



# **DRAFT ENVIRONMENTAL REPORT**

## **STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE DRAFT RURAL DEVELOPMENT PROGRAMME FOR IRELAND 2014-2020**

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## NON-TECHNICAL SUMMARY

### THE RURAL DEVELOPMENT PROGRAMME

Following on from the entering into force of the EU Regulation No 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), (hereafter the Rural Development Regulation), the Department of Agriculture, Food and the Marine (DAFM) is currently preparing Ireland's Rural Development Programme (RDP) for the period 2014-2020. The Programme is to cover the period 2014 –2020 and will replace the current outgoing RDP for 2007-2013.

A total fund of €3.94bn will be available over the lifetime of the new RDP for the measures to be delivered via the Department. The allocation of funding will be phased over the 2014-2020 period in line with the requirements of measure design and budgetary requirements. The detail of the Programme as regards the range of measures, their objectives and means of implementation set out in the RDP 2014-2020 have all been formulated in the light of the performance and experience of the outgoing 2007-2013 RDP.

### STRATEGIC ENVIRONMENTAL ASSESSMENT

As the proposed RDP is an EU co-financed Programme prepared in respect of agriculture, and also has a potential for significant environmental effects, it has been deemed to be subject to Strategic Environmental Assessment (SEA) in accordance with the EU SEA Directive.

In brief SEA consists firstly of preparing an Environmental Report (ER). The ER is a systematic evaluation of the likely environmental implications of the various elements of the proposed Programme on a comprehensive range of environmental receptors specified in the Directive/Regulations. It is not an analysis of the effectiveness or merits of the RDP itself.

A key aspect of the ER is that it is an overarching document that takes a strategic overview of the Programme and as such is positioned at the top of a hierarchy of themes and requirements as are to be applied at a Programme implementation level. The findings of the ER feed into the Programme development process such that any adverse environmental implications can be avoided from the outset, the impacts mitigated or alternative approaches adopted. This process includes a requirement for public consultation in advance of adoption of the Programme.

Pre-consultation regarding the Programme was undertaken with the wide range of stakeholders nationally and, in the case of the scope of the ER, the various statutory consultees were also consulted (namely the Environmental Protection Agency, the Minister and Department for the Environment, Community & Local Government, the Minister and Department of Communications, Energy and Natural Resources; and the Minister and Department for Arts, Heritage and the Gaeltacht).

Given the very broad range of the draft RDP measures and their potential to interact with virtually all environmental receptors of note it was determined that each RDP measure should be examined for its potential impacts on the environment. Therefore no measures were "Scoped out" in advance of preparing the ER.

## APPROPRIATE ASSESSMENT

It should be noted that where state sponsored Plans/Programmes can potentially impact on designated areas for conservation an “Appropriate Assessment” under the European Communities (Birds and Natural Habitats) Regulations S.I. 447 of 2011 must also be carried out. Such an Assessment is currently being finalised within a separate parallel process to that of SEA. Importantly, the most recent draft of that assessment concludes that: “The RDP 2014-2020 as adopted will not have any significant impacts on the integrity of any Natura 2000 (protected habitat) sites”

## DRAFT RDP MEASURES

There is a range of measures proposed for the RDP. Varying levels of funding is to be allocated to each. While the final grouping may change, as may the level of financial support, this does not affect the assessment of the likely impacts to any notable degree. The RDP measures come under the following headings:

- Agri-Environment and Climate Measures;
- Areas of Natural Constraint;
- On Farm Capital Investments;
- Knowledge Transfer Measures;
- Collaborative and Quality Focused Measures;
- Targeted Support -Beef Data and Genomics Programme;
- LEADER.

## STATE OF THE IRISH ENVIRONMENT

As the above measures of the RDP are to be implemented within and across a wide range of rural environments the current state of the environment as regards water quality, climate change etc. forms the backdrop in which the RDP is to be set and with which it will interact.

The current state of Ireland’s environment, including environmental trends/evolution, is comprehensively described in the most recent Environmental Protection Agency (EPA) publication: the “State of the Environment Report- Ireland’s Environment” 2012. (Additional, more recent detailed data, is available on protected habitats and species from the National Parks and Wildlife Service (NPWS) of the Department of Arts, Heritage and the Gaeltacht (DAHG). This is more relevant to the Appropriate Assessment.) The EPA State of the Environment report, the fifth such report, presents the most comprehensive information on the quality of Ireland’s environment. The principal, environmental media of relevance addressed in that report are as follows.

### Water

The quality of Ireland’s rivers, transitional water bodies and coastal waters is considered to be comparatively good compared to that of Europe overall. Nonetheless, water pollution problems do exist in Ireland and these are associated with both point sources such as municipal sewage treatment and with diffuse sources such as agriculture. Against this background meeting the Environmental Protection Objectives (stringent water quality targets) set out in the EU Water Framework Directive (WFD) will prove challenging. The protection of groundwater, an important natural resource, is also a priority.

### Land and Soil

While Ireland has experienced a relatively high rate of land use change since the 1990s, the soils (other than peatlands) are nonetheless considered to be in good condition. Clearly rural development programmes, such

as the proposed RDP, have land use implications, including implications for maintaining those good soil conditions.

### **Air Quality and Climate**

While air quality in Ireland is, in the main, considered to be good, there are significant challenges relating to transport emissions and Green House Gas Emissions (GHG).

The European Commission Roadmap for moving to a competitive low-carbon economy by 2050 points to EU-wide GHG emission reduction requirements of up to 80% by 2050. This is a significant requirement particularly for Ireland which, compared to the rest of the EU, has a situation where GHG emissions from agriculture are proportionally higher than for most Member States.

### **Biodiversity**

Ireland's marine and terrestrial environments support a wide variety of species and habitats, many of which are of international importance. However across Europe, including Ireland, biodiversity is in decline. Major causes of decline in Europe are land use, including certain forms of agricultural land use.

Ireland has international and legal obligations to protect biodiversity and these include a commitment to halt biodiversity loss by 2020. An important element in the conservation of biodiversity is the creation of protected areas and while good progress has been made in this regard there are still habitats of national importance that require to be designated for protection.

### **Consumption and Waste**

Ireland has achieved its EU waste recycling and recovery targets for many waste streams including electronics/electrical wastes, paper, plastic and glass. In effect, recycling reduces the consumption of materials thereby helping to conserve finite resources such as materials and energy. Ireland has also achieved the first target for diversion of biodegradable waste from landfill as required under the EU Landfill Directive. The development of Bio-Energy has the potential to further assist in reducing the quantities of such wastes going to landfill. Not all wastes can be readily recycled and the availability of future landfill capacity is of concern.

## **DESCRIPTION OF RDP MEASURES AND ASSOCIATED ENVIRONMENTAL CONSIDERATIONS**

### **AGRI-ENVIRONMENT AND CLIMATE MEASURES**

The inclusion of Agri-Environment and climate measures is compulsory under the Rural Development Regulation. The proposed measures will deliver overarching benefits in terms of the rural environment whilst addressing the issues of climate change mitigation, water quality and the preservation of priority habitats and species. The proposals under this theme are the Green Low-Carbon Agri-Environment Scheme (GLAS), the Organic Farming Scheme and the Locally Led Output Based Scheme.

#### **Green Low-Carbon Agri-Environment Scheme (GLAS)**

Certain farmlands are restricted in the way agriculture should be conducted due to the necessity to meet obligations and objectives in respect of the protection of the natural habitats and water quality associated with those areas. The proposed new GLAS scheme adopts an integrated approach to achieving these objectives.

GLAS has been designed to contribute to the mitigation of the environmental impacts of agriculture through the delivery of targeted environmental advice and best practice at farm level. The incorporation of core mandatory requirements and the focus on the farmer delivering actions that will provide the most environmental benefit on his/her farm will ensure that the optimum environmental impact is achieved.

The purpose of the measure is to both promote and support ways of using agricultural land that is compatible with:

- the protection and improvement of the environment and achieving water quality, climate change and biodiversity objectives;
- the conservation of high nature value farmed environments both within and outside of designated Natura 2000 sites;
- the use of nutrient management planning in farming practice;
- fostering knowledge transfer in the area of sustainable environmental farming systems.

The proposed minimum contract under GLAS will be 5 years. GLAS will comprise of an integrated measure with payments for Natura sites (under Article 30 of the Regulation) included in the general scheme under specific actions (Farmland Habitat Conservation, Conservation of Bird Species, Uplands Conservation). Additional payments may be made available under GLAS+ for a limited number of farmers who take on particularly challenging actions which deliver an exceptional level of environmental benefit.

GLAS will, as is the intention, make a significant and important contribution to the conservation of natural habitats and to the conservation of the floral and faunal species these habitats support. As such the Measures represent the single most important element of the draft RDP as regards the protection of biodiversity. Central to its objective of environmental protection and conservation will be its application supported with the appropriate level of specialist knowledge. The Knowledge Transfer Measure of the RDP will play a key role in this regard.

In common with many other measures, GLAS also has the positive benefit of reducing the likelihood of land abandonment thereby conserving traditional landscapes and retaining the rural population these areas support.

### Organic Farming Scheme

The support under this measure aims to encourage farmers to convert from conventional farming methods and to apply organic farming methods thus answering society's demand for the use of environmentally friendly farming practices. The proposal is for a continuity of the general structure and implementation/administration of the existing Organic Farming Scheme which entails an annual area based payment over a 5/7 year period with a higher payment for the initial two year conversion period.

The farming practices that the Organic Farming Scheme promotes contribute to improving soil and water quality, to mitigation and adaptation to climate change and to the improvement of the state of biodiversity e.g. by crop rotation, use of organic fertilisers, improvement to soil organic matter and by no use of synthetic plant protection products or synthetic fertilisers. All of these positive environmental attributes that are an inherent part of organic farming will be supported as a consequence of participation in the Organic Farming Scheme. This promotion of low intensity farming is regarded as benefiting all aspects of the environment.

### Locally Led Output Based Scheme

The objective of the measure is to provide a complementary approach to the overall Agri-Environmental effort, one which encourages the development of unique projects designed to respond to specific environmental challenges. Examples include the continuance and expansion of the existing Burren Farming for Conservation Project, and the preservation of the Freshwater Pearl Mussel. The resultant environmental impacts can be predicted to be entirely positive.

