

# Ecosystems and Land Use Policy Exchange Group (ELPEG) Bulletin

## Issue 2, October 2016

### What is the ELPEG Bulletin?

The ELPEG Bulletin will provide updates for policy stakeholders on research activities being undertaken in the Scottish Government Strategic Research Programme, in particular in the areas of Biodiversity and Ecosystems, and Integrated Natural Assets. The focus will be the policy areas of:

- ) Scottish Biodiversity Strategy; Land Use Strategy for Scotland; Report on Proposals and Policies (Climate Change); SRDP and CAP greening; Scottish Forestry Strategy.

This edition of the Bulletin does not try to cover all of the research being undertaken in the Biodiversity and Ecosystems and the Integrated Natural Assets work packages. It focuses on the work where there will be policy-related outputs and stakeholder engagement during the period October 2016 to March 2017, and which we believe will be of direct interest to policy makers working in these areas. A further update is planned in conjunction with the next ELPEG meeting early in 2017, looking ahead to September 2017.

The text below states what has happened to date and what is planned over the next six months. Given the post 'Brexit' context, we would particularly welcome any insights and suggestions from you regarding how and when work may need to be adjusted to take account of changes in policy objectives and/or policy delivery mechanisms, including funding availability.

### Scottish Biodiversity Strategy

- ) The **impact of management regimes on biodiversity, ecosystem function and ecosystem service delivery** (1.3.1, O1.3a) is being examined in upland ecosystems. The mediating role of plant traits is being examined in data from a long-term study of the impact of grazing management, with an analysis of data scheduled for completion in **August 2016**; 2017 data will be integrated into the data set prior to final analysis and publication (intended audience SG, SNH, academics; [Robin.Pakeman@hutton.ac.uk](mailto:Robin.Pakeman@hutton.ac.uk)). Larger-scale studies in upland management systems (1.3.2, O2.2) will explore how changes in management regime alter ecosystem service supply; first findings from this work will be discussed with local stakeholders (**February 2017**) and the wider stakeholder community (**March 2017**; intended audience SG, agencies, land managers; [Davy.McCracken@sruc.ac.uk](mailto:Davy.McCracken@sruc.ac.uk)).
- ) The development of **Ecosystem Health Indicators** (1.3.1, O2.1) is being supported through work in the Strategic Research Programme (SRP), and collaboration between SRP researchers and key stakeholders (e.g. SNH staff). An initial step was establishing a working group to define stakeholder needs, which involved running a joint workshop on this topic in **June 2016** (intended audience agencies, SG, SRP researchers; [Rob.Brooker@hutton.ac.uk](mailto:Rob.Brooker@hutton.ac.uk)). This workshop also identified links to work on refinement of the **Natural Capital Asset Index** (NCAI) (1.4.1, biii). SRP researchers will contribute to a review of the current NCAI indicators by **March 2017**, and further collaborative work on the EHIs will be defined during discussions in October 2016 (intended audience as above; [Rob.Brooker@hutton.ac.uk](mailto:Rob.Brooker@hutton.ac.uk)).
- ) **Animal diseases and the spread of INNS** are a threat to Scotland's natural environments. Good scientific knowledge is essential to underpin management. Work within the SRP (1.3.3, O3.2b) examines in particular the role of squirrelpox virus (SQPV) in the replacement of native red squirrels by invasive grey squirrels. Data on this topic will be provided to the Scottish Squirrel Group (**March 2017**; intended audience SG, NGOs, agencies; [Colin.McInnes@more.dun.ac.uk](mailto:Colin.McInnes@more.dun.ac.uk)).

## ELPEG SPOTLIGHT

### **Biodiversity governance mechanisms: generic lessons from a review of farmland biodiversity governance** (RD 1.3.4, O1.1)

Here we provide an extended introduction to the work developed in RD 1.3.4, O1.1, focusing on a review of governance mechanisms for biodiversity. The purpose of this review is to identify what types of mechanisms are being applied in Scotland and elsewhere, and what have been the experiences with these mechanisms, in particular regarding stakeholder participation. This will include mechanisms not currently applied in Scotland. The work aims to support delivery of the Scottish Biodiversity Strategy by providing an overview over existing mechanisms and assessing potential new mechanisms which could be applied, for example through future changes to the SRDP process.

