



Coordination Committee Focus Group **Delivery of Environmental Services**

Progress Report

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List of Acronyms

AES	Agri-environment Scheme
EAFRD	European Agricultural Fund for Rural Development
ENRD	European Network for Rural Development
ES	Environmental Services
FG	Focus Group – referring here specifically to the ENRD coordination committee focus group on environmental services
HNV	High Nature Value
LPIS	Land Parcel Information System
RD	Rural Development
RDP	Rural Development Programme

1 INTRODUCTION AND UPDATE ON PROGRESS

This report presents the progress made on the tasks set out under the Focus Group's (FG) work plan, specifically those relating to the activities that have taken place since January 2012 (phase one of the work plan). It provides a review of the activities that have been completed to date and sets out initial findings. Although an outline of the anticipated activities under Phase 2 of the FG is also presented, a detailed work plan has been developed separately.

1.1 Purpose and objectives of the Focus Group

The purpose of this FG is to consider how best the delivery of the range of environmental services that are supported through the European Agricultural Fund for Rural Development (EAFRD) can be improved and maximised in the future. Lessons learnt from this work are intended to help to inform the design and implementation of Rural Development Programmes (RDPs) in the next programming period (2014–2020). The scope of the group, therefore, covers environmental services provided through agriculture, forestry as well as rural areas more generally.

In performing its analysis, the FG has:

1. facilitated the **exchange of practices** used in Member States to deliver environmental services - through the EAFRD - and collected examples of these experiences to be used as informative reference or study material for dissemination;
2. taken into account the diversity of European rural areas and the national, regional and local contexts and needs, with the view to contribute to the **European dimension** of the policy.

1.2 Update on progress

A first task of the FG was to produce a background paper (May 2012, see Annex 4). This paper sets out a definition of the term 'environmental services' as a means of communicating the more technical term of 'environmental public goods'. The report makes clear that environmental services are those environmental public goods for which there is a rationale for support through public policy. As such, it specifies that it is the environmental benefits going beyond those required by the mandatory baseline which are captured by the notion of environmental services. In these terms a distinction is made from ecosystem services, which includes market goods that do not justify the same support. The background paper also sets out the wider context as to why environmental services are needed in relation to current pressures faced in the rural environment.

Significant progress has also been made to identify **how** environmental services can be delivered through RDPs. This element of the FG's work (as set out in the FG's work plan) aimed to answer a number of questions, namely:

- What kinds of policy measures are needed and are most effective and efficient in delivering environmental services?
- What sorts of approach have been used to deliver environmental services within RDPs under the current programming period and what were the main factors of their success?
- What are the advantages of collective and community-based type approaches and what is needed to ensure they are successful?
- What opportunities exist for delivering environmental services alongside improvement of the economic performance of the holding or rural area and the provision of social benefits?

- What lessons can be drawn from these examples for the development, design and implementation of RDPs for the next programming period (2014-2020)?

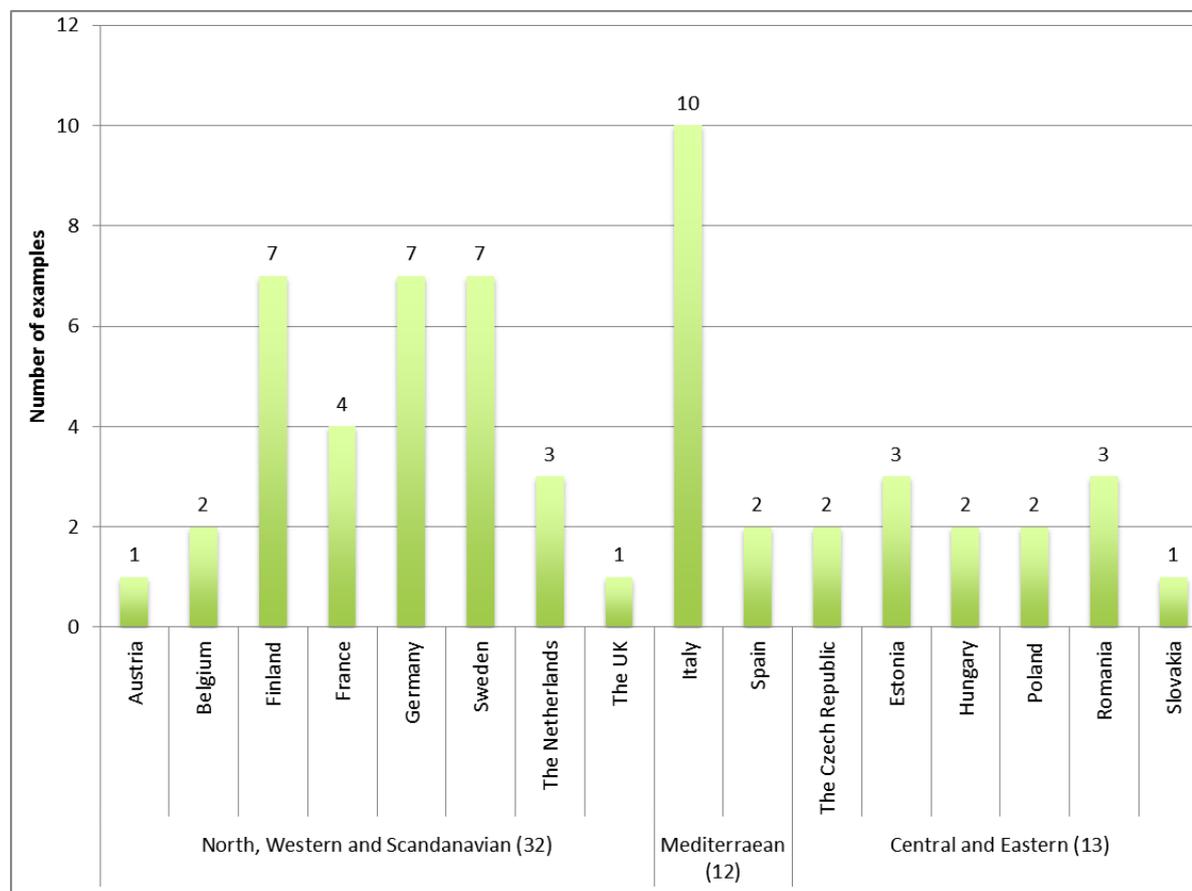
To inform this element of the work, the FG has undertaken a series of online discussions, a face-to-face meeting in Brussels, as well as a workshop combined with a field visit in the Netherlands in May 2012. A template was developed to collate examples of delivery practices in different countries for the provision of environmental services and to consider what worked well and what not so well. These examples are intended to create a strong evidence base on which recommendations for the forthcoming programming period (2014-2020) can be built. Examples have been gathered in two phases. A first series of examples was collected by FG members and discussed at a meeting in Brussels on 16 March 2012. The meeting looked in particular at what these examples convey in terms of the criteria influencing the successful delivery of environmental services. Since then, further examples have been gathered, bringing the total to more than 50. It is these examples, alongside the FG's discussion, which have informed the analysis in this progress report.

2 APPROACHES USED FOR DELIVERING ENVIRONMENTAL SERVICES THROUGH RURAL DEVELOPMENT PROGRAMMES

This section summarises the different types of approach that have been identified as being used in different Member States/regions for delivering environmental services, based on examples provided by the FG and supplemented with information from other relevant literature, previous work carried out within the ENRD (for example see ENRD, 2010a and b in Annex 1) and that provided by additional experts in the field.

A range of different approaches to delivering environmental services has been identified. Overall, the geographical coverage of the examples - from 15 Member States - reflects the current composition of the FG. The majority of the examples (32) relate to northern and western and Scandinavian Member States – which may also be an indicator of their longer experience with agri-environment schemes, and therefore the availability of a higher number of examples. However, a significant number (12) were provided for the Mediterranean area (in particular from Italy) as well as from RDPs in some of the central and eastern Member States (13) (Figure 1).

Figure 1: Number of examples provided by Member State



2.1 Types of measures used

The examples provided focus primarily on those RDP measures that directly target the provision of environmental services, especially the agri-environment measure (214). The examples are largely agriculturally-focused measures and there is a general paucity of examples for forestry across all types of measures. This should be taken into account in future work. Other land management measures with an environmental dimension are also covered, although with far fewer examples, including non-productive investments (216), natural handicap payments (211, 212) and conservation of rural heritage (323). The Natura 2000 and WFD (water framework directive) measure (213) does not deliver environmental services within the definition used for this FG (i.e. services that go beyond those required by the mandatory baseline). This measure provides, in fact, payments to farmers to compensate for disadvantages they may experience from being required to carry out mandatory actions that apply within Natura 2000 areas or river basins, as put in place by Member States. However, this measure (213) has been included on the basis that it would be useful to draw lessons from current practice so as to understand how the measure is used in different countries and particularly how it is used in conjunction with agri-environment schemes to deliver additional voluntary actions that go beyond Natura 2000 mandatory action. Accompanying measures, particularly vocational training and advice (111) are also included within the examples, as are examples of the LEADER approach. It should be noted that a number of the examples indicate the

importance of the use of multiple measures in combination. This is particularly true for vocational training and advice and for the non-productive investments measure both of which can be used in combination with the agri-environment measure - for example where advice and training are used to improve the delivery of environmental services through agri-environment schemes. Table 1 shows the number of examples given for each measure and highlights the strong bias of examples towards those in Axis 2 with fewer examples provided from Axes 1, 3 and the use of the LEADER approach.

Table 1: Examples of different measures presented in the inventory¹

Measure	Description	No. examples
111	Vocational training and advice	5
114	Use of advisory services	1
121	Modernisation of agricultural holdings	1
125	Infrastructure related to the development and adaptation of agriculture and forestry	1
211/212	Natural handicap payments to farmers	2
213	Natura 2000 payments and payments linked to Directive 2000/60/EC	2
214	Agri-environment	34
216	Non-productive investments	4
226	Restoring forestry potential and introducing prevention actions	1
323	Conservation and upgrading of the rural heritage	3
Leader	Leader	2
Other - linked to RD	Examples that were not funded by EAFRD measures but are linked (e.g. Plan 42 in Castilla y León, Spain)	5

Source: Environmental Services Focus Group - ES delivery examples.