## **AREAS OF NATURAL CONSTRAINT**

Farmers in Areas of Natural Constraint (ANC) face significant handicaps deriving from factors such as remoteness, difficult topography and poor soil conditions. The budget allocation to this measure represents some 35% of the total RDP budget. The stated objectives of this measure are to:

- ensure continued agricultural land use, thereby contributing to the maintenance of a viable rural society;
- maintain the countryside;
- maintain and promote sustainable farming systems, which in particular take account of environmental protection requirements.

Essentially the measure seeks to assist farming to continue in these less productive areas and in a more environmentally sustainable manner. The principal environmental consequence of achieving that objective is the prevention of rural decline and associated land abandonment while at the same time achieving the environmental benefits that low intensity farming can contribute to the diversity of rural landscapes and farmland habitats.

## **ON-FARM CAPITAL INVESTMENT**

### Targeted Agricultural Modernisation Schemes II (TAMS II)

The approach taken in the measures is to target particular areas of investment in order to assist farmers to establish or upgrade their facilities in a particular manner. Examples of facilities to be supported include dairy equipment, slurry storage, animal housing and low emission slurry spreading equipment. The grant-aid provided (estimated to be some €395m in total) will ensure that farmers can meet the current challenges of the agriculture sector as well as providing benefits in relation to animal welfare, the environment, reduction of labour costs, climate change and increased efficiency.

Improved farm infrastructure arising from increased capital investment across the range of facilities (e.g. slurry storage and land spreading equipment) has the capacity to yield positive environmental benefits by reducing the risks of accidental pollution and hence serves to protect the natural environment, most notably in the area of water, soil, biodiversity, flora, fauna, air quality and climate.

The benefits of this improved and increased infrastructure will be further reinforced when coupled with the “Knowledge Transfer” elements of the RDP which will assist farmers to be appropriately educated in key environmental matters such as understanding and appreciating the necessity to protect the environment and, secondly, in acquiring the necessary skills in how to achieve that protection at a practical operational level.

### Bio-Energy Scheme

The Bio-Energy Scheme provides establishment grants to farmers to grow Miscanthus (a tall bamboo-like grass) and Willow for the production of biomass suitable for use as a renewable source of energy. There is the added benefit of providing an alternative land use and income source for individual farmers, with the potential for additional employment in rural areas as supply chains develop and increasing areas of energy crops are established. Financial support is expected to amount to some €12m in total, with the target of supporting some 500 beneficiaries.

Importantly, the bio-energy scheme has the potential to deliver benefits in the context of climate change through reduction of GHG emissions and through carbon uptake. Secondary environmental benefits include:

- Protection of surface water and groundwater through the greater level of bio-absorption of contaminants originating from farm animals;
- Potentially positive impacts on biodiversity, most notably invertebrates and birds, through the provision of additional types of habitats;
- Positive impacts in maintaining rural populations through locally produced energy;
- Development of a local bio-energy infrastructure that can also utilise biomass that would otherwise arise as a waste thereby helping in the diversion of wastes from landfill.

## **KNOWLEDGE TRANSFER MEASURES**

Increasing the knowledge base in the sector can contribute to increased efficiency, effectiveness and competitiveness by addressing knowledge gaps in areas such as financial and risk management, grass management practices and animal health and welfare. Similarly, knowledge transfer in relation to environmental and climate change issues will contribute to the development of a more sustainable sector.

Knowledge transfer to the farming community is to be achieved through the application of a number of activities. These are: the establishment of Knowledge Transfer Groups, European Innovation Partnerships, Continued Professional Development for Advisors and the development of a Targeted Animal Health and Welfare Advisory Service. It is anticipated that approximately €112m for Knowledge Transfer Measures will be applied over the lifetime of the RDP.

These measures have the potential to make an important contribution to both the efficiency and quality of farming activity in Ireland. While improved efficiency has the potential to increase output, and hence raise the environmental footprint of agriculture overall, its close linkage to environmental knowledge and environmental best practice has the potential to greatly increase the depth and quality of the application of environment protection and enhancement at individual farm level. This can be regarded as a positive impact on the primary environmental receptors of farming activity, namely soil, surface water, ground-water, biodiversity and climate (the latter in the context of GHG emissions).

## **COLLABORATIVE AND QUALITY FOCUSED MEASURES**

Support for collaborative and quality focused measures includes support for: Collaborative Farming, Artisan Food Cooperation and support for Quality Schemes. While the total funding to be allocated under these headings over the lifetime of the RDP has not yet been finalised it is likely to be of the order of €5m.

### Support for Collaborative Farming

The overriding objective of this measure is to encourage greater engagement by the farming community with the concept of collaborative farming, and in particular farm partnerships.

The improved work practices, efficiencies and economy of land use that will result from the shared skills, assets and experience should provide some modest environmental benefits in lower transport/fuel use, lower water wastage and more efficient use of electricity.

### Artisan Food Cooperation Scheme

The approach proposed here is to provide support for collaborative proposals which seek to improve product quality, enhance relevant skills, and improve market access.

The inherent attraction of artisan foods for customers is that they are regarded as meeting the highest of quality standards and must be produced in a manner that is environmentally acceptable and sustainable.

### Regional Product Development Support (to be delivered via LEADER)

Regional Product Development support will work to address specific issues, including quality issues, identified for primary producers in attempting to improve their competitiveness.

Increasingly “quality” is regarded as extending to include aspects such as freedom from residual chemicals, production in an environmentally responsible manner and production with due regard to animal health and welfare. Support for both the Artisan Food Cooperation Scheme and the Quality Schemes can help achieve this outcome. Also, given an appropriate level of emphasis on the verifiable environmental credentials of foods, such as is required for participation in the Bord Bia “Origin Green”, the positive environmental benefits of these measures can be further enhanced.

## **TARGETED SUPPORTS –BEEF DATA AND GENOMICS PROGRAMME**

The aim of this support is to increase the value of the output from the beef sector without increasing herd size. This will be achieved through use of genomics technology. This will facilitate the selection of breeding stock with improved fertility which will result in cattle of better quality, accelerated weight gain and extended grazing capacity.

Thus the increased value of output will be achieved with a reduced suckler herd and less intensive resource inputs than is currently the case. This is predicted to result in a reduction in emissions to the environment, including a reduction in greenhouse gas emissions.

## **LEADER**

LEADER aims to support the sustainable economic and social development of rural Ireland. It is administered by the Department of Environment, Community and Local Government (DECLG). The primary objective is the delivery of a community-led local development approach to rural development, supporting a range of community and enterprise projects and the creation of local sustainable employment. In most instances that employment will be linked to local material assets and resources. This of itself helps to contribute to sustainable development as it is less likely to necessitate the importation of materials, associated transport etc. The creation of locally based employment also avoids employees having to commute long distances to

work. Some projects, in particular those involving physical development or works, will require a formal application to the relevant local authority for planning consent and as such will be subject to appropriate planning and environmental considerations at that time.

## **INTERACTION WITH OTHER PLANS AND PROGRAMMES**

Over the course of the environmental assessment of the various RDP measures there were a number of national plans and programmes identified that can potentially have linkages with the RDP. In many respects the RDP now under consideration has been drafted with regard to these Plans and Programmes, such as in the case of the “National Biodiversity Plan 2011-2016” in the drafting of the GLAS measure.

## **ENVIRONMENTAL CONTROLS**

There are a number of environmental Directives and international agreements that can potentially have linkages with the RDP. The relevance and importance of these is that many set the legal framework of environmental rules and requirements under Irish environmental law and within which rural development takes place. In many respects these statutory rules and requirements serve as an important, and sometimes the primary, “Control Measure” for the proposed RDP 2014-2020.

## **MONITORING**

The implementation of the programme will be the responsibility of DAFM and this responsibility extends to ensuring that the environmental conditions attached to the individual supports are adhered to and that unanticipated adverse impacts do not occur. If any such adverse situations are found to arise the programme is sufficiently flexible to allow these to be promptly addressed.

The necessary environmental monitoring for achieving this objective will be through a combination of pre-specified reporting requirements on the part of the beneficiaries and of on-farm inspections by appropriately qualified DAFM staff. In the case of some programme elements a specific computer based system will be developed and this will serve to ensure that documented recording and monitoring of the relevant environmental aspects occurs on an ongoing basis. Also, in the case of GLAS, it is intended that DAFM will closely liaise with the National Parks and Wildlife Service regarding the monitoring of desired outcomes and impacts.

## **CONCLUSIONS**

The Rural Development Regulation published by the European Commission was formally adopted on the 17th December 2013. Under that regulation it is a clear prerequisite of funding support that the RDP of each Member State take due account of environmental protection and sustainable development... To that end it is apparent from an examination of each measure of Ireland’s draft RDP that these requirements have been addressed in a fully integrated and comprehensive manner. This was achieved at the design stage of the programme, a process which included extensive consultation with all relevant stakeholders from the outset.

It is concluded that, when viewed in its totality, the RDP has little potential to result in any adverse environmental consequences of note. To the contrary, the RDP has the potential to make an overall positive contribution to Ireland's environment and to the communities that environment supports.

## 1. INTRODUCTION

### 1.1 BACKGROUND

The draft EU Regulation on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), (hereafter the Rural Development Regulation) was originally published by the European Commission in October 2011 and was formally adopted on the 17th December 2013. It requires that Rural Development Programmes (RDPs) be based on 6 Priority Areas for rural development. These priority areas are:

- fostering knowledge transfer and innovation;
- enhancing competitiveness;
- promoting food chain organisation and risk management in agriculture;
- restoring, preserving and enhancing ecosystems;
- promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy;
- promoting social inclusion, poverty reduction and economic development in rural areas.

Each priority area includes a series of associated focus areas. Also, addressing these priority areas, RDPs must contribute to the cross cutting themes of innovation, climate change and environment.

In addition to the requirement to address the priority areas and cross cutting themes, the Rural Development Regulation has also set a number of requirements that must be taken into account in designing the new RDP. These are that:

- at least 5% of the EU allocation must be allocated to LEADER;
- at least 30% of EU funding must be allocated to environmental and climate measures; and
- 6% of EU funding will be held back for allocation in 2019 following a performance review to be carried out by the Commission.

Following on from the adoption of the Regulation the Department of Agriculture, Food and the Marine (hereafter referred to as DAFM, or the Department) is currently preparing Ireland's RDP for the period 2014-2020 (hereafter referred to as the RDP or the "Programme"). The Programme, to cover the period 2014 –2020 will follow the current outgoing RDP for 2007-2013.

A total of over €4 billion is available for the new RDP. The proposed allocations for individual measures is set out in Section 3. "Financial Support". The allocation of funding will be phased over the 2014-2020 period in line with the requirements of measure design and budgetary requirements. The RDP applies to the entire territory of the Republic of Ireland.