The first part of the work consists of a literature review of experiences developed in Scotland, Europe and internationally. This will be followed by a workshop and interviews with key stakeholders to provide a better understanding of the reason why some governance instruments are not being used in the Scottish context, and the potential as well as possible drawbacks and barriers for employing these mechanisms in Scotland in the future. So far, based on the existing academic and grey literature, we have developed a database with 73 different biodiversity governance mechanisms. The available information comes mainly from farmland systems, but the review is not limited to farmland systems per se.

Governance mechanisms have been classified based on the institutional arrangement that is in place (e.g. regulation, subsidies, markets, etc.). In addition, information on advantages, disadvantages, motivations and role of stakeholders has also been included. This work will be presented and discussed at a parallel workshop during the coming ELSEG event to help us identify gaps in the literature and the reasons why some mechanisms have not been applied in Scotland. The review of governance mechanisms will be included in a report (March 2017) and also discussed with policy stakeholders (January 2017) and at ESCom events (whenever possible before March 2017).

We would appreciate input from ELPEG on the following two issues: i) existing gaps in the current database and ii) their considerations regarding which potential biodiversity governance mechanisms currently not used in Scotland may be especially interesting or relevant to focus on.

This work provides a biodiversity link to similar research on integrated policy delivery mechanisms for the conservation, restoration and sustainable use of our natural assets (soil, water and biodiversity across our landscapes) (1.4.2bi). Here we also are looking at a range of institutional arrangements for delivery of suite of policies influencing soil, water and biodiversity in Scotland, which often share the same processes of 'delivery' on the ground. Therefore, we are working closely together to share our thinking across the theme and the programme.

For more information contact:

Paula Novo (1.3.4, O1.1) [Paula.Novo@hutton.ac.uk](mailto:Paula.Novo@hutton.ac.uk)

Kerry Waylen (1.4.2bi) [Kerry.Waylen@hutton.ac.uk](mailto:Kerry.Waylen@hutton.ac.uk)

- ) **System – including ecosystem – resilience** (1.3.3, O1.1) is becoming an important focus for research. To better understand the complexity of systems, research is exploring concepts of resilience in relation to key environmental drivers. It is synthesising the findings of previous studies, identifying the state of current knowledge, and distilling elements of wider applicability of the study of resilience to a range of ecosystems in Scotland. The aim is to enable the development and targeting of management actions to enhance resilience. The work has been initiated through synthesis of current scientific understanding, including a research workshop (intended audience SRP researchers; **October 2016**). This will be followed by external stakeholder consultation through the Ecosystem and Land Use Stakeholder Engagement Group (**November 2016**) and the development of a science brief on the potential to apply resilience concepts to Scottish biodiversity (**March 2017**; intended audience SG, agencies, NGOs, land managers; [Glenn.Jason@hutton.ac.uk](mailto:Glenn.Jason@hutton.ac.uk)),
- ) Understanding the **relationships between biodiversity and cultural ecosystem services** is a key current research priority. A rapid evidence assessment literature review on the effects of biodiversity enhancement on the delivery of cultural ES will be conducted (1.3.2, O1.1), focussing on “does the ecology of a place matter in terms of cultural ecosystem services being delivered” (**March 2017**; intended audience SG, SNH, researchers; [Katherine.Irvine@hutton.ac.uk](mailto:Katherine.Irvine@hutton.ac.uk)).
- ) Research will explore **the consequences of environmental and climate change for ecosystem resilience** (1.3.3, O2.2b) by focussing on the possible redistribution of high impact and umbrella vertebrate species. Focal species include ticks and Capercaillie, both high profile species and central to current land and woodland management strategies. Work is underway on developing a Participatory GIS (PGIS) to firstly better understand and communicate how local habitat change (e.g woodland expansion) and development (e.g. tourism infrastructure, housing) will affect the distribution of Capercaillie within the CNPA. Secondly the PGIS will be used (RD 1.4.3) to explore how stakeholders make decisions to trade off multiple benefits. The work will benefit a wide range of stakeholders (foresters, conservationists, developers and the wider community) and the conservation and management of Capercaillie in the face of multiple and competing land uses by allowing stakeholders to visually explore potential effects of habitat change and development on Capercaillie (**November 2016**; intended audience NPAs, NGOs, agencies [Scott.Newey@hutton.ac.uk](mailto:Scott.Newey@hutton.ac.uk)). (See below for work on climate change and native woodlands).
- ) A **working tool to account for habitat/species distributions and impacts of habitat loss and gain** in the context of urban planning will be developed (1.3.4, O3). This work will consider both habitats at risk from different types of development (identified at local and national levels) and where habitats might be created (e.g. green infrastructure investments such as in the Central Scotland Green Network). The biodiversity and ecosystem services associated with these habitat changes will be characterised. Models will be used to analyse the potential effects that habitat change might have depending on their spatial context, and translated into draft maps for ground-truthing with stakeholders ([Alistair.Mcvittie@sruc.ac.uk](mailto:Alistair.Mcvittie@sruc.ac.uk), **March 2017**).