Although a good number of examples have been sourced, they only cover ten of the 44 possible Rural Development (RD) measures available in the current programming period (see Annex 3). This is important to bear in mind, as it does not reflect the fact that funding can also be made available through other measures for investments in infrastructure to address environmental issues, such as water scarcity or greenhouse gas emissions in order to address climate change impacts (e.g. methods of collecting and storing water, promoting efficient irrigation systems, installing anaerobic digesters, etc.). As not all use of such rural development measures delivers environmental benefit, it remains a priority to ensure that such funding is both sustainable and not detrimental to other environmental services (such as biodiversity or soil protection, etc.).

In addition to those examples provided using specific RD measures, it is notable that there are a number of examples (5) which involve approaches adopted at least in part outside of RD policy (non-EAFRD measures) and instead are supported by private or public initiatives within Member States or regions. Such approaches are helpful in providing lessons learnt that could be translated into future

¹ Please note that the table refers to the number of examples per measure, i.e. some examples may cover more than one measure and in these cases they will appear twice in the table.

RD policy. A further 16 examples have been provided where there is too little information to determine the source of the support for the environmental services delivered.

2.2 Environmental services

The environmental services that form the focus of this work are described in the background paper and listed below. As can be seen in Table 2, the majority of examples focus on biodiversity objectives, possibly as a result of the frequency of evidence available.

Table 2: Environmental services and number of examples provided

Environmental service	No. examples
Biodiversity – habitats and species	31
Landscapes	8
Water Quality	11
Water Availability	11
Soil Functionality	7
Air Quality	1
Resilience to Flooding	2
Resilience to Fire	2
Climate regulation – reduced greenhouse gas emissions/ carbon sequestration	3
Environmental services combined with non-environmental benefits	1
No services explicitly listed	5

Many of the approaches and measures embodied in the examples provided have the potential to deliver a wider range of environmental services (ES) than those stated. Agri-environment schemes and the practices which they contain are inherently multi-objective (see for example Cooper et al. 2009; Keenleyside et al. 2011). For instance, management to prevent scrub encroachment and keep the landscape open to prevent fire risk is also likely to have biodiversity, soil functionality and landscape benefits. This multi-service delivery is an important aspect of RD policy and though it is not an indication of a specific approach, it should nonetheless be highlighted and taken into consideration when reviewing the different approaches and the services they deliver.

2.3 Approaches to the delivery of environmental services

The range of approaches to delivering ES, as demonstrated by the examples provided, is set out below. These have been grouped to reflect the main areas of inquiry of the FG. This initial analysis considers conclusions that might be drawn about which types of approach have worked better in the past than others. Section 3 then examines what factors have led to the achievement of successful outcomes as well as identifies some of the barriers to successful delivery that need to be overcome.

The evidence collected to date can be grouped into five different types of approach to delivery. These are as follows:

- Integrated delivery - combining packages of measures from the EAFRD and/or different funds;
- Collective approaches;
- Community-based approaches (for example using the LEADER approach);
- Holistic approaches to achieving multiple outcomes (for example approaches that aim to deliver environmental services alongside economic and social outcomes); and
- Outcome-focused delivery.

It should be noted that these types of approach rarely occur in isolation and the effective delivery of ES may require a combination of them. For example, the use of a range of different measures (integrated delivery) through coordinated delivery at landscape-scale using collective approaches.

2.3.1 Integrated delivery

Integrated delivery describes the use of a combination of different RD policy measures to deliver environmental services. Measures can be integrated in different ways: a scheme may be introduced which incorporates elements from a range of measures, although this is not apparent to the land manager from the delivery end; farmers may be required to carry out certain activities funded by one measure (such as training) in order to receive support through another, e.g. agri-environment payments; or the design of a range of measures in a particular locality are all tailored as part of a package of measures that are applicable for a certain type of beneficiary or farming system, e.g. High Nature Value (HNV) farming systems.

The examples provided by the FG have tended to centre on the agri-environment measure, which is combined with land management measures as well as other measures to assist with capital investment or advice, in order to facilitate the achievement of environmental objectives. The most common combinations of (one or several) measures with the agri-environment measure in the examples provided included:

- vocational training and advice;
- non-productive investments;
- natural handicap payments;
- conservation and upgrading of rural heritage;
- Natura 2000 payments;
- infrastructure related to the development and adaptation of agriculture and forestry.

Training and the provision of advice has been identified as one of the key factors of success (see section 3) and the examples suggest that training in combination with support to environmental land management activities has proved particularly effective at increasing the awareness of farmers of environmental priorities, as well as improving the skills of farmers in implementing environmental management.

In some cases training is part of the requirements of agri-environment schemes, as in the case of Estonia (see also Keenleyside et al. 2011). In this example, improving the farmers' knowledge of their role in meeting different environmental challenges is expected to improve their delivery of ES and possibly lead to added delivery beyond the requirements set out in the measure. The involvement of farmers in the training process allows for a greater sharing of knowledge about the effectiveness and potential of the different measures and helps to improve future measure design.

Beyond raising awareness, training can have a direct impact on the skills needed to implement some of the land management measures. For example in Finland, Hungary and Italy, vocational training and advice has been provided under measure 111 in order to improve land managers' ability to implement certain agri-environment management practices such as integrated pest management. The importance of training is also highlighted in several studies (Kleijn et al. 2001; Boccaccio et al. 2009; Pol et al. 2011; European Court of Auditors 2011; Loblej et al. 2011). For example, Poláková et al

(2011) cite evidence from many northern European countries which indicates that the greater the understanding of the benefits and outcomes of environmental land management practices, the more likely a land manager is to commit to undertaking such actions and the more likely the outcomes are to be successful and sustained in the longer term (see for example Herzon and Mikk 2007).

In the wider literature there are further examples of the need to use RD measures in an integrated way, for example in response to the declining economic viability of HNV farming (see Beaufoy and Poux 2012). Support for such areas requires an integrated approach across different policy measures including: targeted Pillar 1 payments and improved cross-compliance protection for permanent grassland, higher support rates under Pillar 2, well targeted agri-environment support to meet the specific objectives of the areas and farming concerned, local projects to mainstream HNV farming into rural communities (LEADER) and an EU-wide model of the Land Parcel Information System (LPIS) for monitoring (Beaufoy and Marsden 2010). Further examples are provided in Boccaccio et al (2009) for Greece, Spain, Portugal and Wales².

A range of studies also stress that care should be taken when using a combination of policy measures to ensure that there is coherence between the measures, particularly in relation to their eligibility criteria and management requirements, and that the optimal mix of measures used are guided by clear objectives (see Poláková et al. 2011). An approach to ensure coherence and the optimal mix of measures used to deliver environmental services is seen in Italy (Marche) where the 'Area Programme for Biodiversity' (launched in 2011) is funded primarily by the Natura 2000 measure, with support from other RDP measures (125, 211, 214 and 216) and developed by broad consultation and with the participation of local farmers living in the protected area and local authorities (see Box 1).

Box 1: Integrated delivery in the Marche region of Italy

In the Marche region of Italy, a new approach was needed for the implementation of RDP measures to ensure collaboration between stakeholders and optimum use of measures to support the delivery of environmental services in order to improve the biodiversity status of Natura 2000 sites.

In response to this need the Area Programme for Biodiversity was launched in 2011. It is primarily financed through measure 213 but with support from other RD measures and developed through broad consultation and with the participation of local farmers living in the protected area and local authorities. The main actors are the Marche regional authority (in charge of RDP planning and implementation), the bodies managing Natura 2000, farmers and local authorities (such as provinces and municipalities).

The main expected benefits are the possibility to realise a series of integrated interventions within a given Natura 2000 area, agreed between public and private operators. The implementation should prove easier and

² Greece: training under measure 111 is provided to beneficiaries of agri-environment, afforestation and LFA measures in order to support an effective implementation of the measures. Portugal: Axis 1, various measures – designed to support the productivity of cork competitiveness. By ensuring competitive cork woodland, several environmental services are provided: biodiversity conservation, protect against desertification, improve fire resilience, and sink carbon. Slovenia: biodiversity targets can be better met by combining basic agri-environment schemes (such as the organic farming payment) with Natura 2000 to ensure that endangered species and habitats can be targeted through broad land management requirements. Wales (UK): positive examples of non-productive investments. Support is used for capital items in two agri-environment schemes.

the impact more significant, not just for biodiversity conservation, but also for the maintenance of soil fertility, watercourses and ground water, and for landscape conservation.

The design of this new approach required a large amount of administrative work for the two Regional Departments involved (Agriculture and Environment), in order to ensure accordance with the standard RDP rules. The approach also required a substantial communication effort involving many dissemination initiatives undertaken at local level by the Marche region, public authorities and farmers' associations so as to promote and discuss the new approach, both before and during the launch of the initial implementation phase. However, due to this joint effort, the system is now well-known (and has also gathered much interest beyond the region), with the next implementation round expected to require less effort.

Summary:

- Using combinations of integrated measures can be an effective way of providing support for the range of economic and capacity-building activities that are often needed to underpin support for the actual delivery of environmental services.
- Combinations of measures can be used to meet defined needs focussing on specific ES (such as wetland management) or within defined geographical areas (such as Natura 2000 sites or mountain areas) or for particular farming systems (such as HNV farming).
- Using a combination of measures, especially within defined areas, requires **coordination** of those implementing the measure and **good communication**. As such there is a certain level of **increased administrative investment** required.

2.3.2 Collective approaches to delivery

Collective approaches can be both territorial (landscape-scale or multiple holding) and institutional/organisational (involving multiple stakeholders). Territorial approaches are where multiple farmers or foresters are encouraged to provide management across an area greater than that of an individual holding. These areas can be designated, such as Natura 2000 sites or administrative areas, natural, such as water catchments and areas of a particular type of landscape, or identified for the specific purposes of the measure. Institutional or organisational collective approaches are where a wider range of actors and stakeholders are involved in scheme delivery, such as local authorities and NGOs. The two approaches are not mutually exclusive.

Collective approaches have been clearly demonstrated to deliver a wide range of environmental services. Examples presented by the FG include collective approaches to catchment management in Tuscany³; the restoration of HNV farmland in Sweden⁴; territorial agri-environment schemes in France, and landscape-scale agri-environment delivery in the Netherlands. Such examples demonstrate the potential added value of engaging a number of different actors across a wide area or the coordination of a range of different stakeholder groups. In all cases these approaches require some form of coordination with clear objectives - either from local, regional or national organisations or through bottom-up or community lead approaches (see section 2.3.3). The need for dedicated advisors to help manage and support collective approaches is also highlighted as a key factor. Both the FG examples and wider studies indicate that it is important that those giving the advice and coordination do so at the right level and are individuals who can engage with the target groups and are trusted by the groups.

