect information from stakeholders in the agriculture and forestry sectors to understand ('unpack') people's notions of public goods from agriculture and forestry, and explore where important public goods and bads (PGBs) were found in the areas. The results of the first round of workshops were used to aid the design of the second round of workshops, through the selection of interesting case study areas.

Following on, the aims of the second workshop were to:

i)   Validate interesting case study areas in terms of public goods' and bads' delivery, which have been identified from workshop one and which will be analysed throughout the project;

ii)   Discuss the governance mechanisms that would enable an improved provision of public goods in agricultural and forestry systems and the information that would be needed to design socially desirable interventions;

iii) Discuss the type of tools (e.g. website, social media, communities of practice, networks) which could be of benefit to agriculture and forestry stakeholders for enhancing their knowledge on public good delivery.

The aims were discussed through the use of two case studies which were introduced to the group at the beginning of this workshop. These were the Ugie Catchment area (in the North East of Aberdeenshire) and the Upper Dee area (in the West of Aberdeenshire). Both were selected due to their consideration as 'hotspots' in terms of high levels of public goods' and bads' delivery, emerging as a result of existing mismatches between the supply and demand sides. The selection of these two 'hotspots' was based on the outcomes of the first PROVIDE workshop held in February 2016.

The next section of this report provides some further details on the participants, followed by a recap of the activities undertaken during the workshop and a summary of the results from the activities and the associated discussions. Finally, the key emerging points from the workshop are highlighted along with a short summary of the next steps of the project.

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[1]EU partner countries include: Austria, Bulgaria, the Czech Republic, Estonia, Finland, France, Germany, Italy, the Netherlands, Poland, Romania, Spain, and the UK.

2. Participants

Invitations were sent by email and/or phone to all those on the mailing list gathered by the research team (of the James Hutton Institute), which included the individuals who had attended the first workshop (who had expressed an interest in the second workshop). The mailing list was devised from suggestions from previous workshops run by the researchers, as well as suggestions by other participants. This list included: farmers' and foresters' associations and businesses; researchers and academics with expertise in agriculture and forestry matters; representatives of land estates; representatives of public institutions; and, environmental and outdoor NGOs. Ultimately the workshop had seven participants. Although numbers were somewhat lower than we had anticipated there was a good range of participants, in terms of their backgrounds and expertise – representing Aberdeenshire agriculture, forestry, academia, an environmental public body and the National Park which sits within Aberdeenshire. Further details on the participants who attended this workshop can be found in the table below:

Table 1: Information on the workshop participants

Organisation/ Affiliation	Details	Attended first workshop?
Farmer	Aberdeenshire Local Outdoor Access Forum (ALOAF) member; LEAF (Linking Environment And Farming) farmer	Yes
Scottish Natural Heritage	Operations Manager for Tayside and Grampian; Family background in farming	Yes
Forestry Commission Scotland	Development Officer	No
Cairngorms National Park Authority	Land Management Advisor; Farmer	No
James Hutton Institute	Social Researcher; Local Resident	No
Veg box scheme / Farmer	Organic vegetable business owner; Academic	No
University of Aberdeen/ James Hutton Institute	Economist	Yes

3. Introducing and verifying the case studies

After an introductory presentation on the project to date and the aims of the workshop, the two case study areas/ hotspots were introduced (by way of a summary and a conceptual map depicting the main public goods and bads in the area, and their connections). The participants were then divided into two subgroups (with the group participants were pre-selected before the workshop to enable the most expertise in each sub-group) with each subgroup focusing on one case study area. As highlighted earlier, these case study areas were selected due to their consideration as 'hotspots' in terms of high levels of public goods' and bads' delivery, emerging as a result of existing mismatches between the supply and demand sides. Each subgroup was then given the opportunity to verify the case study summaries and maps, and to identify the main PGBs within the two areas which require improved governance. The (verified) descriptions of the case studies along with the main points from the discussions and amended concept maps are summarised below:

3.1 Case study area 1 - The Ugie Catchment Area

The River Ugie catchment is located in North East Aberdeenshire, with the mouth of the river emerging in the industrial (oil and fishing) town of Peterhead. The area around the catchment is comprised of a fertile and relatively mixed farming system. Although there is some livestock farming, the majority of the agriculture is the production of cereals. This farming provides some jobs and income to the area, but is also at odds with the environment in terms of water pollution and loss of habitats and biodiversity. There is little forestry in the area.