## Land Use Strategy for Scotland

- ) A draft **Natural Asset Register** (1.4.1a) will be developed by **Spring 2017**. A review on existing natural asset or ecosystem service registers and databases is available on request (intended audience: SG, agencies, NGOs and academics involved in developing and using web-based databases). Based on the outcome of this review, we are now consulting key stakeholders in policy and academia to ensure the Natural Asset Register database is designed to complement and duplicate existing initiatives. A consultation on a prototype NAR will commence in **March 2017** (audience as above). ([David.Donnelly@hutton.ac.uk](mailto:David.Donnelly@hutton.ac.uk)).

- ) **Cultural Ecosystem Services indicators and mapping** (1.4.1bvi) is collating existing data to analyse gaps to guide research operationalising the Common International Classification of Ecosystem Services (CICES), including intangible aspects such as tranquillity or spirituality. A consultation with SNH staff was held in **August 2016**, which will inform a report on an inventory of available data (**November 2016**) as well as supporting the SNH-led working paper on 'CES – towards a common framework for developing policy and practice in Scotland' ([Inge.Aalders@hutton.ac.uk](mailto:Inge.Aalders@hutton.ac.uk)).
- ) These tools will identify **current status and historic trends associated with delivery of ecosystem services** (1.4.2a) (e.g. nutrient retention, sediment retention, carbon storage, provision of arable, livestock grazing or timber, pollination and habitat networks) and results will be presented to the ELPEG or the Soils Engagement Group, if requested in **Spring 2017**. We have begun to scope out **Policy option appraisal for delivery of multiple benefits** (1.4.2ci) through technical discussions with staff from WP2.4 about how to combine ecosystem service and land use/land management data (e.g. from IACS returns to look at outcomes from LFASS payments and project ANC payments). Discussions with stakeholders about which policy topics and options to model have been delayed but will take place asap (intended audience: SG and agency staff working on Areas of Natural Constraint or another policy pilot case study). ([Alessandro.gimona@hutton.ac.uk](mailto:Alessandro.gimona@hutton.ac.uk)).
- ) Case studies of **Natural Capital Accounting** (1.4.1c) will be developed to test the methodology in a sector or habitat in order to consider the supply and demand of ecosystem services in that sector or habitat ([Alistair.McVittie@sruc.ac.uk](mailto:Alistair.McVittie@sruc.ac.uk)). A review of Defra valuation look-up tables undertaken to identify key gaps in the UK relevant valuation literature is available on request (intended audience: SG and agencies involved in environmental accounting, Defra, SFNC, ONS), and a shortlist of possible case studies will be consulted on using the Ecosystem Services and Land Use Stakeholder Engagement Group meeting in **November 2016**.
- ) Research **assessing economic impacts of changes in Ecosystem Services** (1.4.2ciii) is exploring economic methods to investigate the contribution of ESS values/flows to economic growth ([Dominic.Moran@sruc.ac.uk](mailto:Dominic.Moran@sruc.ac.uk)). Stakeholder perspectives on potential pathways linking natural capital to standard macro-economic indicators were discussed during a project meeting (19th August, 2016), reporting the results of the economy-wide effects of GHG mitigation project. This work is carried out in partnership with Fraser of Allander Institute, which has now employed a PDRA (David Comerford) to help progress the next stage of the project, leading to an agreed 'route-map' (**November, 2016**, intended audience: Science, OCEA, ONS, Natural Capital Committee).
- ) **Opportunities to increase multiple benefits through policy and industry delivery mechanisms** (1.4.2bi) (see spotlight above) We are currently applying an evaluation framework derived from institutional and policy assessment literatures to a sample of incentives (AEC schemes) and regulations (GBR). Initial findings from a survey on views on PES were presented at a conference in **August 2016** (slides available on request, intended audience: scientists) and our ideas about on how to increase opportunities will be presented to ELPEG, if requested, in **Spring 2017**. ([Kerry.Waylen@hutton.ac.uk](mailto:Kerry.Waylen@hutton.ac.uk)).
- ) Research on **using social innovation to deliver multiple benefits** (1.4.2biii) will develop a typology of social innovation for testing in Scotland (**Spring 2017**, intended audience: agencies involved in LEADER, Forestry Commission, Scottish Forum for Natural Capital, ECom, [Maria.Nijnik@hutton.ac.uk](mailto:Maria.Nijnik@hutton.ac.uk)). The work has benefitted from interactions with the [H2020 project SIMRA](#), where ideas of social innovation and its use across Europe are being discussed.
- ) We will be developing an **adaptive management approach to facilitate the evaluation and coordination of measures to deliver multiple benefits** ([kit.macleod@hutton.ac.uk](mailto:kit.macleod@hutton.ac.uk)) (1.4.3a). A review of approaches to adaptive management, informed by literature and expert advice