³ Media Valle del Serchio (Pistoia and Lucca Provinces, Tuscany)

⁴ Öster Götland (archipelago area)

Two examples from Finland indicate the potential role of LEADER groups in providing communication with local stakeholders. However the response from LEADER groups is variable. In some cases they are implementing local strategies with a strong environmental dimension but in the majority of cases they implement wider local development strategies.

An example from Germany illustrates the use of local organisations to act as intermediaries between the local level and at national level to support planning and implement local projects with an environmental focus. This approach was set up in response to a need for coordination and management between relevant stakeholders where the environmental targets require action not related to farming practices.

The longevity of support, either financially or through advice and coordination, is a key factor identified in the examples and supported through wider studies. In a number of cases collective approaches have been used to deliver specific objectives, such as the recreation of a wetland area. However without on-going management there is a risk that such areas will decline. This has been witnessed in Estonia where habitat restoration was funded (albeit not through EAFRD) without any support for on-going management. This would suggest that engaging individuals and organisations in the longer-term aims of such approaches is essential to ensure that the outcomes that have been paid for continue in the longer term and do not vanish as soon as funding disappears.

Summary:

- Collective approaches (territorial and/or organisational) can deliver added value and deliver environment services over a greater area with stronger environmental interest and motivation.
- They require significant **coordination** but this can result in better targeting of resources and the provision of advice. This can lead to **increased administrative burdens** however.
- They require **clear aims and objectives** to target resources effectively.
- They require **greater flexibility** than some current land management measures in order to be effective at the wider landscape-scale.
- These sorts of approaches could bring small farmers, currently excluded from CAP support, into the system⁵.
- Issues with collective approaches include the ability to source the **initial investment** needed (effort and money), which may need to be met by the collective.
- Collectives who are not led by landowners may find it difficult to leverage EAFRD support, if landowners are unwilling to participate.
- Collectives that consist of local organisations can play a role in delivery by acting as intermediaries but this requires a high level of trust between all actors (farmers, local organisations and administrative bodies).
- Internal arrangements within a collective are critical for ensuring the necessary implementation and respect of all requirements and the conditions and delivery of the expected outcome (e.g. shared responsibilities in terms of implementation as well as monitoring and control).
- **Longevity of delivery** is questionable where financial support is not offered in the long term and no individual takes ownership for the on-going management of the area in question.

⁵ Outcomes of the ENRD Thematic Working Group 4 meeting on 'Collective approaches to agri-environment contracts', Brussels, 15 March 2011.

2.3.3 Community-based approaches

Community approaches describe the involvement of local and regional individuals or organisations, who may be outside of the farming or forestry sectors, in scheme development, design and implementation. This type of approach is often a key element of collective approaches involving a number of different stakeholders.

One interesting example of a community-based approach is in the Czech Republic where local hunter organisations promote the use of certain agri-environment management practices that help to provide biodiversity benefits as well as increase game numbers. The hunter groups, present in most villages, are able to engage directly with farmers and to encourage them to adopt certain practices. The results have been highly successful demonstrating the benefits of effective communication about the dual benefits of certain measures as well as the importance of trusted advice.

Other examples involve the development of local projects in Germany to support the implementation of nature conservation and Natura 2000 water protection actions. Local stakeholders together with the nature conservation agency develop rural heritage projects, financed under measure 323, to provide flexible approaches to deliver environmental services. The involvement of such stakeholders, however, created significant administrative burdens which needed to be coordinated by the nature conservation agency.

No examples have been provided that illustrate the use of LEADER approaches specifically for the provision of ES other than for their ability to engage a wide range of local stakeholders and ensure that projects fit with the LEADER development strategy. The Rhon biosphere example⁶ may be one approach which uses LEADER, although its role in the process has yet to be examined. It is also understood that ways of using the LEADER approach to help design and deliver packages of measures to support crofting systems in Scotland are under investigation for the forthcoming programming period.

Examples from other studies demonstrate the importance of farmers' initiatives in developing and maintaining environmental schemes. For example, farmers in the self-initiated Pontbren partnership in Wales were reluctant to participate in the formal Welsh agri-environment scheme because of its perceived inflexibility to address the needs of the local area. Instead they created their own initiative which was flexible and better suited to their farms (Posthumus and Morris 2010). Similar approaches are seen in Romania where the ADEPT project, driven by an NGO group, works with farmers to overcome barriers to entry into existing agri-environment schemes as well as helping the government to develop new schemes.

Summary:

- Community-based approaches can help to provide flexible and locally tailored approaches to deliver ES.
- Such approaches require coordination through some form of administrative body, for example nature conservation agencies, or national/regional authorities.

⁶ See example n. 22 in Annex 3 "Examples of environmental services delivery through RDPs"

2.3.4 Holistic approaches to achieve multiple outcomes - green growth in practice

Holistic or multi-faceted 'win-win' approaches describe the joined-up delivery of multiple environmental services alongside economic and social benefits. This could be achieved through the use of either a single measure or combination of measures (such as through an integrated delivery approach) and could equally well be delivered using collective, community-based and outcome-focused approaches. In this approach, however, the emphasis is on achieving multiple benefits, for example adding value to food products through their improved marketing or increased tourism in an area alongside the provision of ES.

Examples from the FG of holistic approaches include adding value to agricultural products and shortening supply chains in Belgium and France. Adding value to agricultural products is an interesting example of how RD measures are used to improve the economic stability of farmers, reduce reliance on large chain operations and provide marketing opportunities based on environmental performance. In the Belgian example, farmers are remunerated for leaving ten per cent of arable fields un-cropped which helps to compensate for any income foregone from the crops that would have been produced on this land. In the French example, no such remuneration is provided and farmers are finding that production volumes are too small to be profitable, despite the premium received for the product based on its environmental credentials. However the scheme persists due to the willingness of individuals. Both approaches indicate the importance of communication to consumers and the wider promotion of the environmental activities of the producers if the added value on products is to be realised in practice.

Other studies highlight the use of axis one measures (132 and 133) to support the production of PDO (Protected Designation of Origin) food products from Spanish HNV farming systems, thereby increasing the economic viability of farming in these areas (see Boccaccio et al. 2009). In Sweden, measure 123 has been used to support farmers in the operation of a new local dairy to market local produce and command a better price for their products⁷. In addition, Axis 2 measures have been used to similar effect, with measure 222 used to help restore silvo-agro-pastoral systems in Spain (see Boccaccio et al. 2009). However for the latter example uptake has been relatively low as only part of the costs are financed and thus such incentives rely at least in part on the desire of land managers to engage in the activity. In Austria Axis 3 measures (313) and the LEADER approach have both been used to support the production of organic potatoes as well as for increasing awareness of environmental issues in the region and to promote sustainable tourism⁸.

Summary:

- Holistic approaches recognise and promote the fact that the delivery of ES through agriculture (and forestry) can have a wide range of additional benefits including providing added value to agricultural products, promoting local tourism and increasing awareness of environmental issues.

⁷ ENRD Thematic Working Group 2, case studies

- http://enrd.ec.europa.eu/app_templates/filedownload.cfm?id=AC998940-DE5D-B92C-23A6-FE1F2BD21A2A

⁸ ENRD Thematic Working Group 2, case studies

- http://enrd.ec.europa.eu/app_templates/filedownload.cfm?id=AC9CA148-DDB4-5F2E-F9B1-67B9DF38A688

- Such approaches require significant investment in **communication and advice** activities to ensure engagement by the different actors. **Promotional activities** are required between sector groups. This can also lead to **increased administrative** burden.
- These approaches also require in many cases the use of **collective approaches** or at least the engagement of a wide group of individuals and sectors within an area.

2.3.5 Outcome-focused delivery

Outcome-focused delivery refers to the direct relationship between the outcomes of RD policy measures and the level of support granted. For example, a farmer may be paid for certain environmental management only when the results of that management are realised. The potential for pursuing outcome-based approaches, sometimes referred to as 'payments by results' arises from its more positive approach to ES delivery through focusing the attention of farmers on the outcomes required, rather than only on following prescriptive management options which have been demonstrated to deliver the outcomes required. This in turn provides farmers with greater ownership of the results and generates a greater degree of pride in the outcomes. On the other hand such an approach may also be associated with a risk for the potential beneficiaries. Specifically, it may cause uncertainty with the farmer where other intervening factors, over which he has no control, can cause failure of achieving the required results for receiving payment.

Of the examples provided from the FG there are none which specifically describe outcome-focused approaches. However, certain elements of outcome-focused delivery are found in many of the examples provided by the FG. These include the setting of specific objectives; allowing land managers a reasonable degree of discretion and flexibility about how to meet those objectives (but also an increased responsibility for the results); and monitoring that can be carried out by local groups or collectives. However, it needs to be kept in mind that the payment calculations - if to be granted under the agri-environmental legal framework - also when implementing this approach need to be done on the basis of covering cost incurred and income foregone linked to certain management actions.

In the Netherlands some examples of applying outcome-focused approaches were highlighted, however, these were discontinued.. Issues such as the scale of delivery, the variability of the results and also the type of environmental service considered all have their inherent difficulties when measuring outcomes. However, more recent developments as a result of additional experience and research of the workable examples provided by the FG may lead to this approach being reconsidered.

Other information sources, however, do provide some examples of outcome-focused approaches. In the Rheinland-Pfalz and Baden-Württemberg regions of Germany, farmers engaged in agri-environment schemes are rewarded with extra payments for achieving a defined level of species richness in their HNV grassland areas. The farmers are responsible for identifying a number of easily recognised species which they declare in order to receive a supplementary payment of €50 per hectare. In addition to minimum management requirements, farmers are free to apply the farming practices they consider appropriate to achieve the required outcome (see also European Court of Auditors 2011). These approaches are particularly effective in attracting farmers with around 10 000 of them applying for this agri-environment measure to manage a total 65 000 hectares, which is around half the HNV grassland (and 12 per cent of all grassland) in Baden-Württemberg (Oppermann and Krismann 2003).