On the whole, the participants agreed with the storyline and map presented, with a few suggested improvements/ corrections. Although the Ugie catchment had been originally presented as an intensive farming system, participants indicated that it is a mixed farming system, as it also includes livestock farming. The system was not considered intensive due to both the climatic conditions of North-East Scotland which make intensive farming difficult, along with the high and currently (perhaps) unjustifiable costs that are associated with intensive farming. Another observation made by the stakeholders was to question why 'drinking water' had been placed under 'food production' in the diagram. Drinking water issues were identified as of high importance in the catchment, and mostly related to water quality. In general, participants perceived that agriculture had mostly negative effects on the quality rather than the quantity of water.

The participants also pointed out that 'recreation' and 'landscape' were missing from the diagram. They indicated that a positive link should be established between the agricultural system and recreation, as people should be able to access recreation areas close to where they live (instead of being forced to drive long distances). This is not only a right of people but increasingly a Scottish Government priority (to improve health and wellbeing). With regard to 'landscape', participants suggested including it because the landscape had changed over time and there were now more woodland, bigger fields and less hedgerows.

The participants also pointed out that it was difficult to recognise and evaluate the relationships between the elements of the diagram due to the limited amount of information provided. In addition, they argued that the nature of the relationships ('positive' or 'negative') largely depends on the specific context of each relationship. These contextual factors include how they are impacted by the global markets; the level of subsidization within the specific agricultural system; lack of long-term vision of government policies and poor management of the policies. Furthermore, in the diagram all relationships were depicted as having equal impact (arrows of the same size) whereas in reality the strength of the relationships and magnitude of the impacts may differ.

The participants identified the main PGBs which need improved governance within the Ugie area as: **biodiversity**, **water quality (especially for drinking uses) and quantity**, and **soil functionality**. Although these issues have been the target of many different interventions, these have proven ineffective to date as improvements have not yet been achieved, and thus they are still in need of further (good quality) governance.

The refined concept map below shows the various linkages that are connected to agriculture in the Ugie catchment. The map takes into account the changes suggested by the participants (highlighted in black).

Figure 1: Concept map for the Ugie Catchment case study area
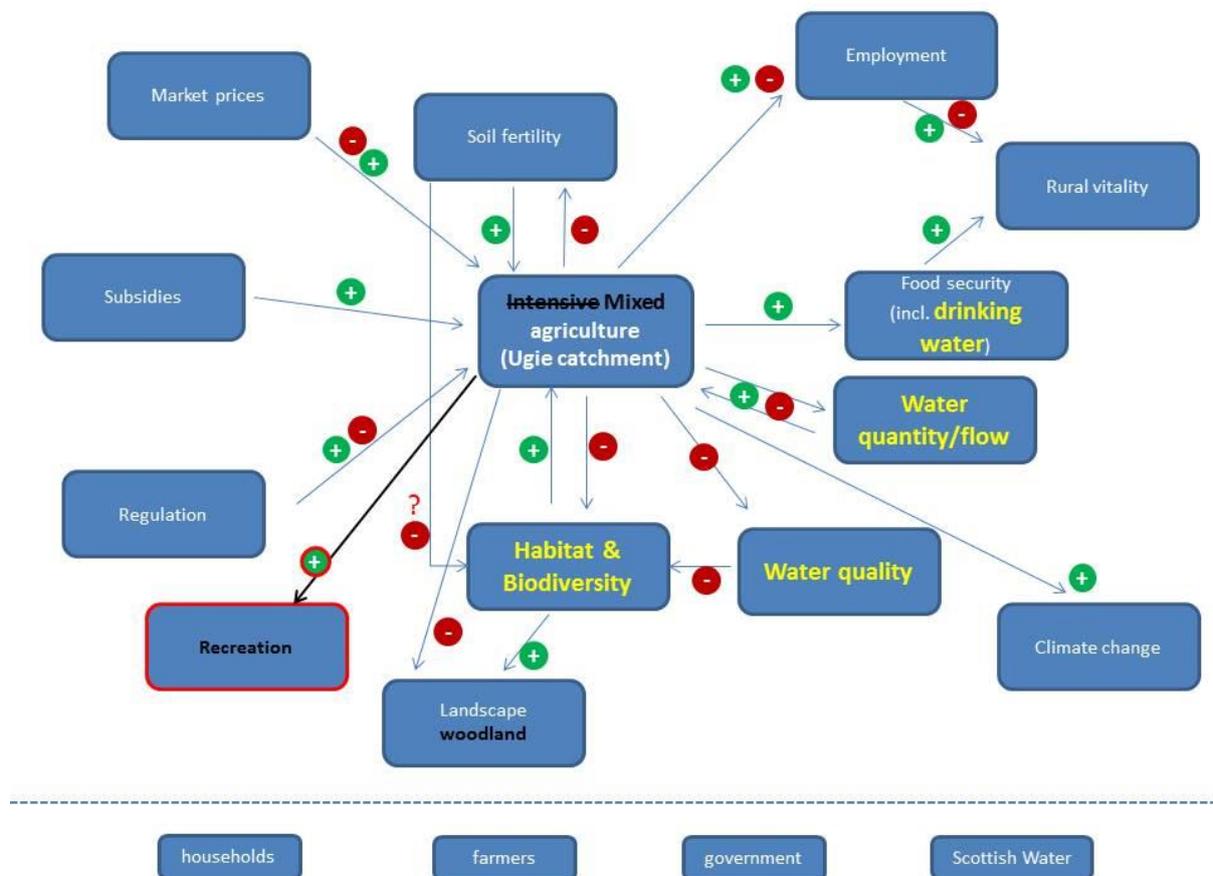
3.2 Case study Area 2 - Upper Dee