For clarity and accuracy the descriptions for each of the supports is in many cases directly transcribed from the latest texts on the RDP as provided by the DAFM.

## 1.2 THE RDP AND THE REQUIREMENT FOR STRATEGIC ENVIRONMENTAL ASSESSMENT

According to Article 2 of the EU Directive 2001/42/EC (commonly referred to as the SEA Directive) programmes co-financed by the European Union fall under the scope of the SEA Directive. Strategic Environmental Assessment (SEA) is mandatory for all types of plans and programmes "which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent for projects listed in Annexes I and II to Directive 2011/92/EU".

Furthermore, as the proposed RDP is a co-financed Programme prepared in respect of agriculture and also has a potential for significant environmental effects, it has been deemed to be subject to SEA. The relevant implementing Regulations in Ireland are: the European Communities (environmental assessment of certain plans and programmes) Regulations, S.I. 435 of 2004 and the Planning and Development (strategic environmental assessment) Regulations, S.I. No. 436 of 2004 and as amended by S.I. No. 200 of 2011 and S.I. No. 2001 of 2011.

In brief SEA consists firstly of preparing an Environmental Report (ER). The ER is a systematic evaluation of the likely environmental implications of the various elements of the proposed Programme on a comprehensive range of environmental receptors specified in the Directive/Regulations. A key aspect of the ER is that it is an overarching document that takes a strategic overview of the Programme and as such is positioned at the top of a hierarchy of themes and requirements as are to be applied at a Programme implementation level.

The findings of the ER feed into the Programme development process such that any adverse environmental implications of the Programme can be avoided from the outset, the impacts mitigated or alternative approaches adopted. Mitigation includes monitoring the (environmental) impacts of the Programme over its implementation period. This process includes a requirement for public consultation in advance of adoption of the Programme. The Programme is also subject to an Ex-ante Evaluation and this is currently in preparation.

### **Drafting of the Rural Development Programme**

Work to develop the likely form, content and extent of the proposed RDP for the Republic of Ireland first commenced in 2012, and included an open consultation process initiated by the Department, which invited submissions in response to the EU priorities for new programmes. The draft Programme would be guided and framed in the first instance by the necessity to comply with the priority objectives and supports to be agreed at EU level, all in the context of promoting sustainable rural development throughout the Community.

The detail of the Programme as regards the range of measures, their objectives and means of implementation set out in the RDP 2014-2020 have all been formulated in the light of the performance and experience of the outgoing 2007-2013 RDP.

In preparing the draft Programme proposals, the Department also undertook a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis structured according to the EU priorities. The Department then subjected the emerging SWOT findings to further consultations at stakeholder consultation sessions held at venues in different parts of country.

### **Consultation on Scope of the Environmental Report (ER)**

These consultations were also used as an opportunity to advise the attendees that the RDP was to be subject to SEA and that a formal scoping of the ER content and depth would be undertaken in advance. As required under the SEA Regulations, DAFM notified the statutory consultees, namely the Environmental Protection Agency, the Minister and Department for the Environment, Community & Local Government, the Minister and Department of Communications, Energy and Natural Resources and the Minister and Department for Arts, Heritage and Gaeltacht to advise them that a new Rural Development Programme for Ireland was shortly to be prepared and that it was to be subject to SEA.

Since that time a draft Scoping Report on the likely content and depth of the ER has been prepared and submitted to the statutory consultees. Feedback from that consultative process further informed the proposed content of the ER.

The most comprehensive response on scoping was received from the Department of Arts, Heritage and the Gaeltacht (DAHG) and from the Environmental Protection Agency (EPA).

The DAHG submission, dated 1<sup>st</sup> May 2014, makes specific reference to their numerous earlier submissions to DAFM in 2013 and early 2014 regarding their view of the content and approach that they would like to see adopted in the RDP. Those submissions would therefore have been taken into account in the draft RDP that became available at the end of March 2014 and upon which this ER is based. The DAHG submission of 1<sup>st</sup> May relates to both the ER and to the Appropriate Assessment. The principal points raised by DAHG have been considered in preparing the ER, however, some appear to be overly specific and unsuited to a strategic, overarching assessment such as this. This is particularly the case given the broad and non site specific nature of the detail that is available in the proposed programme.

The EPA in its comments and submissions is very supportive of the RDP in principal. Their submissions have been given the appropriate level of consideration in preparing the ER and are further addressed in the implementation and monitoring recommendations.

The Northern Ireland Environment Agency also made a submission regarding the proposed content of the ER. Their views relate in the first instance to consideration of potential trans-boundary effects. These and the other issues raised by them have been taken into account in this ER.

Given the very broad scope of the draft RDP measures and their potential to interact with virtually all environmental receptors of note it was determined that each RDP measure should be examined for its potential impacts on the environment. Therefore no measures were “scoped out” in advance of preparing the ER.

## **1.3 METHODOLOGY**

A more specific set of proposals on the likely RDP content has now been prepared by DAFM, and captured in its draft document: “Description of Proposed Measures for RDP 2014-2020”. This document became available at the end of January 2014, and forms the basis of the ER as elaborated below.

In addressing the six Priority Areas required by the EU the national draft Programme proposes a range of measures, grouped thematically. The key aspects of the draft RDP relevant to the ER are presented

in summary form throughout the environmental impact evaluation. Importantly it should be noted that the various configurations and contents of each measure are based on the current draft proposals and consequently may be subject to change. The summary of measures presented within the ER is solely for the purpose of assisting in obtaining the necessary “Strategic Overview” in the context of environmental assessment and protection under SEA. Similarly the degree of financial support proposed for any given measure is simply provided to give an indication of the scale of the support which may be linked to the scale of any resultant environmental impacts. Consequently, as the draft RDP evolves, any minor changes in the thematic groupings of the measures or in the exact level of financial support afforded under any given measure will not alter the findings of the ER to any notable extent. This approach is allowed for in the SEA Regulations S.I. 435, 2004 under article 12, sub-section 2 (b) and (c).

The consideration of “Alternatives” under SEA in this report relates to recommended options/proposals for modifying the RDP solely in the context of the environmental issues or problems identified. Issues relating to the overall effectiveness, desirability, value for money etc. of the RDP are outside the scope of an ER.

The primary purpose of the ER is to identify any adverse environmental impacts that might be associated with the various measures and sub-measures of the development programme so that they can be eliminated or reduced from the outset. In the event of any such adverse impact being identified as likely then, subject to predictable, quantifiable data being available, a more empirical evaluation in respect of that specific measure and impact would be desirable. As no such adverse impacts were identified the need for an evaluation of this nature did not arise.

The degree of significance of likely impacts on the various environmental receptors that has been assigned in the matrix to any particular measure is presented in summary form as an “Impact Matrix”. It is, of necessity, a prediction and is not to imply that impacts cannot occur that are greater or lesser than the assigned value. Rather, it is based on the likelihood of such impacts arising and within a mature regulatory environment such as now pertains in Ireland. This approach is appropriate for an overarching document such as this Environmental Report dealing, as it must, with a Programme that has an exceptionally broad range of measures and sub-measures, all implemented across a wide and diverse geographical range of locations, conditions and individual circumstances. In most cases the impacts of the measures on the various environmental receptors are predicted to be positive but because of the lack of quantifiable data, as already discussed, the assignment of the significance of the positive impact is, of necessity, subjective by nature rather than empirically based.

The various environmental receptor headings in a matrix may be shown to be potentially impacted in a positive or negative manner. In such cases these are where relatively direct impacts may occur. There will in many cases be associated indirect impacts, e.g. in the case of water quality where positive or negative impacts link to indirect impacts on “Human Health” and biodiversity.

#### **Appropriate Assessment**

It should be noted that where state sponsored Plans/Programmes can potentially impact on designated areas for conservation an “Appropriate Assessment” under the European Communities (Birds and Natural Habitats) Regulations S.I. 447 of 2011 must also be carried out. Such an Assessment is currently in preparation within a parallel process. Preparing this assessment entails consulting with the Programme maker, i.e. DAFM, and with the National Parks and Wildlife Service (NPWS) of the Department of Arts, Heritage and the Gaeltacht.

While SEA and Appropriate Assessment (AA) are separate processes they have many aspects in common and the relevant findings or recommendations are considered accordingly. Consequently over the course of preparing each assessment, (SEA and AA), regular consultation and information exchange was undertaken between the authors.

## 2. ENVIRONMENTAL SETTING

### 2.1 INTRODUCTION

As the RDP is to be implemented within and across a wide range of rural environments the current state of the environment as regards water quality, climate change etc. forms the backdrop in which the RDP is to be set and with which it will interact.

The current state of the environment, including environmental trends/evolution, is comprehensively described in the most recent Environmental Protection Agency (EPA) publication: the “State of the Environment Report- Ireland’s Environment” 2012. (Additional, more recent detailed data, is available on protected habitats and species from the National Parks and Wildlife Service (NPWS) of the Department of Arts, Heritage and the Gaeltacht (DAHG). This is more relevant to the Appropriate Assessment). The EPA report, the fifth such report, presents the most comprehensive information on the quality of Ireland’s environment. The report provides an in-depth analysis of the socio-economic developments that have impacts and consequences for the environment, together with thematic assessments focusing on key trends, challenges and actions.

The EPA report presents a comprehensive series of “Thematic Assessment” chapters. The principal relevant assessments (relevant in the context of the RDP and SEA) in the report are considered to include:

- Water;
- Land and Soil;
- Greenhouse Gases and Climate Change;
- Air Quality and Trans-boundary Air Emissions;
- Nature and Biodiversity;
- Sustainable Resource Use;
- Consumption and Waste.

The key aspects of each of these thematic assessments is provided below.

### 2.2 WATER

The quality of Ireland’s rivers, transitional water bodies and coastal waters is considered to be comparatively good compared to that of Europe overall. In Ireland where polluted sites have been identified approximately half are attributed to large point sources such as municipal wastewater treatment plants and the remainder attributed to diffuse inputs. Principal among the diffuse sources of pollutants is agriculture and, to a lesser extent, forestry and peat cutting. Also in the wider context the EU has identified conflicts between EU water policy and other policies, including the Common Agricultural Policy.