A similar type of approach is seen in England under the higher-level tier of the agri-environment scheme Environmental Stewardship. These agri-environment agreements include 'indicators of success'. Similar to the approach in Germany, a range of different indicators are used, such as the coverage of broad-leaved plants. However no specific remuneration is given for delivering these results, instead they are intended to ensure that the land manager and the public body's advisor can monitor whether the environmental outcomes have been achieved (see European Court of Auditors 2011).

Outcome-focused approaches may also help to achieve longer term attitudinal and cultural changes in those carrying out the actions. Prescriptive approaches, i.e. those that require farmers to carry out specific management actions and which are more typical of agri-environment schemes, can distract attention away from the aim of achieving the desired environmental outcomes. The forthcoming report by SEI-Milieu highlights that restrictions on farmers' behaviour can act as a disincentive for participation in land management schemes and weaken overall commitment to environmental goals in the longer term (citing Muster *et al*, 2001; Wilson and Hart 2001; Deci *et al*, 1999). This suggests the need to further test alternative designs of agri-environment payments, such as outcome-based payments, which allow farmers to engage, to innovate and to utilise existing knowledge in environmental provision.

Summary:

- Outcome-focused approaches can be effective in achieving increased ownership and strengthened commitment from farmers and other land managers to the delivery of ES in the longer term. On the other hand, they can pose certain risks linked to other intervening factors over which the farmer has no control.
- Such approaches require clear articulation and communication of the desired outcomes and it is critical that verification of the achievement of these outcomes is simple to establish.
- Further support and advice may be necessary to communicate the importance of the desired results so as to engage farmers in the longer-term goals.

2.4 Summary

From the analysis so far, it is clear that, within the context of the evidence collected for the FG, more information has been provided about collective and integrated approaches than outcome-focused or more holistic approaches. This is not to say that these approaches to delivery are necessarily better, but it could imply that these types of approaches: are more prevalent in the EU at the current time; are those which are considered the most important to pursue; or are those where success in achieving the anticipated results is most easily identified. What is clear from the examples and wider literature is that all approaches overlap and interrelate and creating divisions between them is somewhat artificial.

What this preliminary analysis does imply is that there is considerable future scope for more innovative approaches to delivery, which build upon the examples provided here. This exercise also highlights the benefits of bringing examples together from different parts of the EU, to share experience and to stimulate ideas and new thinking about the different ways in which to facilitate positive action by land managers to benefit the environment.

3 SUCCESS FACTORS

Based on an analysis of the examples provided and the outputs of the FG meetings held in Brussels (March) and in the Netherlands (May), this section provides a summary of the key factors that have influenced the successful delivery of environmental services. It also explores some of the most commonly identified barriers that prevent successful outcomes from being achieved in practice, with a view to understanding how these barriers can be overcome in the next programming period.

Evidence from the FG, which is backed up by the literature (see for example Boccaccio et al. 2009; Cooper et al. 2009; Natural England 2009; Poláková et al. 2011; Beaufoy and Poux 2012; Keenleyside et al. 2012) indicates that a wide range of factors influence the success of scheme delivery in practice. These can be subdivided into four main groups of factors, 'procedural', 'institutional/governance', 'advice/guidance' and 'practical/administrative', as outlined in Table 3 below. Those considered to be of highest importance, according to a ranking of the factors identified, by members of the FG are highlighted in the table⁹.

⁹ A ranking of the importance of factors of success was carried out by members of the FG attending the Netherlands workshop (23-24/05/2012). Highest ranked factors are highlighted in the table.

Table 3: Success factors

Factors to consider	
Procedural Factors	
<p>Measure and scheme design <i>‘to provide flexibility, collaboration and focus’</i></p>	<ul style="list-style-type: none"> - Make the most of the flexibility of the measures in terms of the way that they can be used (to encourage landscape-scale delivery or outcome-focused approaches, for example) - Use of an appropriate mix of measures to deliver win-win solutions to improve farm profitability and to increase the chances of long-term sustainability (economic, social and environmental) - Design and target measures to respond to local circumstances and farmers’ and foresters’ needs - Targeting of resources - Attractive, adequate level of payments - Incentivise joint contracts - Involvement of stakeholders, especially farmers and foresters, in design process to achieve a sense of ownership in the scheme - Integration of new research findings and innovation ideas for new approaches - Continuity of approach: to provide coherence of approach over time and beyond programming periods
<p>Policy coherence</p>	<ul style="list-style-type: none"> - Coherence should be ensured at the farm level between cross compliance, greening measures and AEC (agri-environment-climate) schemes to avoid unintended perverse effects for environmental services as a result of conflicting requirements under different measures - Ensure measures are coherent with and included in broader national/regional strategies on specific priorities
<p>Monitoring and feedback <i>‘to increase knowledge and improve design’</i></p>	<ul style="list-style-type: none"> - Increased monitoring and feedback loops to allow improvements in scheme design and implementation to be made - Innovative approaches to monitoring should be explored – landscape-scale rather than farm specific, involvement of local actors/farmers or NGOs
Institutional/Governance Factors	
<p>Collaboration, partnership and ownership <i>‘to deliver effectively, at different scales and across sectors’</i></p>	<ul style="list-style-type: none"> - Collaboration between stakeholders in scheme implementation - Community-based approaches (bottom-up approach at local level) - Collective approaches to deliver results at the required scale - Cross-sectoral approaches to engage wider audience and deliver greater benefits - Encourage local ownership of schemes to achieve better results in practice

(continued)

Factors associated with advice and training	
<p>Advice, communication and training <i>'to build trust, knowledge and understanding'</i></p>	<ul style="list-style-type: none"> - Good quality advice and training schemes, delivered at different levels - Peer-to-peer advice to share knowledge and best practice - Integrated agri-environment and business-oriented advice - Advice and training on monitoring and evaluation - Advice delivered at the right level and time by the right organisation/people - Communication on the benefits of the measures to the wider public
Practical/Administrative Factors	
<p>Administrative factors <i>'to provide clarity, simplicity and right incentives'</i></p>	<p>Application – to ensure the confidence and security of beneficiaries in entering a contract:</p> <ul style="list-style-type: none"> - Clarity of eligibility criteria - Ease of application process - Farmers and administration as equal partners in the contract - Ensure farmers are involved in the discussion and are asked about their needs and that there is clear communication with the administration about roles, process and risks. - Ensure ways of developing agreements with group of farmers <p>Payment rates:</p> <ul style="list-style-type: none"> - Incentives for positive action <p>Administrative simplification</p> <ul style="list-style-type: none"> - Reduce administrative costs at all levels - Reduction in red tape through the use of smart IT: e.g. electronic application to help to identify mistakes and speed-up the process.
<p>Control and Enforcement rules</p>	<ul style="list-style-type: none"> - Enforcement and control systems should be risk-based and sanctions should be proportionate to the severity of non-compliance and should be different for each Pillar - Guidance on enforcement and liability issues where agreements involve multiple beneficiaries

Other studies have also highlighted a wider range of issues, including institutional and political factors; and other intervening factors outside the control of the farmer or policy (see for example Poláková et al. 2011). In practice it is usually a combination of these factors that contribute to the relative success or failure of a measure to deliver ES. In addition it should be noted that there is a great deal of overlap and interaction between these factors and the barriers to realising one factor in practice may be overcome by another.

Each group of success factors is addressed in turn below.

3.1 Procedural Factors

Procedural factors are those linked to the process of designing the programme of measures within a given area and the way in which the measures are used and subsequently monitored and evaluated. Within the context of RDPs, the key areas highlighted as important for the successful delivery of ES are the way in which the measures and schemes are chosen and designed, including the way in which stakeholders are engaged; the importance of ensuring policy coherence between RDP

measures and other elements of the CAP as well as other national/regional strategies and priorities; and the need to ensure appropriate monitoring which can feed back into improved scheme design.

3.1.1 Measure and scheme design

The interaction between land management practices and the provision of the full range of ES considered by the FG are inherently complex, and differ according to local bio-geographic and cultural situations in different farming systems across the EU. The effectiveness of the delivery of environmental services through rural development policy depends heavily therefore upon: the design of the overall policy; a good analysis of the current situation with the identification of the environmental needs and pressures; the measures which it contains and which are to respond to these needs and pressures; the objectives it seeks to address and; the overall way the measures are implemented by Member States through their Rural Development Programmes.

The evidence provided by the FG indicates a range of different factors that contribute towards the effective design of RDPs. These include, the value of schemes founded on a robust evidence base, the benefits of involving key stakeholders in determining how measures are matched to local needs, as well as the importance of making the most of the measures' flexibility, using them in combination to deliver economic and social benefits alongside environmental services and the longevity of the support provided.

The examples collected by the FG, highlight the ways in which these factors have been incorporated into the design of different RDPs, particularly emphasising flexibility in measure design (singly or in combination) as well as the importance of partnership through engaging with a range of stakeholders in the design process (see for example Box 2, Box 3 and Box 4 and further supported by Siebert et al. 2006; Boccaccio et al. 2009; Siebert et al. 2010; Poláková et al. 2011). Stakeholder engagement, particularly where this allows the needs of local areas and beneficiaries to be taken into account, leads to greater ownership of the measure or scheme by those who are implementing it. This can in turn lead to greater engagement and commitment to delivering environmental outcomes.

Box 2: Partnership approach and flexibility in the design of Axis 2 measures in Finland

In order to deliver effective environmental measures, the Finnish Ministry of Agriculture and Forestry has implemented a partnership approach for the design of Axis 2 measures.

From the beginning of the planning process a range of stakeholders are invited to consider and discuss agri-environment practices relevant to specific objectives. These stakeholders include: Ministry representatives, the Paying Agency, regional administrations, farmers' organisations, NGOs, researchers and advisory services. Different environmental objectives are discussed under 11 established thematic subgroups covering topics such as biodiversity, use of fertilisers and manure, plant cover, genetic resources or ecological production. The discussion outcomes are then fed into the design of Axis 2 measures.

Through early and on-going contact, there is an improved understanding amongst stakeholders of why and how RDP measures are developed; a greater exchange of information, points-of-view and practical experience in order to deliver solutions collectively; a greater focusing of research to find solutions to specific issues; and continuous feedback during the preparation of the measures.

Nevertheless, is important to note that the Ministry needs to play an active coordination role and sufficient time is needed for this approach to be effective.