The upper part of the River Dee is a sparsely populated upland area located in West Aberdeenshire. It is a popular tourism and recreation site in addition to being home to forestry and some extensive agricultural activities. Much of the area is within the boundaries of the Cairngorms National Park. Furthermore, the land is mainly divided into large estates relying on a mixture of tourism, recreation, sporting and forestry activities, in addition to some low-intensity hill-farming.

Although originally we included the Upper Dee catchment area as a case study with regards to its forestry system, the participants emphasised that forestry (and its associated public goods and bads) were just one of numerous land uses in the area, with moorland (and the associated shooting and hunting) being more important for the area in terms of land use and economic value . The key goods provided by the area are timber production, income and rural vitality (through tourism), biodiversity and habitats, landscape diversity, culture and identity, soil maintenance and water quality. Given the focus of the map (on forestry), forestry issues were initially discussed including its mainly private nature, which can be at odds with tourism and recreation activities. There were suggestions to replace single-species conifer plantations with new species which provided more public goods and better access. Given the recent flooding in the case study area (Ballater, December 2015), there were many discussions over the potential connections between forestry activities and increased flooding risks (e.g. large scale felling and more drainage). As much of the case study area has National Park status, there are already restrictions on some activities such as large-scale clear-felling, but the lack of a joined-up approach to water and land management in upstream areas was seen as a contributing factor to flooding risk.

The subgroup agreed that the most important issues for the area, and ones which require improved governance, were those related to **tourism & recreation** and **flooding**. Given that the area lies mainly within the Cairngorms National Park, it is a popular tourism destination, and there are existing conflicts between the various tourist activities (e.g. mountain biking and hunting) as well as between the tourist activities more widely and conservation objectives.

In terms of the system map, the subgroup generally agreed with the pre-prepared version, but also felt that it was important to include moorland as one of the central land uses, as well as to rename 'tax relief' as 'tax treatment' and to include 'markets' and 'grants' as directly influencing forestry and moorland so as to create a more realistic map.

The issues surrounding flooding in the case study area, e.g. negative impacts on agriculture, rural and tourism businesses, require improved governance. The participants were concerned that flood management remains largely dependent on 'hard' solutions (e.g. engineering) rather than 'soft' ones such as reforestation close to river banks, whereas flooding arises from a series of smaller actions (e.g. scattered land management changes, inappropriate building, overuse of water).