from academia and contacts at SNH and SEPA was used to develop an approach to help us evaluate our agricultural, woodland and catchment applications (report available **October 2016** on request, intended audience: SG and agency staff, SE-LINK, EsCOM members). The approach will be discussed at our Ecosystems and Land-Use Stakeholders Engagement Group workshop (**November 2016**).

## Report on Proposals and Policies (Climate Change) & Climate Change Adaptation Programme

- ) Research **assessing multiple land use options** (1.4.2cii) has started to build tools to consider the climatic resilience of ecosystem services (including carbon storage) associated with woodlands and peatlands through to 2050. The initial focus is the integration of an existing multi-criteria tool developed for the Aberdeenshire Regional Land Use Pilot with the WISE tool developed through CXC peatlands. Stakeholder perspectives on the options for the tool development for both mitigation and adaptation will be discussed at our Ecosystems and Land-Use Stakeholders Engagement Group workshop (**November 2016**) ([Alessandro.Gimona@hutton.ac.uk](mailto:Alessandro.Gimona@hutton.ac.uk)).
- ) Research is ongoing to improve our understanding of **ecosystem service flows and our inventory of natural assets** (1.4.1bii). We are improving the spatial resolution of ecosystem service modelling (using a range of tools and refined data sets) to answer future policy questions, particularly how ESS might respond to future climate change. A report on improvements to these models is due in **February 2017** (intended audience: SG and agencies with an interest in modelling ESS delivery, [Alessandro.gimona@hutton.ac.uk](mailto:Alessandro.gimona@hutton.ac.uk)).
- ) Many projects listed under other headings include an aspect of climate change adaptation including: **using social innovation to deliver multiple benefits** (1.4.2biii); **adaptive management approach to facilitate the evaluation and coordination of measures to deliver multiple benefits** (1.4.3a); **assessing multiple land use options** (1.4.2cii); **woodland supply of ecosystem services** (1.3.2a).

## SRDP and CAP greening

- ) Work to assess **new management options for agri-environment schemes** (1.3.4, O1.1 & O1.2) will bring together existing evidence, and information gathered from engagement with stakeholders, to propose new management measures for inclusion in agri-environment schemes in Scotland. It will link to work being undertaken on perceptions of and attitudes towards management options. A stakeholder consultation on novel measures will be undertaken, with stakeholders identifying those novel measures to be tested in the field (**March 2017**), and an associated policy brief (1.3.4, O2) will be written (**March 2017**; intended audience: SG and agencies involved in AECs implementation; [Robin.Pakeman@hutton.ac.uk](mailto:Robin.Pakeman@hutton.ac.uk)).
- ) An associated activity is the development of methods for **targeting SRDP payments for biodiversity** (1.4.1bv). Data on species and habitat links to management has been received and is being collated and assessed for its utility in spatial targeting (**September 2016**). This will inform the consultation on how to refine SRDP AECs targeting and how species respond to targeting (**March 2017**; intended audience: SG and agencies involved in AECs implementation post 2021, [Robin.Pakeman@hutton.ac.uk](mailto:Robin.Pakeman@hutton.ac.uk)).
- ) Research is **assessing the potential for Environmental Focus Areas (EFAs), Agri-Environmental Climate Schemes (AECS) and the Environmental Cooperation Action Fund (ECAAF) to deliver multiple benefits at a landscape scale** (1.4.3b) within case study