In summary, the partnership approach in Finland demonstrates the effective engagement of a wide range of stakeholders in the early design of Axis 2 measures. This approach helps to increase awareness of the issues, enhance the dissemination of measures, achieve better buy-in and potentially lead to outcomes better matched to different stakeholders' needs.

Another key factor in this process relates to the degree to which measures are used flexibly and tailored to local circumstances and needs. In the examples provided by the FG, flexibility is demonstrated to have a positive impact in allowing more efficient solutions to be implemented. This is demonstrated for example in Germany, where funding under measure 323 has been used to develop tailored projects in the field of nature conservation and water protection. The high flexibility of this approach allows for efficient solutions that are coherent with local needs and regionally accepted (see Box 3).

Box 3: Demonstrating flexibility through rural heritage programmes to develop regionally tailored projects in Germany.

In 14 German RDPs, funding under measure 323 has been used to develop tailored projects addressing specific needs in the field of nature conservation (Natura 2000) and water protection (Water Framework Directive). The high flexibility of this approach allows efficient solutions to be implemented and secures solutions that are tailored to the local situation and regionally accepted.

The costs covered under this scheme include, among others, Natura 2000 planning, maintenance/restoration of habitats and implementation of species conservation programmes, WFD projects and nature conservation consultations services. Together with agri-environment schemes (AES), natural heritage projects provide 80% of the public funding implementing Natura 2000 in Germany. Despite this, it has been noticed that the development, approval, implementation and control of this approach must be simplified both for the applying stakeholder and for the administration.

Where flexibility is lacking it can hamper spontaneous and endogenous initiatives and constrain implementation of measures within administrative borders rather than at the necessary scale required to deliver results. Most examples that demonstrate flexibility in scheme design, particularly as a means of achieving integrated solutions for rural areas maximising synergies between economic, social and environmental outcomes, also highlight the need for good coordination and the consequential increase in administrative capacity to manage the complexity that such approaches can bring (see Box 4). However such an increase is thought to be commensurate with the improved outcomes achieved and therefore needs to be seen as an integral part of the cost of delivering environmental benefits.

Box 4: Flexible approaches to develop territorial contract-based solutions in France

Over the last few decades, the Cévennes National Parc (PNC) in France has experienced a decline in population, along with the agricultural and other land-based activities needed for the maintenance of its valuable natural landscape and cultural heritage. In this context, the PNC has recognised the importance of combining socio-economic development with environmental protection and the consequent need for collaboration between several institutions.

In order to support sustainable agriculture, since 2007, contract-based solutions called 'territorial agri-environmental measures – Park Core area' (MAEt) are being managed jointly by the Direction

Départementale de l'Agriculture et de la Forêt (DDAF), the PNC and the Chamber of Agriculture. The novelty of MAET is the territorial approach, meaning that contracts are restricted to specific locations for which a prior assessment of environmental sites has been conducted. This assessment includes the identification of the different management practices and the number of contracts needed to achieve the agreed conservation objectives for the area.

The PNC believes this initiative has been successful in enhancing institutional collaboration and in defining a coherent approach to support farmers' delivery of ES. The results of this approach, whilst also taking into account other policy and CAP initiatives, have led to an increase of new farmers in this area and lower decline in agriculture than elsewhere in the park. However, there are concerns as to whether or not the five-year length of the contract is enough time to witness real environmental change. Furthermore, the resulting contractual system is time-consuming and complex to administer, requiring a lot of coordination work, together with sufficient financial support to allow a certain volume of contracts. The presence of the PNC or the Chamber of Agriculture are key for the development of a comprehensive strategy for the area, along with clear objectives and a cross-cutting approach to facilitate coordinated action and the delivery of effective results.

In summary, this contractual system is more likely to be successful when based on a collaborative approach and oriented to specific targets at a territorial scale. In addition it has helped to encourage better understanding and trust among the agricultural and wider stakeholders.

With sufficient flexibility and through the involvement of land managers in scheme design the different measures and schemes can be designed to meet local needs as well as broader strategic priorities. Furthermore this engagement can help to increase the transfer of knowledge of successful examples between individuals, groups, regions and even Member States. By engaging stakeholders from the outset there is also the potential to provide better clarity about the purpose of the different measures or schemes, and how they are contributing towards different strategic objectives, and thus save time and resources later in the process. These benefits are seen particularly in collective approaches, such as in the Netherlands (see Box 5).

Box 5: The importance of coordination and advice for collective approaches in the Netherlands

There are two broad types of collective approach in the Netherlands. Each has a territorial focus.

The first can be categorised as a 'coordinated' approach, whereby individual farmers apply for contracts, under the agri-environment measure, within the framework of a plan for a particular area or territory. Implementation is coordinated by a project manager and agri-environment contracts are only permitted on land that is prioritised in the plan. Agri-environment agreements focussing on maintaining and improving the status of meadow birds, arable farmland birds and hamsters are some examples of priorities that have been addressed in this way. This sort of approach requires significant levels of coordination from within the region to communicate with governmental organisation and other stakeholders, as well as providing advice to farmers and the wider community.

The second can be categorised as a 'genuine' collective approach. The essential element of this approach is that it is a group of farmers in the form of a collective or an association that applies for an agri-environment contract on the basis of a plan for the area/region concerned. The collective then agrees individual contracts with its members to ensure that the overall contract requirements, and ultimately the objectives of the plan, are met. A series of four CAP pilot approaches to the collective delivery of environmental services were established in 2011. These aim to improve the delivery of ES through cohesive measures and practices; to advance the interaction between farmers and also with non-farmers; to encourage land managers to think of ES as farm products so as to increase responsibility for their delivery; introduce flexibility of delivery; and provide long-term

commitment and cooperation by giving land managers more responsibility for the outcomes.

The shared responsibility brought about by this sort of collective approach has increased the social interaction between land manager and peer-to-peer advice between farmers as well as improving the understanding and integration of environmental and agronomic knowledge and it has generated greater ownership of the outcomes required. The way the agreements have been developed provides farmers with the flexibility to adapt the management at the farm level as long as the overall commitments of the collective are respected.

Confidence and security in the longer-term continuity of measure or schemes is another key factor of success, both for their design and implementation. The examples provided by the FG suggest that the duration of certain contracts, even those over five years long, is not a sufficient length of time to see the delivery of real environmental results (see Box 6). The coherence and persistence in offering the same type of measures in subsequent programming periods helps to provide a stable framework for land managers, both to provide the continuation of management necessary to deliver results and to help improve understanding of the goals of the measures as well as to plan for the longer term. However, FG discussions have also highlighted that ensuring measures are available over the long term needs to encompass the flexibility needed to adapt the operation of measures in the short-term, should the measures not be delivering the benefits intended. What is required, therefore, is a coherent long-term policy framework, within which there is a consistency of the measures made available to land managers for environmental delivery, combined with some short-term flexibility - to the extent allowed by the framework - about how these are implemented in practice.

Box 6: Continuity of approaches to fertilisation planning and monitoring in agri-environment schemes across mainland Finland

In Finland, water protection from agricultural run-off is a key environmental issue due to the impact of run-off on inland oligotrophic (nutrient poor) lakes and the Baltic Sea. In this context, the Finnish government has set demanding targets to reduce agricultural nutrient losses and the national agri-environment programme is the main tool to achieve them.

Improving water protection is a central element of the Finnish AES and consequently the requirements for planning, monitoring and fertiliser use are mandatory for every beneficiary. The objective is to increase the accuracy in fertiliser application in different parcels through regular soil mapping and analysis (every five years), annual cultivation plans prepared by farmers and annual recording of basic data, together with the specific farming practices carried out (including sowing). This parcel-based planning and monitoring approach allows farmers to take into account the specific farm and parcel needs when establishing environmental management measures both annually and across several years.

This approach has been in operation since 2000 and the continuity provided over successive RDPs has led to increased confidence and awareness of farmers, allows for longer-term planning and it provides a contribution towards consistent environmental goals.

This approach continues to have relatively high administrative requirements and controlling fertiliser levels can be difficult and time-consuming. In this sense, it is important to ensure that farmers' records of fertiliser management are available for monitoring. One potential solution to these issues is to promote the submission of information through electronic means.

A number of examples presented focus on specific measures¹⁰ and point out their importance for delivering different types of environmental services. Although it is not explicitly stated, it appears that these examples are considered to be good practice due to the effective design of the measures involved and the flexibility in the way in which measures have been used, as well as the use of advice, training, targeting and monitoring. This demonstrates that effective design is only one part of the process for ensuring the effective delivery of ES in practice.

3.1.2 Policy Coherence

The importance of coherent policy design was highlighted by the FG as being essential to ensure that measures work synergistically and are mutually reinforcing and that any unintended perverse effects are avoided. This is essential at two levels. Firstly, support and requirements under both pillars of the CAP need to be coherent. The need to ensure consistency between the requirements for cross-compliance, the proposed green direct payments and agri-environment-climate payments was a point that was stressed very strongly by the FG. Secondly, there needs to be coherence between the CAP policy design and the objectives of other strategies and funding streams that operate at the national, regional or local level.

To allow this to happen, there is a need for internal coordination and integration at the administrative level, which involves the different administration departments (i.e. agriculture and environment in particular). Different levels of administration need to work together to reflect local, regional and national priorities. In working together, feedback and coordination is also needed between implementing bodies in order to reflect better the needs on the ground.

3.1.3 Monitoring and feedback

Monitoring and feedback is an important element of the policy cycle and is an essential means of improving measure and scheme design. Monitoring is critical to assess the effectiveness and efficiency of measures and it is critical that these findings are reviewed as part of the policy evaluation process to ensure the continued improvement of schemes in terms of their effectiveness and efficiency in achieving their objectives over time (Cooper et al. 2009; Poláková et al. 2011). This should not be confused with issues of control and enforcement which are addressed in the section on 'practical/administrative factors' below.

Feedback of monitoring results to scheme beneficiaries can also act to generate greater buy-in from those implementing the measures. The European Court of Auditors, in its assessment of agri-environment schemes, suggest that feedback on the measures' results may help improve farmers' awareness and understanding of the environmental effects of the agri-environment measures and management, in particular where farmers have changed their practices as a result of the schemes (European Court of Auditors 2011).