The issues surrounding tourism & recreation in the case study area, for example conflicts between users as well as around access rights, also require improved governance (as suggested by the subgroup). Some of the issues highlighted included lack of accountability for poor practice by tourism & recreation businesses, as well as conflicts between users, e.g. salmon fishing on the River Dee and shooting, are very lucrative financially for the landowners compared to other recreation

activities such as kayaking or hiking (although these activities may account for fewer negative impacts on habitats and biodiversity).

The refined concept map below shows the various linkages that are connected to land-estate-based forestry and moorland in the Upper Dee. The map takes into account the changes suggested by the participants (highlighted in black).

Figure 2: Concept map for the Upper Dee case study area
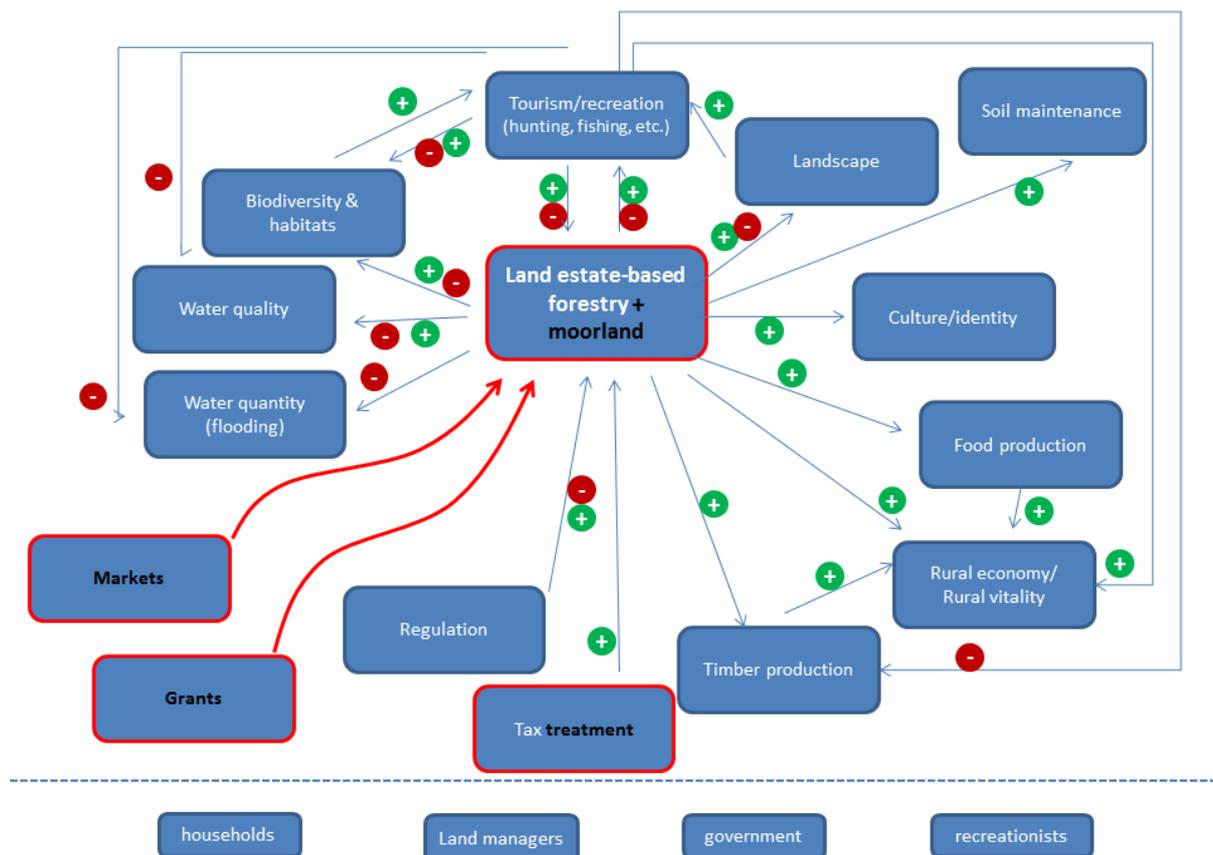
In conclusion, the main identified PGBs which require improved governance, as suggested by the subgroup participants, are **'Biodiversity'**, **'Water quality and quantity'** and **'Soil functionality'** for the Ugie Catchment, and **'Tourism & Recreation'** and **'Flooding'** for the Upper Dee. These PGBs were then discussed in further detail in relation to the case study sites at subsequent stages in the workshop.