Against this background meeting the Environmental Protection Objectives (specifically stringent water quality targets) set out in the EU Water Framework Directive (WFD) for 2015, 2021 and 2027 will prove challenging. To address this challenge seven River Basin Management Plans (RBMPs) have been prepared for Ireland. These RBMPs include measures for:

- Controlling inputs of phosphorus and nitrogen;
- Controlling inputs of organic pollutants such as silage and sewage;
- Controlling pathogens in water;
- Elimination of dangerous substances from water bodies;
- Maintaining sufficient water volumes in surface waters;
- Controlling hydromorphological conditions (i.e. physical characteristics) in rivers.

It is apparent therefore that rural development programmes, particularly agricultural development programmes, have the potential to influence water quality, its protection and management.

### **2.3 LAND AND SOIL**

While Ireland has experienced a relatively high rate of land use change since the 1990s the soils, other than peatlands, are nonetheless considered to be in good condition. However this conclusion is regarded as somewhat compromised by insufficient data on land and soil quality and improvements in this area of knowledge are seen as necessary prerequisites for more integrated and effective land use management in the future. Clearly rural development programmes, such as the proposed RDP, have land use implications, including implications for maintaining Ireland's good soil conditions.

### **2.4 GREENHOUSE GASES (GHG) AND CLIMATE CHANGE**

The European Commission Roadmap for moving to a competitive low-carbon economy by 2050 points to EU-wide GHG emission reduction requirements of up to 80% by 2050. This is a significant requirement particularly for Ireland which, compared to the rest of the EU, has a situation where GHG emissions from agriculture are proportionally higher than for most Member States. The future direction of agricultural development in Ireland therefore has important implications for our GHG emissions profile.

In the context of the lifetime of the RDP (2014-2020) Ireland is required under the EU Climate and Energy Package to achieve a 20% reduction in GHG emissions from sources outside the Emissions Trading Scheme (ETS) by 2020. This is governed by the Effort Sharing Decision (406/2009/EC). The agricultural sector is predicted to account for 48% of non-ETS emissions in 2020, therefore it is important that the RDP should contain mitigation measures to ensure that it does not have an adverse impact on GHG emissions and if possible, should have a positive impact.

### **2.5 AIR QUALITY**

Air quality in Ireland is of a comparatively high standard and the strategies implemented to achieve compliance with the EU National Emissions Ceilings Directive have successfully controlled emissions of sulphur dioxide, ammonia and volatile organic compounds. Problem areas remain in respect of nitrous oxides and particulate matter, both associated with transport, not agriculture. Also particulates in rural towns remain a problem in contrast to our major cities that have seen reductions due to a lower usage of solid fuel and the ban on smoky coal.

### **2.6 BIODIVERSITY**

Ireland's marine and terrestrial environments support a wide variety of species and habitats, many of which are of international importance. However across Europe, including Ireland, biodiversity is in

decline. Major causes of decline in Europe are unsustainable or inappropriate land use including certain forms of agricultural land use.

An important element in the conservation of biodiversity is the creation of protected areas and while good progress has been made in this regard there are still habitats of national importance that require to be designated for protection.

Ireland has international and legal obligations to protect biodiversity and these include a commitment to halt biodiversity loss by 2020. While protection afforded to designated habitats and species is of value it of itself cannot halt biodiversity decline. Overall land use policies and programmes that adequately address and incorporate biodiversity considerations are regarded as key measures in meeting the 2020 biodiversity commitment.

## **2.7 CONSUMPTION AND WASTE**

Ireland has achieved its EU waste recycling and recovery targets for many waste streams including electronics/electrical wastes, paper, plastic and glass. Notably since 2008 there has been a significant reduction (81%) in construction waste associated with the collapse of that sector. Ireland has also achieved the first target for diversion of biodegradable waste from landfill as required under the EU Landfill Directive. Potential problems for the future include issues relating to the availability of landfill as there is only twelve years' gross municipal landfill disposal capacity remaining in the State.

### 3. FINANCIAL SUPPORT

A useful starting point in understanding the potential for impacts on the environment arising from the implementation of the RDP as currently drafted is the degree of financial support afforded under each measure. The following table provides an indication of the approximate levels of support, these levels may be adjusted as the draft RDP is being finalised.

#### Levels of Support Across all Measures

MEASURE	Funding	Approximate % of total fund
<b>Agri-Environment and Climate Measures</b>		
- GLAS and Glas +	€1,450m	36%
- Organic Farming Scheme	€44	1%
- Locally led output based Schemes	€70m	<2%
<b>Areas of Natural Constraint (including island farmers)</b>	€1,370	34%
<b>On-Farm Capital Investments</b>		
- TAMS II	€395m	10%
- Bio Energy Scheme	€12m	0.5%
<b>Knowledge Transfer Measures</b>		
- Knowledge Transfer Groups	€100m	2.5%
- EIP Operational Groups	€4m	0.1%
- CPD for Advisors	€2m	0.05%
- Targeted AHW Advisory Service	€6m	0.15%
<b>Collaborative and Quality Focused Measures</b>		
- Support for Collaborative Farming	€3m	0.1%
<b>Targeted Support</b>		
- Beef Data and Genomics Programme	€295m	7.5%
<b>LEADER</b>	€250m*	6%
<b>Technical Assistance</b>	€6m	0.15%

\*Incorporates €15m for two food supports (Artisan Food Collaborative Scheme and Regional Product Development Support)

It is apparent from the table that the GLAS measure and that for the Areas of Natural Constraint (ANC) account for a significant proportion of the RDP budget which, when taken together, account for almost three quarters of the overall budget. It is to be expected therefore that these two measures

might have a disproportionate potential to impact, either positively or negatively, on the environment.

## **4. ENVIRONMENTAL ASSESSMENT**

### **4.1 INTRODUCTION**

This section considers the environmental impact of each of the proposed RDP measures in turn. With respect to each, the analysis sets out the context for the intervention, implementation approaches, budgets and other dimensions, as well as the detailed anticipated environmental effects.

### **4.2 AGRI-ENVIRONMENT AND CLIMATE MEASURES**

#### **4.2.1 GLAS (GREEN LOW-CARBON AGRI-ENVIRONMENT SCHEME)**

##### Context for Intervention

Ireland's main farming system is grassland based livestock and dairy production with approximately 8% of land in tillage. Certain farmlands however are restricted in the way agriculture should be conducted due to the necessity to meet obligations and objectives in respect of the protection of the natural habitats and water quality associated with those areas. The proposed new GLAS scheme adopts an integrated approach to achieving these objectives.

The inclusion of an Agri-Environment climate measure is compulsory under the rural development Regulation. The proposed scheme will deliver overarching benefits in terms of the rural environment whilst addressing the issues of climate change mitigation, water quality and the preservation of priority habitats and species.

In order to contribute to the mitigation of the environmental impacts of agriculture GLAS has been designed to achieve the delivery of targeted environmental advice and best practice at farm level. It aims to work within the framework for environmental sustainability as set down by the following EU Directives and national and international targets:

- The EU Climate Change and Renewable Energy Package and the Kyoto Protocol.
- The Water Framework Directive, the Groundwater Directive and the Nitrates Directive
- The Habitats Directive, the Birds Directive and the European target of halting the loss of biodiversity by 2020.

This measure also takes into account the need for a targeted Agri-Environmental Scheme highlighted in the Environmental Analysis of "Food Harvest 2020", the industry-sponsored strategy for agriculture and food up to 2020.

##### Purpose and Approach Taken

The purpose of the measure is to promote ways of using agricultural land that are compatible with:

- The protection and improvement of the environment and achieving water quality, climate change and biodiversity objectives;

- The conservation of high nature value farmed environments both within and outside of designated Natura 2000 sites;
- The use of nutrient management planning in farming practice;
- Fostering knowledge transfer in the area of sustainable environmental farming systems.

The proposed minimum contract under GLAS will be 5 years. GLAS will comprise of an integrated measure with payments for Natura sites under Article 30 of the Regulation included in the general scheme under specific actions (Farmland Habitat Conservation, Conservation of Bird Species, Uplands Conservation). GLAS+ payments would be put in place for a limited number of farmers who take on particularly challenging actions which deliver an exceptional level of environmental benefit.

Core Requirements

In the first instance all farmers in the Measure must comply with the following list of core requirements. These are mandatory and aim to ensure that farmers have an enhanced level of environmental knowledge, evidenced by records kept of actions delivered and underpinned by a plan for nutrient resource efficiency on their holding:

- A Farm Advisory Service (FAS) approved agricultural planner must prepare GLAS application.
- A Nutrient Management Plan for the whole farm must be in place before payment issues.
- Knowledge Transfer by means of a training course for specific actions complemented by on-line demonstrations/advice on good environmental practices.
- Record keeping.

The full list of requirements under GLAS are provided in Annex 1 below.

**Qualifying Environmental Requirements and Actions under GLAS**

<b>OBJECTIVE:</b>	
GLAS aims to address the cross-cutting objectives of climate change, water quality and biodiversity.	
<b>CORE</b>	<b>Core Management Requirements</b>
	<p>All of these requirements are compulsory:</p> <ul style="list-style-type: none"> <li>• A Farm Advisory Service (FAS) approved agricultural planner must prepare GLAS application</li> <li>• Nutrient Management Planning</li> <li>• Training in environmental practices and standards</li> <li>• Record keeping of actions delivered</li> </ul>