Monitoring and feedback can take a significant amount of time and staff effort to collect and process. One solution proposed to help reduce this burden was to use collectives or regional groups to provide the monitoring and feedback to those administering the scheme or measure. This may be effective in small groups or where there is regular interaction between individuals within a collective but may be

¹⁰ These mostly relate to the agri-environment measure but also include vocational training and advice as well as non-productive investments.

more difficult to organise at broader geographical scales. Another option, as demonstrated in the outcome-focused delivery approaches, involves the monitoring of environmental outcomes carried out by the land manager. This can help to achieve greater engagement of scheme beneficiaries with the outcomes they are being paid to deliver, although there are also risks that partial monitoring results are achieved, focused only on the positive and underplaying any issues arising or negative results experienced. This is particularly the case with outcome-based approaches where payments are linked to achieving positive outcomes and therefore independent monitoring would also be required. Of course, this is no substitute for the official control and enforcement requirements, which would still need to be carried out.

3.2 Institutional / Governance Factors – Collaboration and partnership

The governance structures that are put in place to design and subsequently implement RDP measures have been highlighted as an important factor that influences successful ES delivery. In particular collaborative working and the involvement of local communities and scheme beneficiaries in scheme design and operation are shown to be important ways of improving ownership of both the process and the outcomes to be delivered.

Given the range of environmental services which rural development policy aims to support and the number of sectors that it covers beyond agriculture and forestry, it is important to ensure collaboration between many different stakeholders. This is true not only for the design of the measures as highlighted above, but also for the implementation of the measures on the ground. Working in partnership and ensuring good interaction between farmers, foresters, public and private sector organisations, NGOs, advisors and local communities, can help to make the delivery of policy measures more effective (see also Poláková et al. 2011). To help guide this process it has been suggested that more explicit and detailed rules are needed within the rural development framework (see Boccaccio *et al.*, 2009) as well as ensuring that there are effective coordination mechanisms in place at the local, regional and national level.

Similar to coordinated responses between stakeholders, collective or coordinated actions between farmers is also cited as being effective, and increasing seen to be essential for delivering ES at the wider landscape-scale, as well as a means of improving the flexibility of the way in which measures are used and the appropriateness of their design to local situations (see, for example, the Pontbren partnership in Wales highlighted in the previous section and Posthumus and Morris 2010; as cited in Poláková et al. 2011).

Coordinated responses rely on clearly identified priorities as well as coordination between different groups and can involve significant administrative efforts, although the subsequent increased buy-in to the schemes and commitment to achieving results can justify this. Using different groups such as NGOs or specific project or voluntary groups or already established LEADER networks to provide some of the necessary coordination may lessen this burden. However, one of the current barriers to the effective delivery of coordinated actions can be the lack of strategic overview or plan identifying priorities and objectives for a specific area identified. Examples provided in the FG point to a need for local, regional and national administrations to act as coordinators, or at least to set the overall strategic objectives in order to facilitate collective action.

For individual farmers in certain regions there appears to remain some reticence to operate in collective approaches. Some of the reasons for this may be cultural, with some countries having less of a history of cooperative working than others, and farmers from other countries preferring to operate individually as a reaction to enforced cooperative activity in the past. However, there are also other more self-interested reasons for this reticence which include the lack of any economic benefit or economic need to work jointly, concerns that this might infringe private property rights or that entering into joint agreements could expose individuals to risks that they cannot necessarily control. Providing added incentives in the form of supplementary payments (e.g. payments covering transaction costs linked to setting a group) for land managers working in partnership with one another to deliver benefits at a landscape-scale is cited as one option to overcome this barrier. However, it is also important that farmers play a central role in agreeing the objectives to be achieved collectively and are involved in the negotiation process so that they understand and are committed to achieving the outcomes identified.

3.3 Communication and advice

Clarity in understanding the objective of a particular measure and how it needs to be implemented is a critical factor in facilitating the delivery of environmental services. This was highlighted as one of the most important success factors by the FG. Communication and advice are essential throughout both the design and application of measures with training and skills development being an important part of policy implementation.

Training and support has been identified as particularly important for land management actions, such as those under AES with the FG suggesting that the current provision of advice for many of the voluntary schemes, such as agri-environment, is insufficient to help effectively deliver environmental services. In some schemes across the EU, training is a mandatory requirement for those undertaking land management actions under AES, as illustrated in Estonia where farmers are required to pass a basic one-day agri-environmental training (and two days for organic farming) by the end of the first contracting year and an additional one-day (or two days for organic farming) training by the end of the contracting period. Other examples have also been highlighted (see Box 7) and can be found in the literature, such as Keenleyside et al. 2011, and the need for more emphasis to be placed on advice and training is also made in other studies (see Boccaccio *et al.*, 2009).

Box 7: Integrated approaches for water quality protection in Marche - Aso Valley, Italy.

In the Aso Valley, fruit orchards growing along river banks are intensively cultivated through the use of chemical inputs. A territorial agri-environmental agreement (TAEA) has been developed with the objective of protecting water and soils from pesticide and nitrate pollution. The agreement involves both public institutions and local private actors to achieve common sustainable rural development goals.

The TAEA implements an innovative multi-sectoral and participative methodology to pursue multiple agri-environmental objectives through an integrated suite of measures addressing water and soil quality, farming practices and the production of healthier products. In this sense, the TAEA was structured as an integrated package, combining measure 111 and measure 214 on specific practices, including integrated pest management (IPM), organic farming, and maintenance of permanent grass areas. Measure 111 covering advice and training was included in the agreement to increase farmers' environmental awareness. Through this RDP measure, a capacity-building programme for farmers was established to disseminate technical guidelines on environmentally sensitive approaches and the associated economic benefits amongst local farmers. Farm visits and bespoke workshops were also

organised in order to increase information sharing among local farmers regarding IPM techniques. Another important characteristic of the agreement is its promotion by word-of-mouth, with a key role played by the *Nuova Agricoltura* association.

Since its implementation a significant number of farmers have joined the scheme and chemical inputs have been reduced, achieving lower levels than those required by law. Furthermore, according to the local stakeholders, compared to the traditional top-down approach, the territorial agreement experienced in the Aso Valley area has resulted in several positive effects on local governance and institutional cooperation dynamics.

At the same time, however, local stakeholders have highlighted several barriers related to coordination and the possibility of improving the integration of this approach into the policy framework of the CAP. They suggest more flexibility in the implementation of RDP schemes so they can be tailored to specific territories, and highlight the importance of sub-regional levels of implementation in order to facilitate more effective coordination at the territorial scale and additional funding to support the building of local networks of farmers.

Training has the potential to enable and encourage farmers and foresters to implement environmentally-sound farm management more effectively. Training does not necessarily need to relate to the implementation of prescriptive practices and can involve the empowerment of individuals to help provide solutions and deliver ES, relying on their skills as land managers. Such flexibility however requires clear communication as well as coordination. Targeted advice is also seen to be important. This can take the form of one-to-one advice, sharing of knowledge and best practice or targeted advice relevant to specific schemes, objectives or areas. Successful examples highlighted by the FG in Austria, Germany and Sweden can be seen in Box 8 and Box 9.

Box 8: Advice for the setting-up of nature management plans in Austria and Germany

Optimising the nature conservation efforts of a farm is a complicated process. It involves respecting the legislative restrictions - both conservation and other types of legislation, choosing from the menu of AES practice and realising the specific potential and overcoming the issues of individual farms. In Austria¹ (nationwide) and Germany (Rheinland-Pfalz² and nationwide³) farmers are supported in their planning for nature conservation, mostly under agri-environment agreements, at the farm level.

Through communication between farmers and environmental advisors and ecologists an inventory of the farm holding is produced which identifies the accessible and most relevant agri-environment practices and which are tailored to the individual needs of the farm. In Rheinland-Pfalz, a consultant for the state environment advisory service and one from the farming advisory service carry out the work together. The advisors identify the range of nature conservation requirements on the farm and the different measures that can meet those needs. These include: core areas and measures (red areas) which are very important for nature conservation aims; yellow areas, which can also be enrolled for AES; blue measures, which are regionalised measures, e.g. /orchard programmes; and green measures (caretaking for landscape elements). In addition to this initial advice, the farmers participating in the agri-environment scheme must participate in at least two training courses in a five-year period.

Planning nature-relevant measures at the farm level together with farmer helps to deliver the right level of environmental management, as well as raising trust and awareness of farmers about conservation priorities and agri-environment programmes. Indicators and monitoring show higher acceptance of measures using a conservation plan and better conservation results. The conservation advisors give feedback to farmers and to administrations at least once a year.

This type of approach relies on flexible measures that can be tailored to the needs of individual farms

and regions as well as accessible schemes. This level of advice is also labour intensive, both for the farmer and the advisors. The farm-level planning takes around two days of work for both parties.

¹ www.mulewf.rlp.de/fileadmin/mufv/img/inhalte/natur/suske.pdf ² www.partnerbetrieb-naturschutz.rlp.de/

³ www.kulturlandplan.de/

Box 9: Advisory services for nutrient management practices in Sweden

In Sweden the agricultural sector is responsible for reducing nitrogen and phosphorus emissions in order to comply with the national environmental quality objectives introduced in 2000. To help guide this process, the project 'Focus on Nutrients' has been introduced by the Swedish Board of Agriculture in collaboration with the Federation of Swedish Farmers (LRF), county authorities and agricultural advisory organisations. The project, financed with both national and EU funds, takes the form of an advisory service which adopts innovative training and advisory approaches in order to implement cost-effective environmental and climate measures at farm level.

Training is provided to both farmers (at regional level) and advisors (at national level). Communication tools such as websites and advertisements also help to contribute to the dissemination of good nutrient management practices and help improve awareness of related legislation.

The advice programme is voluntary, free-of-charge and individually tailored to farms that have more than 50 hectares of land or 25 livestock units. The programme involves a start-up visit by qualified advisors to identify particular practices to be adopted by the farmer.

Focus on Nutrients has become a well-established concept among the farming community and currently has more than 8 000 members. Since the beginning of the project in 2001, 40 000 farm visits have been carried out by 250 advisors in the effort to reduce nutrient losses. Nine out of ten farmers implement the measures proposed and the majority of farmers state that they have become more environmentally aware and that the process has positively affected profitability. Results show that farms have become more resource efficient, decreasing nitrogen and phosphorus leaching by 800 and 30 tonnes per year, respectively, and that there has been good cooperation between all types of farmers (livestock, arable, organic and traditional) and different organisations.