4. Governance mechanisms

After the introduction and initial discussions surrounding the case studies and their associated public goods and bads, the discussions were focussed on governance mechanisms which could be used to improve the delivery of public goods/reduction of public bads. By 'governance' we mean the rules and procedures for decision-making and which are used to influence motivations and behaviour. Governance can take place through the state in the form of regulations and incentive mechanisms for example. In addition, governance can take place outwith the state, such as through the market or through collaborative arrangements (e.g. community forests, user associations).

4.1 Characteristics of good governance mechanisms

To start this discussion, participants were first asked to individually identify and write down the characteristics they felt contributed to making a 'good' governance mechanism. The identified characteristics, taking into account the discussions in both groups and the suggestions which were recorded on post-it notes, are highlighted below:

- Effective – contributes to the goal;
- Efficient – doesn't duplicate effort (wastes money); minimize (socio-economic) the costs for local population;
- Subject to targeting and monitoring;
- Equitable;
- Side-effects are considered (linked to targeting and equitability);
- People understand, accept and buy into the mechanism;
- Accuracy and honesty;
- Clear and simple objectives (with prioritisation);
- Takes account of the system as a whole and all its sectors;
- Has a long-term vision;
- Creates visible and practical results/ outputs, leaves the situation better than it was before;
- Good value for money;
- Simple administration;
- Should work on the principle of deterrence rather than punishment after bad action.

Figure 3: Post it exercise of the 'Characteristics of good governance mechanisms'
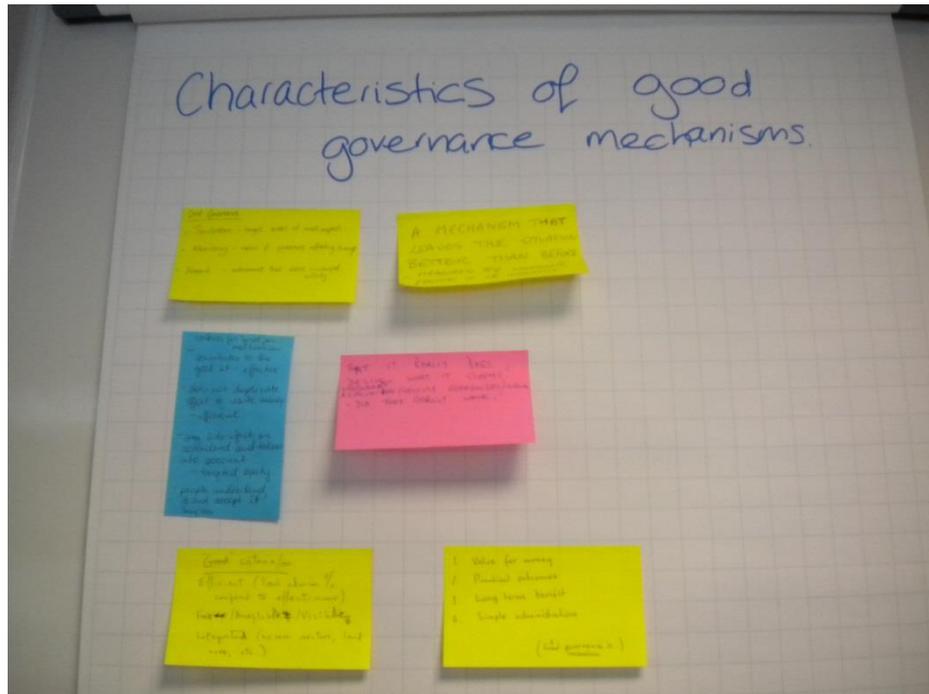
Subsequently there were wider subgroup discussions around some of these characteristics. For instance, with regard to target setting, the discussions revolved around the fact that the targets are not always based on scientific information.