catchments based around i) the arable Balruddery Centre for Sustainable Cropping and ii) the three MRP grassland research farms (Glensaugh, Hartwood and Kirkton/ Auchentyre). Farm managers have been interviewed to identify EFA/AECs preferences; and spatial data collected to allow ecosystem service delivery from the catchments to be identified. A report from stakeholder engagement, including the co-constructed research agenda will be available in **December 2016** (intended audience: SG and agencies with an interest in EFAs, AECs and ECAF). ECAF data is being obtained and will be analysed to establish barriers and enabling aspects of collaboration, leading to a technical report on barriers to uptake of AECs options and ECAF (**February 2017**, intended audience: SG and agencies with an interest in EFAs, AECs and ECAF). RD staff have been involved in learning best practice in implementing demonstration days and planning for the annual demonstration day, provisionally at Glensaugh, looking a soil liming and woodland expansion issues, is underway (**March 2017**) (intended audience: local farmers, NFUS, SLE). ([Justin.Irvine@hutton.ac.uk](mailto:Justin.Irvine@hutton.ac.uk)).

- ) Research will also consider how to **integrate SRDP interventions with Natural Flood Management (NFM) and General Binding Rules (GBR) for the delivery of multiple benefits** (1.4.3d). This work will collaborate with ongoing catchment initiatives such as Tweed, Dee or Strathard project to consider an adaptive management approach as called for by Scottish Freshwater Group and SEPA Natural Flood Management Handbook ([Kit.Macleod@hutton.ac.uk](mailto:Kit.Macleod@hutton.ac.uk)). Scoping out case study opportunities will take place by December 2016. A report from stakeholder engagement, including the co-constructed research agenda, will be available in **December 2016** (intended audience: SG and agencies involved in SRDP AECs, Flood risk management and River Basin Management planning, plus catchment organisations). We will produce a short report on how we link across Practical interventions to realise multiple benefits and manage trade-offs (1.4.3) and Effectiveness of water management (1.2.4) due in **March 2017** (intended audience: SEPA and Scottish Freshwater Group).
- ) Research on **improving the environmental performance of beef supply chains** (1.4.2biv) will classify Scottish beef production systems and design a conceptual model for quantitative modelling of how changes to the supply chain will deliver multiple benefits ([Simon.Willcock@sruc.ac.uk](mailto:Simon.Willcock@sruc.ac.uk)). Progress has been made on identifying where models for parts of the supply chain exist or are being developed, using existing characterisations of the Scottish Beef industry. The conceptual framework for analysis of trade-offs will be available by **March 2017** (intended audience: NFUS, QMS, SG and agencies with an interest in circular economy).

## Scottish Forestry Strategy

- ) Woodland systems will be the focus of work considering how management interventions, and their effect on the relationship between people and the environment, can alter the **supply of ecosystem services**. Using case studies of woodland management in the Cairngorms National Park (potentially as part of the Capercaillie conservation programme), and the Central Scotland Green Network, initial activities include developing a conceptual framework (1.3.2, O1.1) - through engagement with stakeholders - for assessing the production of woodland ecosystem services, and developing scenarios for the outcome of management interventions (e.g. ecosystem restoration) for discussion with stakeholders. A stakeholder engagement weekend (1.3.2, O1.8) has been undertaken at the Royal Botanic Gardens, Edinburgh (intended audience: general public; [David.Miller@hutton.ac.uk](mailto:David.Miller@hutton.ac.uk)). The framework will be discussed with the wider stakeholder groups (including ECom) by **February 2017** (intended audience: researchers, SG, agencies; [Anke.Fischer@hutton.ac.uk](mailto:Anke.Fischer@hutton.ac.uk)) and will be followed by the development of a draft specification of scenarios for discussion with local stakeholders (intended audience: land managers; **March 2017**).

- ) Related work to develop **approaches that reconcile woodland expansion with other land use priorities** (1.4.3c) will address benefits and trade-offs from woodland expansion, incentivised by the Woodland Grants Scheme, in: i) in Cumbernauld (Central Scotland Green Network) and ii) Boat of Garten + Carrbridge within Cairngorms National Park. Meetings have been held with stakeholders e.g. CNPA, Capercaillie BAP Group, Capercaillie HLF bid team, Community council members and staff from the Cumbernauld Living Landscape Project to co-construct the focus of the research (summary of issues available on request). report on the benefits derived by communities from the case study areas, identifying the main trade-offs, is currently in an early draft form (due December 2016, proposed audience: local stakeholders and LUS team). A Stakeholder Workshop on Adaptive Management of woodland expansion is proposed for Feb/March (2017), to be held in CNP for local stakeholders. The development of maps of woodland expansion options and consequences for ecosystem services and biodiversity (Proposed audience: SG agency staff) has just started (March 2017; [katrina.brown@hutton.ac.uk](mailto:katrina.brown@hutton.ac.uk)).