<p><b>PRIORITY</b></p>	<p><b>TIER 1 Priority Environmental Assets and Action</b></p> <p><b>All farmers with PEAs get first priority access to the Scheme in Year One and subsequent years.</b> It is not guaranteed that all eligible applicants in Tier 1 will get into the Scheme and scoring matrix will apply if necessary.</p> <p>If any of these <b>Assets</b> are applicable to your holding, you <b>must choose them, plan the relevant actions,</b> and as a result you will receive priority access to GLAS in the order 1 – 5 as follows (<i>NB order not finalised</i>):</p> <ol style="list-style-type: none"> <li>1. Farmland Habitat (private Natura sites )</li> <li>2. Farmland Birds (e.g. Twite, Curlew, Corncrake, Grey Partridge, Hen Harrier)</li> <li>3. Commonages (80% participation <i>Note: lower participation levels addressed in Tier 2</i>)</li> <li>4. High Status Water Area</li> <li>5. Rare Breeds</li> </ol> <p>If your wholefarm stocking-rate exceeds 140kg Livestock Manure Nitrogen per hectare (produced on the holding), or you have greater than 30 ha of arable crops, you may still qualify for priority access even if you do not have one of the Priority Assets listed above. To qualify, you must undertake one of the following 4 actions. These places will be filled in order 6 – 9 (<i>NB order not finalised</i>):</p> <ol style="list-style-type: none"> <li>6. Low Emission Slurry Spreading</li> <li>7. Minimum Tillage</li> <li>8. Green Cover Establishment from a Sown Crop</li> <li>9. Wild Bird Cover (grassland farms only)</li> </ol> <p>Finally, if you are a registered Organic farmer you may apply for priority access to the scheme under this tier, by selecting actions appropriate to the environmental priorities on your farm. However, if any of the assets listed from 1-5 above apply, you must choose them first.</p>	<p><b>YEAR ONE and subsequent years</b></p>
<p><b>SECONDARY</b></p>	<p><b>TIER 2 Environmental Assets and Actions</b></p> <p><b>All farmers with Environmental Assets and Actions get secondary access to the Scheme.</b> It is not guaranteed that all eligible applicants in Tier 2 will get into the Scheme and scoring matrix will apply if necessary.</p> <p>If any of these <b>Assets</b> are applicable to your holding <b>you must choose them</b> and as a result you will get secondary access (once Tier I is filled) to the Scheme in the order 1 - 2:</p> <ol style="list-style-type: none"> <li>1. Commonages (50% - 79% participation)</li> <li>2. Vulnerable Water Area</li> </ol> <p>If you wish to be considered for secondary access (but none of the above are applicable to your farm), you must choose one of the following 4 actions. These places will be filled in order 3 - 6 (<i>NB order not finalised</i>):</p> <ol style="list-style-type: none"> <li>3. Low Emission Slurry Spreading</li> <li>4. Minimum Tillage</li> <li>5. Green Cover Establishment from a Sown Crop</li> <li>6. Wild Bird Cover (grassland farms only)</li> </ol> <p><i>Farmers in Tier 2 will get access in sequence in subsequent years also (if they apply)</i></p>	<p><b>YEAR TWO and subsequent years</b></p>

<b>GENERAL</b>	<p><b>TIER 3 General Actions*</b></p> <p>These actions aim to enhance the climate change, water quality and biodiversity benefits delivered and can be chosen in addition to Priority and Secondary actions or on their own (choosing only General Actions will not guarantee entry to the Scheme):</p> <ul style="list-style-type: none"> <li>• Low Input Permanent Pasture</li> <li>• Traditional Hay Meadow</li> <li>• Riparian Margins</li> <li>• Coppicing Hedgerows</li> <li>• Laying Hedgerows</li> <li>• Planting New Hedgerows</li> <li>• Traditional Stone Wall Maintenance</li> <li>• Tree Planting (whips)</li> <li>• Environmental Management of Fallow Land</li> <li>• Arable Margins</li> <li>• Birds, Bees and Bat Boxes</li> <li>• Wild Flower margin</li> <li>• Wild Bird cover for tillage farmers</li> <li>• Protection of water courses (not in High Status or Vulnerable Areas)</li> <li>• Protection of archaeological sites</li> </ul> <p>*A selection process will be used to allow farmers join GLAS by means of these actions if take-up of Priority and Secondary Assets and Actions falls short.</p>	<b>YEAR TWO (possibly) or YEAR THREE depending on funding</b>
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Two-Tier Entry Requirements

Tier 1:

Priority will be given to farmers who choose at least one action from the Priority list above in order to join the scheme. Some of these actions will be mandatory for farms in certain locations: e.g. farms with watercourses must choose the protection of watercourses action, those in freshwater pearl mussel areas must address that issue.

Tier 2:

Once all places under Tier 1 have been filled, and if there is capacity, a selection process will be used to allow other farmers who have chosen actions from the General list to join the Scheme. The selection process will apply weightings in terms of environmental benefit to actions and a scoring system will be used to allocate places.

Other Actions

Farmers can choose additional actions from the Priority list and/or the General list (Annex 1), to bring their annual payment to the maximum of €5,000. Planners will be required to advise farmers to choose actions most suitable for their farms and which deliver the greatest environmental dividend.

New actions specifically for tillage farmers have been included in order to encourage uptake and to increase the number of actions contributing to climate change objectives.

All applicants will be required to engage the services of a planner in the preparation of their application and successful applicants will be required to have a nutrient management plan prepared for the farm. The importance of training to ensure proper delivery of commitments and to protect against the occurrence of error rates is also recognised and training modules in environmentally sustainable farming practices will be delivered under the Knowledge Transfer measure.

#### Budget and Costings

Overall financial allocation for RDP period is to be €1,450m.

It is proposed that a maximum payment of €5,000 per annum will apply, with the Scheme building up to the inclusion of some 50,000 farmers. It is also proposed that, within budget limits, a GLAS+ payment would be put in place for a limited number of farmers who take on particularly challenging actions which deliver an exceptional level of environmental benefit. It is proposed that this payment will be up to €2,000 per annum.

#### Target Groups

It is suggested that the following could be specifically targeted:

- Farms with high status water quality sites;
- Conservation habitats with poor or bad status;
- Specific species under immediate threat;
- Intensive farmers with a grassland stocking rate of >140kg of Organic N per hectare and tillage farmers with more than 30 hectares of arable crops.

#### Environmental Considerations in Relation to GLAS and GLAS+

The purpose of GLAS is to facilitate and promote ways of using agricultural land that are compatible with the protection and conservation of environmentally sensitive areas and receptors, designated or otherwise. It has therefore a high degree of environmental requirements and mechanisms built into the measure for achieving those core objectives. As such GLAS can be regarded first and foremost as an environmental protection measure rather than primarily an agricultural development measure. Its environmental objectives, mechanisms and required outcomes, all are designed to maximise positive environmental results.

In devising the GLAS measure the DAFM was informed by the experience gained over three decades of implementing predecessor programmes, namely the Rural Environment Protection Scheme (REPS) and the Agri-Environment Options Scheme (AEOS). The development of these earlier schemes was progressed in consultation with the relevant stakeholders, including the National Parks and Wildlife Service (NWPS) of the Department of Arts, Heritage and the Gaeltacht.

For an understanding of the specific environmental dimension and impacts of GLAS therefore the summarised description of the measure, as presented above, should be consulted as many of the proposed actions and objectives of GLAS, and their environmental consequences, are inextricably linked.

As stated in the draft RDP the scheme is “green” on the basis of the following:

- It preserves traditional hay meadows and low input pastures;
- It is low-carbon as it retains the carbon stocks in soil through margins and habitat preservation and practices such as minimum tillage;
- It is “Agri-Environment” as it promotes agricultural actions which introduce or continue to apply agricultural production methods compatible with the protection of the environment, water quality, the landscape and its features, endangered species of flora and fauna and climate change mitigation.

GLAS will, as is the intention, make a “significant” contribution to the conservation of natural habitats and to the conservation of the floral and faunal species these habitats support. As such the measures represent the single most important element of the draft RDP as regards the protection of biodiversity. The measure will also have positive impacts on biodiversity beyond national boundaries in that it affords protection to a range of migratory species and acts to conserve the habitats such species use for that part of their life cycle spent in Ireland. An in-depth analysis of the potential impacts of GLAS on Natura 2000 sites has been carried out for the Appropriate Assessment report.

The measure will, in addition, have some degree of positive impacts in that it promotes low intensity agriculture and hence reduced materials consumption, reduces the likelihood of land abandonment and thereby conserving the traditional landscapes and helps retain the rural population these areas support.

The introduction of a Traditional Buildings measure is also under consideration, and this may be appropriate to the locally led model. This would be similar to the measure last employed under REPS 4 and would be targeted at the preservation and conservation of traditional farm buildings and structures. Coupled with the “protection of archaeological sites” Actions (as per Annex 1) these will result in some positive impacts on Cultural Heritage.

**GLAS and GLAS+**  
**SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS**

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>			<i>Positive</i>	
<b>Population</b>		<i>Positive</i>		
<b>Human Health</b>	<i>None</i>			
<b>Fauna</b>			<i>Positive</i>	
<b>Flora</b>			<i>Positive</i>	
<b>Soil</b>			<i>Positive</i>	
<b>Water</b>			<i>Positive</i>	
<b>Air</b>		<i>Positive</i>		
<b>Climatic Factors</b>			<i>Positive</i>	
<b>Material Assets<sup>1</sup></b>	<i>Minor (Positive)</i>			
<b>Cultural Heritage</b> (Archaeology, architecture)		<i>Positive</i>		
<b>Landscape</b>			<i>Positive</i>	
<b>Materials consumption</b>		<i>Positive</i>		

Consideration of Alternatives with a view to preventing adverse effects

GLAS has been designed in the light of the operation of similar schemes over many years. As such the format, mechanisms and finances etc. for the current proposals in the RDP are considered to represent the optimum approach for achieving sustainable agriculture and the avoidance of any negative impacts. Consequently the issue of alternative approaches does not arise.

Mitigation

GLAS has been designed to contribute to the mitigation of the environmental impacts of agriculture and to achieve the delivery of targeted environmental advice and best practice at farm level. It is in essence a mitigation measure in its own right.

Performance Indicators

Key output indicators to measure performance include:

- Area of Natura land under contracts;
- Area of Commonage under contracts;

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<sup>1</sup> 1 For the purposes of this report the term “Material Assets” means any physical asset of monetary value or replacement cost. It includes, but is not limited to, farmland, livestock, buildings, and public infrastructure such as roads, pipelines etc.

- Number of contracts prioritising water quality;
- Number of holdings with nutrient management plans;
- Area under Wild Bird Cover;
- Volume of slurry spread using Low Trajectory spreading equipment;
- Number of trees planted;
- Length of hedgerow maintained;
- Length of stone wall maintained;
- Length of Riparian Margins contracted;
- Number of farm with Nutrient Management Plans;
- Area of land contracted for Minimum Tillage.

Category	Output Targets (provisional estimates)
Number of farms with Nutrient Management Plan	50,000
Area of commonage under contracts	150,000ha (based on 50% of declared area 2013)
% of Scheme funds invested in Natura and wider biodiversity including Commonages	40%
% of Scheme funds invested in water quality	30%
% of Scheme funds invested in General Environmental actions	Combined target of 30% for climate change and general environmental actions

#### Monitoring

The Agri-Environment Division has developed an in depth understanding of Agri-Environment schemes and their delivery over a number of years. A specific computer based system will be developed for GLAS to include facilities for on-line applications, a mapping system, payments system, on farm inspection outcomes and reporting and monitoring mechanisms.