4.2 Existing/ novel governance mechanisms for the good/ desired delivery of Public Goods

Subsequently the participants were asked to identify and discuss the existing or novel governance mechanisms which could be used to ensure good/desired delivery of the identified PGBs. These discussions took place in the same two sub-groups as the first part of the workshop, with each group focussing on one case study area and the PGBs which they identified as important. These PGBs were **biodiversity, water quality and soil functionality for the Ugie case** and **biodiversity, flooding and tourism for the Upper Dee case**. The various suggested governance mechanisms are highlighted below according to the Public Good/Bads they are associated with.

4.2.1 Biodiversity (Ugie catchment area)

- **Monitoring:** Some stakeholders suggested the use of monitoring as a means to improve biodiversity levels in the Ugie catchment area. The monitoring of what is on the ground should be improved and the results shared with the public and farmers in effective ways. Participants felt that this would allow farmers to make better-informed decisions, but recognised that there may be a lack of capacity amongst farmers and environmental

organisations to implement the monitoring, especially at multiple levels to deal with heterogeneity of, for instance, different types of farming, different locations.

- **Knowledge Exchange:** The suggestion to encourage knowledge exchange, specifically practical and informal knowledge, with the general public, especially schoolchildren, to make them more aware of the importance of Public Goods and biodiversity from a young age. There was recognition that this may be hard to measure.

- **Presentation and Marketing:** Improved presentation and marketing of information concerning biodiversity to increase the public awareness of issues concerning biodiversity. However, again this may be difficult to measure.

- **Fair food prices:** Food prices would take into account the negative effects on habitats and biodiversity which would be of benefit to society (in terms of increased Public Good delivery) and the farmers who were able to participate in the supply chains.

- **Longer-term tenancy agreements:** Participants suggested that land reform issues such as these are important and that short-term tenancy agreements do not always help to implement measures that require a longer term vision.

- **Policy support for organic agriculture:** This suggested mechanism specifically concerned a change in the regulations (via making the regulations and policies associated with organic agriculture more mainstream, as is currently being implemented in France) to ultimately increase the uptake of organic agriculture.

- **Outcome/ output based agri-environmental schemes:** The stakeholders highlighted that farmers would like simpler agri-environmental schemes, which could be achieved by basing these schemes on achieved outcomes rather than on the implementation of actions (as is currently the case). However, there are concerns with regard to measuring outcomes, which could make it difficult to base payments on these.

- **Policy integration and coordination:** This suggestion concerned coordinating various government policies and the targeting of specific interventions for the benefit of wider society (and biodiversity), although these may be difficult to implement or fund.

4.2.2 Flooding (Upper Dee area)

- **Flooding compensation schemes:** The suggestion was to pay farmers/ landowners in the form of compensation for allowing their agricultural land to be flooded (to prevent flooding in built-up areas further downstream). This would work like an insurance mechanism, where payments would be linked to actually incurred damage/losses to the farmer. The stakeholders believed that the farmers would be generally positive towards this mechanism but that in addition it would require implementation at local rather than national levels. It would also require the development of general guidelines for the implementation of such a scheme . However, some of the participants thought that it would be relatively easy to verify and implement, as the amount of compensation could be easily accounted for through a field visit after flooding to assess the cost of the damage.

4.2.3 Tourism & Recreation (Upper Dee area)

- **Codes of practice for individuals/ interest groups:** This would target the users/ beneficiaries of recreational opportunities to ensure there are consistent standards for activities such as mountain biking, to encourage appropriate use/ discourage misuse of Public Goods in the area (e.g. by encouraging mountain bikers to stick to marked routes). This is already occurring in certain areas within the Upper Dee, e.g. in areas where rare and vulnerable species such as Capercaillie breed, and where signs are used to discourage dog walkers and other recreational users from entering. These types of mechanism may however be difficult to enforce/ regulate as they rely on voluntary adherence.
- **Restrict the access rights of commercial businesses:** Participants suggested that current access rights (free access to commercial as well as non-commercial users) was in effect damaging to the interests of the landowners. While they thought that free access should be maintained for non-commercial users, they suggested that commercial users, who make a business through activities such as hiring out canoes, or guiding mountain walks, should not automatically have the right to use privately owned land. The rationale was that activities such as canoeing may have negative impacts on activities such as salmon fishing, which are important income sources for land owners in the area. The participants were unsure how this would impact biodiversity but the mechanism was suggested nevertheless.
- **Buying access rights from landowners:** This suggested mechanism was linked to the previous one as a way for commercial businesses to obtain access rights from landowners in exchange for a payment. It would provide landowners with more control over the number of users who use their land and the impacts these numbers have on biodiversity and on their own commercial activities (e.g. angling, shooting), as well as benefitting them financially. It would however discourage some users from accessing the land due to the new financial burden. The participants also discussed the use of this mechanism more generally, in relation to all users rather than simply commercial users.
- **Tourist tax:** This suggestion involved targeting users (through taxation) when they access a tourist activity or venue. This revenue from taxation could be used to improve the delivery of PGs in the area but it may have a negative effect on tourist spending/ tourist numbers. The effectiveness of the mechanism at various scales would be dependent on how it is implemented, e.g. a uniform fee or particular fees for particular locations.