The example provided demonstrates that changing farmers' attitudes and practices has not been easy. It requires time and convincing explanations about the importance and positive effect of the proposed measures - not only for the environment, but also for farmers' businesses. It is also essential that the advice relies on repeated voluntary visits and that each farmer's achievements are monitored and communicated.

One factor identified as critical to the engagement of individuals in RDP schemes relates to the providers of advice and support. There is evidence in the examples collected by the FG to suggest that advice provided by 'trusted' peers is more likely to be followed than that provided by officials and that the sharing of information and experiences between land managers can improve the delivery of outcomes on the ground (this is backed up in the literature, see for example Garforth et al. 2003; Dwyer et al, 2007; Posthumus and Morris 2010; as cited in Poláková et al. 2011). UZEI (2011) also suggest that advisor numbers are important to build trust between themselves and farmers (as cited in Poláková et al. 2011).

The sharing of suitable advice is particularly important in relating the need for and the compatibility of environmental management in agriculture and forestry business practice. Where advice and training is not provided by 'trusted' peers, those providing the advice may also need to be trained to reflect these needs. For example, advisors may have a clear understanding of the objectives of the

scheme and how it should be implemented, but may have a more limited understanding of the needs of those implementing the scheme and how different actions may fit with current agricultural and forestry practices. Indeed, the examples presented by the FG all suggest that one of the barriers to the effective provision of advice is the need for increased institutional capacity - both to provide the advice as well as to provide coordination for advice provided through other groups. Some examples highlight that training and advice can, in part, be facilitated through better communication with regards to the individual measures, as well as through innovative approaches such as video clips and group seminars. This could help to reduce some of the burden for the coordination of specific training.

Another factor raised during the FG workshop relates to how advice is supported under the new EAFRD, post-2013. In the European Commission's proposal for rural development it is only the provider of advice who is eligible for support. One example, already adopted in Germany (see Box 10) - that was highlighted as worth adopting in other regions - is the idea of having different types of advice available from a range of approved providers, with a 'voucher scheme' providing farmers with the freedom to seek advice from their preferred type of provider.

Box 10: Voucher scheme approach to advice provision in Lower-Saxony, Germany

In Lower-Saxony a range of different advice provision is available for the implementation of rural development measures as well as cross-compliance. Advice is provided through the agricultural chamber, farmers unions, consulting engineers and other specialist, farmers associations and clubs etc. This wide range of advisory bodies is important to provide advice to different groups of farmers for different purposes.

Due to this heterogeneous advisory service structure a payment scheme for an (environmental) advisory service was needed which did not conflict with and did not disturb the existing structures. In February 2012, for the first time, farmers were able to apply for support for advisory services for cross-compliance plus the new CAP challenges under measure 114 and were able to choose the number of hours of advice they required. The advice has to be received by August with up to 80 per cent of the costs covered (to a maximum of €1 500). 2 000 farmers have applied for this service.

The system of handing the money to the farmer and allowing them to choose the advisor (which could be compared to a voucher-system) does not disturb the market competition between existing advisory services. Nor does the administration decide which advisors are employed, rather this is the responsibility of the farmer. The level of knowledge of the advisors in the new fields for advisory services is secured by courses and certification / accreditation.

In terms of potential barriers to this approach, there is currently a lack of advisors who are qualified to provide advice regarding the 'new challenge' of biodiversity (as introduced via the Health Check of the CAP). In response, the agriculture and environment ministries are setting up a joint education system to fill this gap. In addition the relative acceptance of the approach by farmers may be limited by the 80 per cent remuneration costs rather than full re-imburement.

3.4 Practical / administrative factors

Practical considerations - such as the way in which scheme applications and contracts are designed and drawn up, the amount of paperwork and red tape that is perceived to be involved as well as control and enforcement rules - are also key to the success of rural development policy measures in delivering environmental services.

3.4.1 Administrative Factors

The FG has highlighted a number of factors, in relation to the application process for entry into scheme agreements or in order to qualify for support under different measures, that are important to improve uptake of environmental schemes and measures. These include the clarity of eligibility criteria, the ease of the application process, minimising red tape, the involvement of land managers in developing the contractual agreement, as well as ensuring that land managers and administrations are equal partners in the contract.

One significant barrier to the implementation of agri-environment measures, relates to the administrative burden for land managers to enter a scheme or agreement, not only at the application stage but also throughout the duration of the contract. In addition, integrated approaches, as is clear from the examples illustrating the benefits of the integrated use of measures or innovative and collective approaches, do not always balance well with the need to ensure simplicity and reduced administrative complexity. Care needs to be taken, therefore, to find ways of implementing innovative approaches that do not overly complicate scheme operation from the beneficiary's perspective. Any transfer of responsibilities, for example, the use of collectives or land managers to provide monitoring information or the use of local groups and societies to provide advice and support, need to be carefully coordinated to ensure joined-up delivery.

Developing smart IT systems is highlighted as a means of achieving administrative simplification in the longer term. These often require some form of initial investment but once in place they can provide cost savings in scheme targeting, implementation, monitoring and evaluation. However, it is essential that flexibility is built into such IT systems so that they continue to facilitate scheme operation rather than restrict its on-going development over time. The use of the Land Parcel Information System (LPIS) is a good example of a system that has already been shown to have significant value in enabling the targeting of RD measures, particularly the agri-environment measure, where it is especially useful to help prioritise action where financial resources are limited (the Czech Republic provides a good example of where the LPIS has been used successfully for this purpose).

Payment rates have also been referred to in a number of examples and in wider studies as an important factor of success and it is an important to provide the right level of incentive according to the rules set out within the regulations and remunerate land managers for their efforts. The debates on outcome-focused approaches suggest that it would be helpful to change the ethos of payments towards rewards for positive action rather than compensation for constraints imposed. Finding ways of achieving this, without falling foul of WTO rules, could help encourage a more positive view of delivering ES amongst land managers. The provision of supplementary funding, justified by the costs of establishing and operating collective entities, may act as an incentive to engage in collaborative or collective approaches. It may also provide increased confidence and security for farmers entering into a contract that is different to their normal agronomic practices.

3.4.2 Control and Enforcement

The control and enforcement of RD measures and schemes is a necessary part of ensuring that the rules set out the regulations are adhered to and that public money is being spent effectively and efficiently. This part of RD policy implementation is never popular and the FG stressed the need for such controls to be joined-up and risk-based and that sanctions should not be heavy handed, but proportionate to the severity of the non-compliance encountered.

Within the context of promoting more collective approaches to ES delivery in the future, consideration needs to be given to developing rules and guidance for agreements with multiple beneficiaries (groups of land managers or farmers' associations). This is to ensure compliance with contractual obligations and to determine where liability lies in cases on non-compliance. To inform this, it would be useful to draw on the experience of collective approaches piloted in the Netherlands (see Box 5) as well as experience in England and Wales in developing agri-environment agreements on common land, where agreements have been signed with 'commoners' associations' on behalf of all those with grazing rights on the commons.

4 INITIAL FINDINGS

From the first phase of the FG's work and the examples gathered, it is clear that there are numerous good examples of how ES are being delivered through RDPs in many different regions of the EU under the current programming period, often using existing RDP measures in creative and innovative ways. However, for all the good examples, there are other experiences where, for a variety of reasons, full opportunity is not taken of the flexibility offered by the EAFRD, or where the EAFRD rules constrain attempts to innovate.

Two key messages seem to flow from the FG's findings. The first is a real desire to find ways of reinvigorating the design and implementation of RDPs, to innovate and find imaginative and creative ways of using measures to enhance the delivery of environmental services in all parts of the EU, in synergy with desired economic and social outcomes. The second is that, in order to achieve this, there is a need to facilitate greater ownership of the outcomes required by those implementing the measures on the ground and that these outcomes need to be delivered at a much broader territorial scale than is currently the case. Collective approaches, integrated delivery and empowering local stakeholders and land managers, are all phrases that appear constantly.

Above all, the critical role played by advice and training for improving the delivery of ES was highlighted as an area where insufficient emphasis was placed in the current programming period. Alongside the more standard approaches to advice and training, emphasis was placed on the importance of peer-to-peer advice, whereby the sharing of advice and experience between land managers is encouraged. In addition, the importance of involving land managers in monitoring the outcomes of their environmental management as well as feeding back monitoring results to scheme beneficiaries was highlighted. These are proposed as extremely important means of encouraging greater ownership and commitment from land managers in the aims and objectives of the support being provided.

Over the past 20 years, agricultural policy has undergone some fundamental changes and the latest reform is no exception. This has led to uncertainty, particularly within the agricultural sector, about the future nature of support to the sector. RD policy, providing multi-annual payments for land management over a period of five or seven years, provides a certain level of security but the FG highlighted that this does not offer security for the longer term, particularly if significant commercial decisions are being taken about the long-term direction of the business. Having some confidence

that schemes to encourage the delivery of environmental services are going to be available in the longer term, with sufficiently attractive payment rates, was therefore highlighted as extremely important to encourage farmers to engage with them.

Greater involvement of stakeholders as well as farmers and foresters in scheme design and implementation was also highlighted as a means of encouraging more innovative approaches to environmental delivery. The FG examples have shown that by involving environmental and farming stakeholders, rural communities and land managers in the development of RD schemes and measures, greater buy-in is achieved. This also leads to a greater awareness by stakeholders of some of the constraints that prevent certain ideas being taken forward in practice. This ultimately should help lead to improved outcomes as the schemes will be better matched to the different stakeholders' needs. In terms of implementation, collective approaches were particularly emphasised by the FG, both in terms of the value of community-based, multi-stakeholder facilitation of scheme operation as well as the implementation of schemes at a much broader territorial scale. For example, to cover whole landscapes or catchments, as a more effective means of delivering the scale of ES required to meet EU targets.

Some initial issues have been identified that are relevant for the forthcoming programming period and could be taken into account in the drafting of the implementing regulations and other guidance materials to aid the development of the 2014-2020 RDPs. This list will be developed further during the second phase of the FG's work plan to inform a series of recommendations - as well as indicative proposals for materials, seminars, guidance, etc. - that would be beneficial for Member States to help with the development of the 2014-2020 RDPs, based on the evidence collected.