### Summary of activities in next 6 months

Topic	Contact	Activities and Due dates
<b>Scottish Biodiversity Strategy</b>		
<b>Impact of management regimes on biodiversity, ecosystem function and ecosystem service delivery</b> (1.3.1, O1.3a)	<a href="mailto:Davy.McCracken@sruc.ac.uk">Davy.McCracken@sruc.ac.uk</a>	Findings discussed with local stakeholders - <b>February 2017</b> Findings discussed with wider stakeholder community - <b>March 2017</b>
<b>Ecosystem Health Indicators &amp; NCAI</b> (1.3.1, O2.1)	<a href="mailto:Rob.Brooker@hutton.ac.uk">Rob.Brooker@hutton.ac.uk</a>	Defining contribution to EHI work – <b>October 2016</b> Contribution to revision of NCAI – <b>March 2017</b>
<b>Animal diseases and the spread of INNS</b> (1.3.3, O3.2b)	<a href="mailto:Colin.McInnes@mor.edun.ac.uk">Colin.McInnes@mor.edun.ac.uk</a>	Information to Scottish Squirrel Group – <b>March 2017</b>
<b>System – including ecosystem – resilience</b> (1.3.3, O1.1)	<a href="mailto:Glenn.lason@hutton.ac.uk">Glenn.lason@hutton.ac.uk</a>	Research workshop – <b>October 2016</b> Stakeholder consultation workshop – <b>November 2016</b> Science brief – <b>March 2017</b>
<b>Relationships between biodiversity and cultural ecosystem services</b> (1.3.2, O1.1),	<a href="mailto:Justin.Irvine@hutton.ac.uk">Justin.Irvine@hutton.ac.uk</a>	Literature review – <b>February 2017</b>
<b>Consequences of environmental and climate change for ecosystem resilience</b> (1.3.3, O2.2b),	<a href="mailto:Scott.Newey@hutton.ac.uk">Scott.Newey@hutton.ac.uk</a>	Development of participatory GIS – <b>November 2016</b>
<b>Biodiversity governance mechanisms: what can we learn from farmland biodiversity governance?</b> (RD 1.3.4, O1.1) Review of Governance mechanisms Report	<a href="mailto:Paula.Novo@hutton.ac.uk">Paula.Novo@hutton.ac.uk</a>	ESCom event - <b>March 2017</b> Review report - <b>March 2017</b>