#### Appropriate Assessment

Not all land areas and environmental receptors of conservation importance or of particular sensitivity are specifically protected through formal designation for conservation such as that afforded to Natura sites. In the case of those designated sites a separate environmental assessment - an "Appropriate Assessment" - is required in accordance with Article 6(3) of the EU Habitats Directive (92/43/EEC). Under this Directive the potential impacts of any plan or programme on the conservation objectives of a Natura 2000 site of European conservation importance, this includes Special Areas of Conservation (SACs) and Special Protection Areas for birds (SPAs), are to be assessed by means of Appropriate Assessment (AA). Such a report is at an advanced stage of preparation in regard to the RDP.

While all of the measures of the draft RDP were examined in the context of AA it is the GLAS measures in particular that have the greatest capacity to interact with designated sites for conservation. For this reason the conclusions/findings of the AA report are reported here.

The Habitats Directive is implemented in Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011), which supersede the European Communities (Natural Habitats) Regulations 1997 and amendments. The purpose of AA is to assess the impacts of projects in combination with the effects of other plans and projects against the conservation objectives of a Natura 2000 site and to ascertain whether they would adversely affect the integrity of that site. "Other Plans" includes the draft RDP 2014-2020.

In most cases, the plan or project to be assessed is spatially explicit, such as Local Authority Development Plans. The RDP is different in that it is a national plan/programme encompassing the entire territory of the State. Screening each Natura 2000 site in Ireland individually for potential impacts would not be appropriate to the high-level, strategic nature of the RDP. Therefore, the approach taken in the AA is to assess each RDP measure against the habitats and species that comprise the Special Conservation Interests (SCIs) of the Natura 2000 sites. . Those reports have been prepared in accordance with:

- the provisions of the European Communities (Birds and Natural Habitats) Regulations 2011;
- the European Commission’s Methodological Guidance (2002);
- DECLG’s Appropriate Assessment of Plans and Projects in Ireland (2009).

#### Findings of Appropriate Assessment

At advanced draft stage, the AA report concludes that:

*“the RDP 2014-2020 has identified a number of elements within the plan that, in the absence of mitigation, could result in potentially significant negative impacts on the qualifying interests of Natura 2000 sites (protected habitat sites). Several measures for mitigating potential negative impacts have been specified. When these mitigation measures are in place, the risk of impacts will be not significant.”*

*“The RDP 2014-2020 as adopted will not have any significant impacts on the integrity of any Natura 2000 sites”*

## **4.2.2 ORGANIC FARMING SCHEME**

### Context for Intervention

In 2010, across the EU27 Member States 5.7% of the total utilised agricultural area (UAA) was devoted to organic crop area. In Ireland the corresponding figure was 1.1%.The introduction of a more targeted incentivised payment structure aims to more effectively increase organic production. Food Harvest 2020 recognised that while the organic sector in Ireland is relatively small in relation to agriculture as a whole, the sector does represent an opportunity for growth and endorsed the target of 5% of the UAA to be organically farmed land.

### Purpose and Approach Taken

The support under this measure aims to encourage farmers to convert from conventional farming methods and to apply organic farming methods as defined in Council Regulation (EC) No 834/2007, as well as maintain these methods after the initial period of conversion, thus answering society’s demand for the use of environmentally friendly farming practices. The proposal is for a continuity of the general structure and implementation/administration of the existing Organic Farming Scheme which entails an annual area based payment over a 5/7 year period with a higher payment for the initial two year conversion period. The key selection tool will be a five year business plan combined with a scoring matrix. The scheme incorporates the completion of a training course as a mandatory eligibility requirement. Inclusion of Ongoing Training as an optional supplementary measure is also under consideration.

### Budget and Costings

Overall financial allocation for RDP period is expected to be €44m.

### Target groups

The target group is conventional farmers who may consider the organic option. In addition the maintenance of existing organic farmers is a priority.

### Environmental Considerations in Relation to Organic Farming Scheme

In the rural development context, organic farming is mainly expected to establish and maintain a sustainable management system for agriculture. The farming practices it promotes contribute to improving soil and water quality, to mitigation and adaptation to climate change and to the improvement of the state of biodiversity e.g. by crop rotation, use of organic fertilisers, improvement to soil organic matter and by no use of synthetic plant protection products or artificial fertilisers. All of these positive environmental attributes that are an inherent part of organic farming will be supported as a consequence of participation in the Organic Farming Scheme. Importantly the scheme doesn't simply seek to maintain the current level of participation but seeks to achieve an ambitious expansion of the land area so farmed. A consequence of this is that organic, low intensity, farming practices replace existing more intensive agricultural practices. This benefits all aspects of the environment.

The environmental receptors most likely to be impacted upon by the organic farming scheme are presented in the matrix below. While the contribution to human health of organic food versus intensively farmed produce is often the subject of heated debate it can at least be concluded that the production of high quality produce, irrespective of how it is produced, is of health benefit and on that basis has been assigned "some significance" (positive) in the summary matrix. Organic farming is also expected to contribute to maintenance of a rural population through the diversification of agricultural production it affords and to the protection of the traditional landscape form that is associated with low intensity farming.

## Organic Farming Scheme

### SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>			<i>Positive</i>	
<b>Population</b>		<i>Positive</i>		
<b>Human Health</b>		<i>Positive</i>		
<b>Fauna</b>			<i>Positive</i>	
<b>Flora</b>			<i>Positive</i>	
<b>Soil</b>			<i>Positive</i>	
<b>Water</b>			<i>Positive</i>	
<b>Air</b>		<i>Positive</i>		
<b>Climatic Factors</b>		<i>Positive</i>		
<b>Material Assets</b>		<i>Positive</i>		
<b>Cultural Heritage</b> (Archaeology, architecture)	<i>None</i>			
<b>Landscape</b>			<i>Positive</i>	
<b>Materials consumption</b>	<i>Minor (Positive)</i>			

#### Alternatives

The likely impacts arising from expanding participation on organic farming are all predicted to be positive. The alternative to Organic farming is normal farming, with inputs of, for example, artificial fertilisers and consequently greater environmental impacts. It is considered therefore that alternative configurations of the RDP would serve no useful environmental purpose.

#### Mitigation

No adverse environmental impacts are predicted, consequently the issue of mitigation does not arise.

#### Performance Indicators

The performance indicators are:

- Output targets;
- Expenditure - €44m;

#### Monitoring

An online application system will be developed which will greatly facilitate the collating and reporting of monitoring data. Importantly, monitoring of the scheme will also be delivered through inspectorate staff.

### 4.2.3 LOCALLY LED OUTPUT BASED SCHEMES

#### Context for Intervention

While the GLAS and GLAS + measures have been designed to address many of the high priority environmental, climate change and biodiversity challenges facing the sector, there is a recognition that large scale measures such as GLAS may not be the most appropriate vehicle for addressing specific issues. For example, there are many environmental and biodiversity challenges which manifest themselves in a particular manner at local level and are thus not as suited to the approach of national level measures. Thus, locally led projects aimed at specified environmental and biodiversity outputs can be an important complement to wider national level measures. This measure also responds to the issues highlighted by the Environmental Impact Assessment of Food Harvest 2020.

#### Purpose and Approach Taken

The objective of the measure is to provide a complementary approach to the overall Agri-Environmental effort, one which encourages the development of bespoke projects designed to respond to specific environmental challenges. As well as responding to a number of such challenges identified centrally, it is also intended to use the measure to promote independent identification of priorities and, by way of a competitive-call process, to encourage locally-driven solutions.

It is proposed that support here could take the form of:

- Support for a small number of projects identified centrally as being of critical environmental importance, such as the continuance and expansion of the existing Burren Farming for Conservation Project, and the preservation of the Freshwater Pearl Mussel;
- The establishment of a competitive fund to select a number of priority projects on foot of a call for proposals.

#### Budget and Costings

Overall financial allocation for RDP period is expected to be €70m. Each project will be costed individually, based on the inputs required to achieve the outputs targeted, but will respect maximum levels laid down in the Regulation.

#### Target Projects

Support for two projects, namely the existing Burren Farming for Conservation Project and a new project directed at securing the future of the Freshwater Pearl Mussel have been recently been announced. In addition, it is considered that a number of other cameo projects will be recruited by way of a series of competitive calls for proposals. This measure will be targeted at key priority issues being addressed locally.

#### Environmental Considerations in Relation to Locally Led Output Based Schemes

The sole objective of this scheme is environmental protection through the support for locally based, output led, projects. The resultant impacts therefore can be confidently predicted to be entirely positive. However the nature and scale of those positive environmental impacts resulting from that support cannot be defined in advance as it is directly related to any one of a very wide range of potential projects.

#### Alternatives

This scheme is aimed at achieving positive environmental outputs. Consequently the issue of alternatives does not arise.

### Mitigation

The scheme is an environmental protection/enhancement scheme aimed at mitigating adverse environmental effects, irrespective of source, agricultural or otherwise.

### Performance Indicators

The nature of this scheme is such that its performance is directly linked to a number of specific, environmental protection based, targets related to the individual project concerned. Relevant output indicators might include: the area of land concerned, the number of farms involved, the number of farmers trained or the number of collaborative ventures supported. At project level, this would be refined to reflect the specific priorities being supported.

### Monitoring

A scheme specific computer programme is being developed to cover all aspects of the Agri-Environment effort over the period of the RDP. This will be supplemented as required by dedicated data collection on a project-by-project basis.

The Agri-Environment Division has developed an in-depth understanding of Agri-Environment schemes and their delivery over a number of years. In addition, for the targeted output schemes, DAFM expect to work closely with the NPWS.

## **4.3 AREAS OF NATURAL CONSTRAINT**

### Context for Intervention

Farmers in Areas of Natural Constraint face significant handicaps deriving from factors such as remoteness, difficult topography and poor soil conditions. The provision of financial support in these areas is a contribution to the continued viability of these farms, and the continued farming of that land in line with environmental standards.

### Purpose and Approach Taken

Farmers in Areas of Natural Constraint tend to have lower farm productivity and higher unit production costs than farmers in other areas. Without financial support, these lower returns from farming would pose a significant threat to the future viability of these farming communities.

The stated objectives of this Scheme are to:

- ensure continued agricultural land use, thereby contributing to the maintenance of a viable rural society;
- maintain the countryside;
- maintain and promote sustainable farming systems, which in particular take account of environmental protection requirements.

At present, the delivery of support via the existing Less Favoured Areas (FSA) scheme is integrated into the Single Farm Payment system. This has proven to be a very efficient way of administering the scheme.