Initial issues to highlight are as follows:

- Coherence between both pillars of the CAP is essential to ensure that measures work synergistically and are mutually reinforcing and that any unintended perverse effects are avoided. There is a particular need to ensure consistency between the requirements for cross-compliance, the proposed green direct payments and agri-environment-climate payments.
- In designing RDPs, Member States need to be clear about what environmental priorities need to be delivered, why this is important and how the achievement of these priorities can work synergistically with the delivery of economic and social priorities and where this may not be the case.
- Most information and examples provided by the FG relate to the use of agri-environment schemes. However there is considerable potential to use many other measures to deliver ES too and this is already emphasised in the draft EAFRD proposals, with the move away from Axes to Union Priorities and the inclusion of the environment as a cross-cutting priority. However, it would be helpful to provide guidance to Member States to demonstrate how other measures might best be used in combination with environmental land management measures to deliver environmental services.
- Ensuring suitable advice and training is available to land managers is essential and the proposed EAFRD should be checked to ensure that it is possible in the future to fund the sorts of advice that have been highlighted as particularly effective (including peer-to-peer advice, voucher schemes etc.).

- To ensure uptake of schemes there needs to be confidence in the continuity of support for ES in the long term. Coherence in the overall policy framework for rural areas is needed, within which there is consistency in the measures made available to land managers for environmental delivery, combined with some short-term flexibility - to the extent allowed by the framework - about how these are implemented in practice. In this vein, it would be helpful if the process for approvals of modifications to RDPs were quicker, to allow these to be implemented within a shorter timeframe.
- The EAFRD proposal already does much to improve the focus on collaboration and working at a broader territorial scale. However the implementing rules will need to spell out clearly and in more detail precisely what is possible to do, in order to remove any barriers to their effective operation and to ensure that Member States take advantage of these opportunities to develop new ways of working, and do not stick with more conservative approaches for fear of penalties as a result of non-compliance.
- The debates on outcome-focused approaches suggest that it would be helpful to change the ethos of payments towards rewards for positive action rather than compensation for constraints imposed. Finding ways to achieving this, without falling foul of WTO rules, could help encourage a more positive view of delivering ES amongst land managers.
- There is an impressive range of different approaches and ideas about how to deliver environmental services in the different regions of the EU. This FG has demonstrated the real value in sharing experience, which can stimulate creative thinking, spark new ideas and demonstrate how new ways of working can be applied in different situations.

5 NEXT STEPS

This progress report concludes the first phase of the work plan for the FG. A second phase of work is planned to run from July to December 2012. A detailed proposal for this second phase has been developed as a separate exercise.

In general terms, the second phase of the work plan is intended to:

- Provide a fully elaborated and classified set of examples that demonstrate the findings of the FG (as articulated in this progress report) and inform the development of the next suite of RDPs.
- Address, through undertaking further work, some of the areas of inquiry for which finding information has proven to be more problematic, such as the use of forestry measures for environmental purposes and the potential of the LEADER approach to be used for 'green' purposes.
- To identify how environmental and climate concerns can be integrated throughout RDPs as a cross-cutting priority. This includes among others: to stress the role of ex ante evaluation and explore the ways to improve the analysis of the environmental context, needs and opportunities and to improve the definition of the priority targets; to identify the relevant and meaningful indicators (also cutting across measures) ; possibly, to address the issues arising from the transition between programming periods.
- Develop recommendations on specific aspects of delivering ES through RDPs and identify where opportunities to improve delivery should be included within the RDPs for 2014-2020, in order to inform the drafting of implementing rules and guidelines at the EU level.

- Identify opportunities for the discussion and dissemination of the findings of the FG work and start to communicate the findings accordingly.
- Contribute to an ENRD seminar dedicated to 'successful programming' which will bring together the different strands of the ENRD thematic activities in December 2012.

ANNEX 1 BIBLIOGRAPHY

Beaufoy, G. and Marsden, K. (2010) *CAP Reform 2013: last chance to stop the decline of Europe's High Nature Value farming?* Derwentside, UK: European Forum on Nature Conservation and Pastoralism.

Beaufoy, G. and Poux, X. (2012) *Support the farmers who maintain Europe's pastoral landscapes – change the CAP rules on permanent pastures.* EFNCP.

Boccaccio, L., Brunner, A. and Powell, A. (2009) *Could Do Better - How is EU Rural Development Policy Delivering for Biodiversity?* Brussels: Birdlife International.

Cooper, T., Hart, K. and Baldock, D. (2009) *The Provision of Public Goods Through Agriculture in the European Union.* London: Institute for European Environmental Policy.

Dwyer, Janet, Mills, J., Ingram, J., Taylor, J., Burton, R., Blackstock, K., Slee, B., Brown, K., Schwarz, G., Matthews, K. and Dilley, R. (2007) *Understanding and influencing positive behaviour change in farmers and land managers. Report to Defra.* CCRI, Macaulay Institute.

ENRD, (2010a) *Links between Agriculture and the wider rural Economy, findings of ENRD Thematic Working Group 2,* Brussels

ENRD, (2010 b), *Public Goods and Public Intervention, final report of the ENRD Thematic Working Group 3,* Brussels.

European Court of Auditors. (2011) *Is agri-environment support well designed and managed? Special report Number 7.* Strasbourg.

Garforth, C., Angell, B., Archer, J. and Green K. (2003) *Fragmentation or creative diversity? Options in the provision of land management advisory services. Land Use Policy,* No 20, pp.323–333.

Hart, K., Baldock, D., Tucker, G., Allen, B., Calatrava, J., Black, H., Newman, S., Baulcomb, C., McCracken, D. and Gantioler, S. (2011) *Costing the Environmental Needs Related to Rural Land Management.* London: Institute for European Environmental Policy.

Herzon, I. and Mikk, M. (2007) *Farmers' perceptions of biodiversity and their willingness to enhance it through agri-environment schemes: A comparative study from Estonia and Finland. Journal for Nature Conservation,* No 15(1), pp.10–25.

Keenleyside, C., Allen, B., Hart, K., Menadue, H., Stefanova, V., Prazan, J., Herzon, I., Clement, T., Povellato, A., Maciejczak, M. and Boatman, N.D. (2011) *Delivering environmental benefits through entry level agri-environment schemes in the EU. Report prepared for DG Environment, Project ENV.B.1/ETU/2010/0035.* London: Institute for European Environmental Policy.

Kleijn, D., Berendse, F., Smit, R. and Gilissen, N. (2001) Agri-environment schemes do not effectively protect biodiversity in Dutch agricultural landscapes. *Nature*, No 413, pp.723–725.

Lobley, M., Bullock, J. and Winter, M. (2011) *Habitat is just another crop ... it sticks out of the ground and needs management.*

Natural England. (2009) *Agri-environment schemes in England 2009: A review of results and effectiveness.*

Oppermann, R. and Krismann, A. (2003) Schönende Bewirtschaftungstechnik für artenreiches Grünland. In *Artenreiches Grünland bewerten und fördern*. MEKA und TMQV in der Praxis. Stuttgart: Verlag Eugen Ulmer, pp. 110–116.

Poláková, J., Tucker, G., Hart, K., Dwyer, J and Rayment, M. (2011) *Addressing biodiversity and habitat preservation through Measures applied under the Common Agricultural Policy. Report Prepared for DG Agriculture and Rural Development, Contract No. 30-CE-0388497/00-44.* London: Institute for European Environmental Policy.

Posthumus, H. and Morris, J. (2010) Implications of CAP reform for land management and runoff control in England and Wales. *Land Use Policy*, No 27(1), pp.42–50.

SEI-Milieu. (forthcoming) *Long-term CAP Reform Options in an Ecosystems Perspective. Draft final report.*

Siebert, R., Toogood, M. and Knierim, A. (2006) Factors Affecting European Farmers' Participation in Biodiversity Policies. *Sociologia Ruralis*, No 46(4), pp.318–340.

Siebert, Rosemarie, Berger, G., Lorenz, J. and Pfeffer, H. (2010) Assessing German farmers' attitudes regarding nature conservation set-aside in regions dominated by arable farming. *Journal for Nature Conservation*, No 18(4), pp.327–337.

UZEI. (2011) *The questionnaire survey in the PLA and NP on the implementation of E-layer in the agri-environment measures. Report to the Ministry of Agriculture in framework of the Czech funded research programme No. 0002725101.* Praha: UZEI.

ANNEX 2 RURAL DEVELOPMENT MEASURES 2007 – 2013

Measure	Description
Axis 1	Competitiveness
111	Vocational training and information actions
112	Setting up of young farmers
113	Early retirement
114	Use of advisory services
115	Setting up of management, relief and advisory services
121	Modernisation of agricultural holdings
122	Improvement of the economic value of forests
123	Adding value to agricultural and forestry products
124	Cooperation for development of new products, processes and technologies in the agriculture and food sector and in the forestry sector
125	Infrastructure related to the development and adaptation of agriculture and forestry
126	Restoring agricultural production potential
131	Meeting standards based on EU legislation
132	Participation of farmers in food quality schemes
133	Information and promotion activities
141	Semi-subsistence farming
142	Producer groups
143	Providing farm advisory and extension services
144	Holdings undergoing restructuring due to a reform of a common market organisation
Axis 2	Environment and land management
211	Natural handicap payments to farmers in mountain areas
212	Payments to farmers in areas with handicaps, other than mountain areas
213	Natura 2000 payments and payments linked to Directive 2000/60/EC
214	Agri-environment payments
215	Animal welfare payments
216	Non-productive investments
221	First afforestation of agricultural land
222	First establishment of agro-forestry systems on agricultural land
223	First afforestation of non-agricultural land
224	Natura 2000 payments
225	Forest-environment payments
226	Restoring forestry potential and introducing prevention actions
227	Non-productive investments
Axis 3	Economic diversification and quality of life
311	Diversification into non-agricultural activities
312	Support for business creation and development
313	Encouragement of tourism activities
321	Basic services for the economy and rural population
322	Village renewal and development
323	Conservation and upgrading of the rural heritage
331	Training and information
341	Skill-acquisition and animation measure with a view to preparing and implementing a local development strategy
Axis 4	Leader
411	Competitiveness
412	Environment/land management
413	Quality of life/diversification
421	Implementing cooperation projects
431	Running the LAG, skills acquisition, animation