<b>Working tool to account for habitat/species distributions and impacts of habitat loss and gain</b> (1.3.4, O3)	<a href="mailto:Alistair.McVittie@sru.ac.uk">Alistair.McVittie@sru.ac.uk</a>	Draft maps of habitat change impacts – <b>March 2017</b>
<b>Land Use Strategy for Scotland</b>		
<b>Natural Asset Register</b> (1.4.1a)	<a href="mailto:David.Donnely@hutton.ac.uk">David.Donnely@hutton.ac.uk</a>	Review available now on request Consultation on prototype due <b>March 2017</b>
<b>Cultural Ecosystem Services indicators and mapping</b> (1.4.1bvi)	<a href="mailto:Inge.aalders@hutton.ac.uk">Inge.aalders@hutton.ac.uk</a>	Inventory of available data - <b>November 2016</b>
<b>Current status and historic trends associated with delivery of ecosystem services</b> (1.4.2a)	<a href="mailto:Alessandro.gimona@hutton.ac.uk">Alessandro.gimona@hutton.ac.uk</a>	Presentation to ELPEG or SEG if requested ( <b>Spring 2017</b> )
<b>Natural Capital Accounting</b> (1.4.1c)	<a href="mailto:Alistair.McVittie@sru.ac.uk">Alistair.McVittie@sru.ac.uk</a>	Review of gaps in UK valuation literature available now on request Consultation on case studies – <b>October 2016</b>
<b>Assessing economic impacts of changes in Ecosystem Services</b> (1.4.2ciii)	<a href="mailto:Dominic.Moran@sru.ac.uk">Dominic.Moran@sru.ac.uk</a>	Routemap for modelling – <b>November 2016</b>
<b>Opportunities to increase multiple benefits through policy and industry delivery mechanisms</b> (1.4.2bi)	<a href="mailto:Kerry.Waylen@hutton.ac.uk">Kerry.Waylen@hutton.ac.uk</a>	Presentation to ELPEG if requested ( <b>Spring 2017</b> )
<b>Using social innovation to deliver multiple benefits</b> (1.4.2biii)	<a href="mailto:Maria.Nijnik@hutton.ac.uk">Maria.Nijnik@hutton.ac.uk</a>	Typology of social innovation ( <b>Spring 2017</b> )
<b>Adaptive management approach to facilitate the evaluation and coordination of measures to deliver multiple benefits</b> (1.4.3a).	<a href="mailto:kit.macleod@hutton.ac.uk">kit.macleod@hutton.ac.uk</a>	Report on AM – <b>October 2016</b> Consultation and further development via ELSEG – <b>November 2016</b>
<b>Report on Proposals and Policies (Climate Change) &amp; Climate Change Adaptation Programme</b>		
<b>Assessing multiple land use options</b> (1.4.2cii)	<a href="mailto:Alessandro.Gimona@hutton.ac.uk">Alessandro.Gimona@hutton.ac.uk</a>	Options for tool development to be discussed at ELSEG – <b>November 2016</b>
<b>Ecosystem service flows and our inventory of natural assets</b> (1.4.1bii)	<a href="mailto:Alessandro.Gimona@hutton.ac.uk">Alessandro.Gimona@hutton.ac.uk</a>	Report on model developments - <b>February 2017</b>
<b>SRDP and CAP greening</b>		
<b>New management options for agri-environment schemes</b> (1.3.4, O1.1 & O1.2)	<a href="mailto:Robin.Pakeman@hutton.ac.uk">Robin.Pakeman@hutton.ac.uk</a>	Stakeholder consultation on novel measures and associated policy brief – <b>March 2017</b>
<b>Targeting SRDP payments for biodiversity</b> (1.4.1bv)	<a href="mailto:Robin.Pakeman@hutton.ac.uk">Robin.Pakeman@hutton.ac.uk</a>	Report on utility of existing data for spatial targeting – <b>October</b>

		<b>2016</b> Consultation on how to refine AECs – <b>March 2017</b>
<b>Assessing the potential for Environmental Focus Areas (EFAs), Agri-Environmental Climate Schemes (AECS) and the Environmental Cooperation Action Fund (ECAAF) to deliver multiple benefits at a landscape scale (1.4.3b)</b>	<a href="mailto:Justin.Irvine@hutton.ac.uk">Justin.Irvine@hutton.ac.uk</a>	Report on stakeholders' views - <b>Dec 2016</b> Report on barriers to ECAAF uptake - <b>Feb 2017</b> Demonstration Day – Glensaugh – <b>March 2017</b>
<b>Integrating SRDP interventions with Natural Flood Management (NFM) and General Binding Rules (GBR) for the delivery of multiple benefits (1.4.3d)</b>	<a href="mailto:Kit.Macleod@hutton.ac.uk">Kit.Macleod@hutton.ac.uk</a>	Stakeholder engagement issues report - <b>December 2016</b> Report on linking practical catchment interventions – <b>March 2017</b>
<b>Improving the environmental performance of beef supply chains (1.4.2biv)</b>	<a href="mailto:Simon.Willcock@sruc.ac.uk">Simon.Willcock@sruc.ac.uk</a>	Conceptual Framework – <b>March 2017</b>
<b>Scottish Forestry Strategy</b>		
<b>Supply of ecosystem services (1.3.2, O1.1 &amp; O1.8)</b>	<a href="mailto:Anke.Fischer@hutton.ac.uk">Anke.Fischer@hutton.ac.uk</a>	Discussion of ES conceptual framework with stakeholders – <b>February 2017</b> Draft specification of scenarios – <b>March 2017</b>
<b>Approaches that reconcile woodland expansion with other land use priorities (1.4.3c)</b>	<a href="mailto:Katrina.brown@hutton.ac.uk">Katrina.brown@hutton.ac.uk</a>	Stakeholder Consultation Summary Report – <b>October 2016</b> Report on the benefits derived by communities from the case study areas, identifying the main trade-offs – <b>December 2016</b>