4.2.4 Other

- In addition to the mechanisms identified for the two case areas, one participant from the first workshop who was unable to attend the second workshop sent us a suggestion for how to better manage deer numbers and thereby promote the delivery of Public Goods from forestry. The suggestion consisted of issuing local hunters with deer hunting licences from which the payments would be given to the state-owned forests. This would reduce deer numbers in these forests as well as providing affordable hunting opportunities to local hunters.

5. Information needed for governance and valuation mechanisms

Discussions were then facilitated in the sub-groups concerning what information would be required to enable the creation of some of the governance mechanisms mentioned in the previous activity. Suggestions from the Ugie group included clear and concise information on the costs and benefits of various actions and potential mechanisms. According to the participants, this would be relatively easy for recreation, where the costs could be measured through the prices of accessing various sites and the benefits measured in terms of the health improvements from partaking in recreation activities. Suggestions from the Upper Dee included information on costs for access and tourist taxes, as well as for assessing the damage caused by flooding for the flood compensation schemes. Both groups discussed the importance of acquiring biophysical information to monitor the effects and levels of compliance of any governance mechanisms aimed at improving Public Goods/ reducing Public Bads, as well as the necessity to include harder-to-measure aspects such as 'fairness' within any such governance mechanism.

However, some of the participants also expressed concerns including the risks associated with valuing biodiversity along with setting targets. In terms of the 'danger' of setting targets, some of the participants expressed concerns that landowners/farmers may then just aim for the target level to receive a payment in compensation. Whereas in reality the targets should be more efficiently aimed at improving the environment as well as creating safer conditions for protecting ourselves (and the farming community) from some possible risks and catastrophes which may become apparent through too much reliance on monoculture farming.

The participants also recognised that biodiversity valuation is contentious as it is inevitably almost always connected to economic values and costs. The participants recognised that 'value' is a subjective term and as such making decisions based on valuation brings into question whose views are being valued over and above the views of others. Furthermore, one participant pointed out that putting a value on biodiversity is almost impossible, except when biodiversity has a direct link to growing food. For example, it is possible to put a monetary value on earthworms or other soil matter directly linked to plant growth, but for other more obscure links, such as birds for their positive impact on biodiversity, economic valuation is more problematic.

To combat these concerns, the participants offered a number of solutions. Some indicated that fewer, but more targeted, schemes are needed, within which some of the funding could be used for monitoring and enforcement. Another participant added that accepting higher transaction costs would mean that they would be better directed and targeted in terms of outputs. In addition they wished for a monitoring system (and implementation of governance mechanisms) which was less top-down and accounted for a wider range of views, including wider assessments of the potential benefits and impacts of mechanisms.

In terms of the variety of information needed for the different mechanisms, the brief discussions on this emphasised that the different mechanisms will require different information – or in other words they need to be considered specifically in relation to their individual contexts.

6. Information needed from stakeholders

The participants, while remaining in their subgroups, were then asked to discuss what sort of information tools they would find useful to support the delivery of Public Goods/reduction of Public Bads from agriculture and forestry in Aberdeenshire.

In summary, the participants highlighted that there is no shortage of information available and rather the problems are often connected to an overload of information, or information that is difficult to understand, and as such there appears to be a demand for more simple-to-understand and locally-based information. Some participants expressed a desire for more information on the links between biodiversity and the economy as well as on the impacts of different farming practices on biodiversity, which again would require information which is more targeted and context-specific.