Each Member State has until 2018 to designate its ANCs by reference to biophysical criteria. This may change the designation of areas and the structure of the Scheme. Under the Scheme different levels of aid can be paid, (i) depending on the severity of the natural constraint and (ii) the system of farming.

Applicants for support will be required to:

- be a registered herd owner,
- occupy and farm a minimum of three hectares of forage land in a ANC area
- comply with required stocking rates
- comply with good agricultural and environmental conditions.

#### Support for Island Farming

It is proposed to add a top up payment for a separate category of Island Farmers within the structure of the ANC Scheme. This top up will compensate for the particular challenges faced by Island Farmers. Work is ongoing in relation to setting the rate for this top up payment.

#### Budget and Costings

Overall financial allocation for RDP period is expected to be €1,370m

#### Environmental Considerations in Relation to Areas of Natural Constraint

The ANC scheme has as its central objective the maintenance of farming in areas that, in the absence of financial support, would simply not be viable in many cases. This has implications not only for the occupants of those farms but also for the wider rural community in the locality. It is evident from an environmental and population perspective that one important result of the financial support the ANC provides is that it can contribute to the continuation of farming and alleviate the threat of land abandonment in particularly marginal areas.

When linked, as it is, to the qualifying criteria such as having to farm in an environmentally responsible manner (e.g. avoidance of overgrazing, appropriate level of nutrient application etc.) the outcome can be regarded as beneficial and environmentally positive. Also, the financial support provided increases the likelihood that these farms invest in modernising their on-farm infrastructure thereby enabling the application of more sustainable farming practices.

The environmental benefits of low intensity farming are several. Through the prevention of invasive growth a diversity of habitats, such as low input pastures and hedgerows, are maintained. This contributes to both biodiversity and landscape. While “landscape” is a subjective concept it is widely regarded that Ireland’s diverse patchwork of fields and hedgerows, interspersed with low density housing, are a central and defining feature. In contrast, land abandonment would result in the loss of these attributes as well as undermine the clear social benefits of maintaining a viable rural community. Also, the ANC measure through conserving existing low intensity farmland protects against the loss of the Material Asset such farmland represents.

The environmental considerations in relation to island farming and maintaining island communities that are both viable and vibrant is widely regarded as a desirable social objective. Typically such communities face many economic challenges and compared to mainland populations are disproportionately dependent on income based on a mixture of low intensity farming, fishing, tourism and crafts industries. Supports provided to farming through programmes such as the RDP are a key

element in maintaining island population densities at levels sufficient to be viable. Also, island culture is viewed as a distinct and important element of our cultural heritage and support for island communities is regarded as essential for its protection and maintenance.

Low intensity farming on these islands has little potential for adverse impacts and, on the contrary, helps maintain a diversity of land use that in many cases results in a range of wildlife habitats that would not be available if some island lands were to be abandoned. For example the maintenance of Ireland’s population of chough (a threatened species of the crow family) is critically dependant on the type of grassy areas that low intensity grazing creates in coastal areas.

The environmental receptors most likely to be impacted upon by the ANC scheme are presented in the matrix below.

**Areas of Natural Constraint  
SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS**

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>			<i>Positive</i>	
<b>Population</b>			<i>Positive</i>	
<b>Human Health</b>	<i>Minor (positive)</i>			
<b>Fauna</b>			<i>Positive</i>	
<b>Flora</b>			<i>Positive</i>	
<b>Soil</b>			<i>Positive</i>	
<b>Water</b>			<i>Positive</i>	
<b>Air</b>	<i>Minor (positive)</i>			
<b>Climatic Factors</b>	<i>Minor (positive)</i>			
<b>Material Assets</b>			<i>Positive</i>	
<b>Cultural Heritage</b> (Archaeology, architecture)			<i>Positive</i>	
<b>Landscape</b>			<i>Positive</i>	
<b>Materials consumption</b>	<i>None</i>			

Consideration of alternatives with a view to preventing adverse effects

As there are no negative environmental implications associated with the ANC supports the consideration of alternative approaches within the RDP is not necessary.

#### Mitigation

The linking of payments under the scheme to a requirement to employ sustainable environmental practices constitutes an inbuilt mitigation measure ensuring that, overall, no adverse impacts result.

#### Performance Indicators

The key performance indicators are:

- Expenditure €1,370
- Total number of holdings / beneficiaries supported 95,000 farmers pa

#### Monitoring

There is a dual system in place in terms of administration and on the spot checks and inspections to ensure that stocking rate and GAEC requirements are adhered to.

## **4.4 ON-FARM CAPITAL INVESTMENTS**

### **4.4.1 TARGETED AGRICULTURAL MODERNISATION SCHEMES II (TAMS II)**

#### Context for Intervention

Investment in physical assets will enable the sector to respond to a wide range of policy challenges, including the cessation of milk quotas from 2015, the need for more modern and efficient infrastructure, animal health and welfare issues, etc. The need for an enhanced grant scheme for young farmers in order to encourage greater land mobility was also identified.

#### Purpose and Approach Taken

The objective of the measure is to encourage investment in a number of particular target areas which will promote, in particular, increased competitiveness in those sectors in which grant-aid will be made available.

The approach taken in the measures is to target particular areas of investment in order to assist farmers to establish or upgrade their facilities in a particular manner. Considerable capital costs can be encountered by farmers, particularly new entrants, in order to provide new facilities on their holdings or upgrade the existing facilities. The provision of a higher aid intensity for young farmers is aimed at supporting young farmers wishing to enter the sector or improve their holdings.

The grant-aid provided will ensure that farmers can meet the current challenges of the agriculture sector as well as providing benefits in relation to animal welfare, the environment, reduction of labour costs and increased efficiency.

The areas prioritised for investment in the current proposal for TAMS II will contribute to a number of central themes in the farming sector, including:

- enabling growth and expansion;
- environmental and climate change issues;
- supporting increased efficiency of holdings;

- improving animal health and welfare.

#### Areas to be Funded

The initial areas identified for funding are:

- Farm nutrient storage;
- Animal housing;
- Dairy equipment;
- Low emission spreading equipment;
- Animal Welfare and Farm Safety;
- Pig and poultry investments in energy, water meters and medicine dispensers;
- Organic Capital Investment (organic farmers only);
- Young Farmer Capital Investment Scheme (including the above areas and dairy buildings).

#### Budget and Costings

The total budget available for TAMS II priority areas over the course of the RDP is estimated at €395 million.

#### Target Groups

Farmers in all areas of the country will be entitled to apply for grant-aid under TAMS II, subject to meeting the eligibility criteria laid down in each individual scheme.

#### Environmental Considerations in Relation to On-Farm Capital Investment

The principal environmental implications of each of the targeted capital investment supports are anticipated to be as follows:

#### Dairy

As a consequence of the proposed cessation of milk quotas from 2015 Ireland's milk production is expected to expand significantly over the coming years. This will inevitably result in both increased milk throughput per dairy farm and a probable increase in the number of milking parlours nationally.

Milk waste and milk contaminate wash-waters have a high potential to cause water pollution, most notably through de-oxygenation of surface water courses. The first requirement in reducing dairy related water pollution is support for an adequate level of on-farm understanding of the importance to avoid unnecessary milk loss to the environment and in the abilities to optimise the use and management of the milk handling facility. The knowledge transfer elements of the RDP, described elsewhere in this report (Knowledge Transfer Measure), should act to assist dairy farmers in being appropriately educated in these matters. However, to be fully effective that knowledge must be matched with an appropriate level of investment in on-farm infrastructure. In this regard TAMS II provides financial support that will allow for the construction of well-designed parlours fitted out with modern equipment and of sufficient capacity to handle the milk throughput on any given farm. Such systems optimise water use while simultaneously minimising the generation of contaminated wastewaters and milk losses to the environment. Also, new milking parlours can be designed and equipped in a manner that facilitates the application of more efficient hygiene through the use of "Clean in Place" (CIP) techniques. CIP reduces both the use of water and of cleaning agents.

In conclusion it is considered that while the TAMS II element will facilitate the expansion of the dairy sector the potential environmental consequences of the associated expansion of milking facilities can be potentially offset by support for TAMS II ensuring that all such facilities are capable of minimising

milk loss to the environment. This has positive implications for surface water quality, and for the biodiversity/flora/fauna that good water quality supports.

#### Farm Nutrient (Slurry) Storage

The inadequate storage and management of slurry is a well-known cause of surface and groundwater pollution. This arises as a consequence of age deterioration and/or improper construction resulting in leakage of slurry to the environment. Also, in cases where inadequate storage capacity exists, this can result in the land spreading of slurry at excessive application rates and/or under unsuitable weather conditions. Support under TAMS II will ensure that farmers can more readily fund new slurry storage systems or to upgrade, expand and modernise existing systems. As the support for slurry storage is to extend to arable farms this will facilitate the substitution of slurry for artificial fertilizer use while also expanding the available land area for slurry disposal. These outcomes will have a positive impact on surface waters, aquatic flora/fauna, groundwaters and soil.

#### Animal Housing

From an environmental perspective improvements in animal housing can have a number of benefits. Firstly properly designed and sized housing can greatly facilitate the collection and subsequent storage of animal wastes that are generated indoors. This has the benefit of reducing the risk of water pollution from such material. Secondly, modern well designed facilities can improve the ability to prevent and manage disease while also meeting general animal welfare requirements. Compliance with the Animal Health and Welfare Act 2013 is also relevant here. The TAMS II support can assist farmers in achieving these worthwhile objectives.

#### Pig and Poultry

While investments in equipment related to such aspects as energy, water meters and medicine dispensers in the pig and poultry sector should assist in the primary aim of developing these sectors there will be consequent environmental benefits. These benefits include: reduced energy demand, increased opportunities for water management through the use of water metres and enhanced animal health and welfare. All are positive environmental outcomes.

#### Low Emission Spreading Equipment

The spreading of slurry on land has a number of important benefits for agriculture, first as a valuable natural fertilizer and a substitute for the importation of artificial fertilizers and second as a means of slurry disposal. However land spreading also carries significant risks to the environment in terms of potential surface water and groundwater pollution. It is also a significant source of ammonia (NH<sub>3</sub>) emissions, a GHG, nationally. (Almost 98% of national emissions are attributed to agriculture, with the land spreading of cattle manure accounting for 47% of this total). Reductions in ammonia emissions resulting from slurry spreading is an important objective as under the National Emissions Ceilings Directive (2001), Ireland is limited to produce 116 kT/annum of ammonia. Whilst Ireland is currently compliant with emissions below this target at 113 kT, future targets are likely to be more restrictive.