In terms of the format of these tools, the participants gave four suggestions: (1) Employing intermediaries who can gather, digest and disseminate the relevant information to land managers; (2) Having a single simple decision-making tool e.g. to enable each user to use the layers within the tool which are appropriate to them; (3) Having a tool in a variety of formats to recognise the varying preferences of landowners/ users; (4) Making better use of monitor farms and advisory services as methods for sharing knowledge and learning.

7. Feedback

The majority of the participants considered the workshop to be 'useful' and felt there were good opportunities to share their views with the other participants and the facilitators, as well as 'good' or even 'very good' opportunities to feed into the research process. Participants were less positive about the clarity of the explanations of the concepts used in the workshop, which is something we can work on for the next workshop. However, we were also keen not to pre-define many of the concepts to allow the participants to have more flexibility with their responses and more opportunities to engage in the conceptual development of the project.

Generally the participants were positive about the group dynamics, highlighting that these were very open as well as allowing for good group discussions. However, there was a suggestion to have more rotation between the groups so that each participant has an opportunity to feed into each story. This is particularly important for those who represent large areas of Aberdeenshire (e.g. covering both of the case study regions), but also those who want to gain some knowledge about an area they are less involved in (to learn lessons from these alternative areas).

In terms of learning/ new knowledge gained, some of the participants indicated that they gained some new knowledge about: Scotland's natural heritage, agri-environmental schemes and the structure of governance mechanisms. In addition, one participant felt they gained some knowledge about the EU aspect of the project, in terms of the EU-level workshops, and the case study regions of the other partners. However they would have liked to have been given even more information on these aspects. Furthermore, one participant felt the workshop was devised to benefit the project rather than the participants in terms of the role of the participants being (at least at this relatively early stage of the project) to impart knowledge rather than gain knowledge. We will ensure to take all of these comments into account when planning the future workshops.

Furthermore, when asked for suggestions for improving the content and format of the future workshops, offered responses were: to have a more refined focus (e.g. on a specific topic or area); to have more participants; to send out specific questions in advance (to obtain a greater amount of information), or as a follow-up to the workshop (to gain any necessary further clarification of points/ issues raised during the workshop) to ensure the project team obtain all the necessary information; and to allow for final feedback during the to allow participants to gain a broader view of both case-study regions rather than solely one area. Again we will ensure to take all of these comments into account when planning the future workshops.

8. Key messages emerging from the workshop

The key messages emerging from the workshop are:

- The main identified Public Goods/Public Bads which require improved governance, as suggested by the participants, are **'Biodiversity'**, **'Water quality and quantity'** and **'Soil functionality'** for the Ugie Catchment and **'Tourism & Recreation'** and **'Flooding'** for the Upper Dee.
- The suggested governance mechanisms comprised: monitoring, compensation schemes, simpler policy schemes and controlling access/ use.
- The information required to implement these mechanisms successfully included both monetary and non-monetary information/ practices, e.g. the costs and benefits, as well as the inclusion of 'fairness' into the mechanisms. Furthermore, these mechanisms should be considered as context-specific and be fuelled by local information as well as by technical information.
- Suggestions for the format of information tools were:
  - Employing intermediaries who bridge the gap between policymakers and land managers;
  - One simple decision-making tool which contains multiple-layers;
  - Having a tool in a variety of formats to reach more landowners/ users;
  - The use of monitor farms and advisory services for sharing knowledge and learning.
- Some participants would appreciate better clarification of the terms and concepts used within the workshops in the future, as well as more of an update from the EU-level aspects of the project.

9. Next steps

The next steps for the PROVIDE project will consist of an EU-level workshop (July 2016) which will cover similar topics to the topics considered here, but also from an EU-level perspective. Following on from this, each country partner will implement a valuation study of both the demand and supply of at least one of the Public Goods/Public Bads identified as important in at least one of their case study areas. The valuation exercise may include both monetary and non-monetary methods. In addition, the next phase of the project will include evaluating the advantages and disadvantages of a number of the governance mechanisms which were suggested during this round of workshops. The participants of this and the previous workshop will be updated and invited to take part in these activities during the course of autumn 2016.