There are basically two methods whereby slurry is land spread; splash-plate and trailing –shoe. In trailing-shoe systems the equipment directs the slurry via a pipe to a “shoe” attached at the base of each pipe. These shoes separate the sward canopy and apply slurry at the soil surface. There are various configurations of these systems, classed as low-emission including some that open a slit in the soil.

These low emission slurry spreading techniques have been demonstrated to be capable of achieving a number of environmental benefits when compared to that of splash-plate spreading, including:

- reducing the risk of runoff to surface waters;
- extending the spreading time “window”;
- achieving significant reductions in ammonia emissions. (Reductions of up to 95% have been reported. However, the actual reductions consistently achieved vary significantly depending on numerous operational and other factors including: the quality characteristics of the slurry, the nature of land use and soil type, prevailing weather conditions and time of year);
- reducing associated odour nuisance

Animal slurry is also an important substitute for imported chemical NPK fertilizer (e.g. 4.5 m3 of cattle slurry can potentially replace one 50 kg bag of fertilizer). In the context of the wider environment this has the merit of acting as a substitute for artificial fertilizer that would have been manufactured in potentially polluting heavy industrial processes.

Relevant Directives and guidelines in relation to land spreading include the Nitrates Directive (91/676/EEC) introduced in Ireland through a series of Regulations, the most recent of which was the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations S.I. No.31, 2014 and the Teagasc Guideline “Land spreading of Animal Manures, Farm Wastes & Non – agricultural Organic Wastes” .

In conclusion capital support for low emission spreading equipment increases the ability of farms to better utilise animal slurry resources while also enhancing overall environmental performance in a positive way.

#### Summary of Environmental Implications

Capital investment support for these various elements (slurry storage, animal housing etc.) will provide farms with the technical means to operate with reduced environmental impact. The benefits of this improved and increased infrastructure capacity will be further reinforced when coupled with the “Knowledge Transfer” elements of the RDP which will assist farmers to be appropriately educated in key environmental matters such as understanding and appreciating the necessity to protect the environment and, secondly, in acquiring the necessary skills in how to achieve that protection at a practical operational level.

Investment in upgrading and improving on-farm infrastructure is important in maintaining and building upon previous capital investments and thereby makes a positive impact in protecting the Material Assets that these investments represent.

Positive benefits also arise in respect of improving efficiency and hence reducing materials consumption per unit of production. This latter benefit translates to improved income and maintenance of a viable rural population. Reduction in materials consumption can also translate into a reduction in the generation of waste.

Improved farm infrastructure arising from increased capital investment across the range of facilities (e.g. slurry storage and land spreading equipment) also has the capacity to yield positive benefits by reducing the risks of accidental pollution and hence serves to protect the natural environment most notably in the area of water, soil, biodiversity, flora, fauna, and climate.

The environmental receptors most likely to be impacted upon are presented in the matrix below.

**Targeted Agricultural Modernisation Schemes-TAMS II**  
**SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS**

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>		<i>Positive</i>		
<b>Population</b>		<i>Positive</i>		
<b>Human Health</b>	<i>None</i>			
<b>Fauna</b>		<i>Positive</i>		
<b>Flora</b>		<i>Positive</i>		
<b>Soil</b>			<i>Positive</i>	
<b>Water</b>			<i>Positive</i>	
<b>Air</b>		<i>Positive</i>		
<b>Climatic Factors</b>			<i>Positive</i>	
<b>Material Assets</b>			<i>Positive</i>	
<b>Cultural Heritage</b> (Archaeology, architecture)	<i>None</i>			
<b>Landscape</b>	<i>None</i>			
<b>Materials consumption</b>			<i>Positive</i>	

Consideration of alternatives with a view to preventing adverse effects

From the above environmental impact analysis it is evident that no adverse impacts of consequence arise from the implementation of TAMS II and that overall it has the potential to make a positive contribution to environmental protection. Consequently there would be no merit in adopting alternative approaches within these elements of the RDP.

Mitigation measures to reduce the significance of the potential effect

The construction and existence of significant physical on-farm structures has a potential for adverse environmental impacts, these include local nuisance during construction, visual impacts and impacts on protected sites or structures. Such developments are controlled by means of the Planning and Development Regulations 2000-2012, administered by the relevant local authority within whose jurisdiction the development is proposed to take place. While under the Planning and Development Regulations, 2001 (S.I. No. 600 of 2001) many farm developments are classed as “exempted development”, not all are. In either case it is a strict requirement of the TAMS support procedures that evidence of exemption be provided by the applicant or, in cases where planning consent is required, proof of such consent is necessary.

Where Development Consent is granted, it is subject to a range of “Conditions” tailored to the specific nature and location of the development, all in the context of ensuring sustainable development. In exceptional cases, such as where significant environmental effects are anticipated or where the development is likely to impact on protected sites (e.g. Natura 2000) or archaeological sites, a full Environmental Impact Assessment (EIA) may be required under the EIA Directive/Regulations and

possibly an associated Appropriate Assessment under the Habitats Directive/Regulations, the latter in the context of protecting Natura 2000 sites.

In the case of intensive large scale animal husbandry facilities those above a certain threshold are required to apply for, and possess, an Integrated Pollution Prevention and Control licence (IPPC- now also known as Industrial Emissions Directive Licences) before they are permitted to operate. This licensing system is operated by the Environmental Protection Agency (EPA).

#### Performance Indicators

Key performance indicators will include –

- total expenditure - €395 m
- No. of operations supported – 6,300 young farmers, 19,000 general farmers.

#### Monitoring

Monitoring of TAMS II is to be achieved through:

- farm inspections by the local office network of the Department;
- data collected in relation to nature and number of Planning Consents granted;
- planning Consent enforcement by the relevant local authority in cases where consent is required;
- the EPA in cases where an IPPC licence is required.

### **4.4.2 BIO ENERGY SCHEME**

#### Context for intervention

Despite a near trebling in demand between 2003 and 2011 for renewable energy, there are still relatively low levels of production and use overall in Ireland. The contribution of renewable energy to overall energy demand in 2012 was 7.1%, whereas the target is to achieve 16% by 2020 under EU Directive 2009/28/EC. The Commission Climate and Energy policy framework from 2020 to 2030, published on 22/1/14, proposes a renewable energy target of 27% by 2030 (compared to 20% by 2020) with flexibility for individual member states to set national targets. There is a lack of market development for the bio-energy sector for a number of reasons, including the high investment costs required for energy sector development, lack of available finance, and difficulties with the development of the supply chain for bio-energy production, in terms of the need to better join up supply and demand.

The Sustainable Energy Authority of Ireland (SEAI) estimate that optimised biomass availability in 2020, from the main sources such as the forest sector, domestic and industrial waste and agriculture residues, will be less than 60% of the biomass required to deliver the forecast bio-energy contribution to our 2020 renewable energy targets.

#### Purpose and Approach Taken

The greatest benefit to Ireland would be the offsetting of imported fossil fuels by indigenous biomass, with the local economy stimulated by money that would otherwise have left the country. There is the associated security of supply consideration due to the home grown nature of the fuel, the greater

diversification of fuel supplies and reduced dependence on imported fuels, particularly natural gas. There is the added benefit of providing an alternative farming enterprise and source of income for individual farmers, with the potential for additional employment in rural areas as supply chains develop and increasing areas of energy crops are established.

Selection of successful applicants would prioritise clear contractual evidence that the harvested crop will be used for renewable energy purposes within a defined minimum distance from where the crop is grown, the suitability of the site in terms of soil, access, agronomy, previous history of energy crop planting etc. It is also a requirement to demonstrate end-use links to facilities supported by any renewable heat incentive that may be introduced or biomass trade centre supported under the RDP.

#### Budget and Costings

€12 million would provide for establishing 10,000 hectares of crops from 2015-2020 (Based on an estimate of 500 beneficiaries provides for planting an average of 20 hectares per beneficiary over the 2015-2020 period).

#### Target groups

Individual farmers who show clear contractual evidence that the harvested crop will be used for renewable energy purposes within a defined minimum distance from where the crop is grown. Ideally with end-use links to facilities supported by any renewable heat incentive that may be introduced or biomass trade centre supported under the RDP.

#### Environmental Considerations in Relation to Bio-Energy

The Bio-Energy Scheme provides establishment grants to farmers to grow Miscanthus (a tall bamboo-like grass) and Willow for the production of biomass suitable for use as a renewable source of energy. The Scheme aims to increase the production of Willow and Miscanthus in Ireland and to encourage alternative land use options. Eligible costs include those associated with ground preparation, fencing, vegetation control, the purchase of planting stock and planting. The minimum allowable area per applicant is 3 hectares and the maximum is 30 hectares. Importantly, applicants must submit evidence of linkages with end-users to use the biomass crop as a source of Bio-Energy. The Bio-Energy measure is consistent with the Government's Strategy for Renewable Energy '2012 - 2020'.

Bio-energy resources contribute to policy objectives in the energy, environmental, climate change mitigation, rural and regional development policies and for indigenous enterprise development. The energy/environment related benefits of growing biomass for use as fuel are several. Principal among these are carbon, wastewater management and biodiversity.

#### Carbon

One of the major drivers for growing Short Rotation Coppice (SRC) Willow and Miscanthus is their potential for the reduction of national GHG emissions. This reduction is achieved through: Carbon Mitigation and Carbon Sequestration.

Carbon mitigation:

- One hectare of SRC Willow or Miscanthus produces approximately the equivalent energy of 4.5m<sup>3</sup> of light heating oil which equates to over 8 tonnes CO<sub>2</sub>.
- Willow and Miscanthus are carbon neutral fuels, where carbon that is released during its combustion has been absorbed by the crop whilst growing.

- Biomass crops are a more positive influence on soil carbon levels due to reduced soil disturbance levels.

Carbon sequestration:

- Willow and Miscanthus can sequester carbon. Sequestration occurs when the inputs of carbon dioxide are greater than removals from harvesting and decomposition. (SRC Willow can sequester around 0.12 t of carbon/ha/yr.)

#### Wastewater Management

SRC Willow also has the ability to bio-remediate contaminated wastewaters or runoff and as such can form part of an integrated wastewater management programme on farms. For example when planted as buffer strips it can reduce nutrient and sediment runoff compared to other crops.

#### Biodiversity

Any change in land use from arable or grassland to Willow or Miscanthus will inevitably result in changes in the ecology/biodiversity of at least those fields directly concerned.

It has been demonstrated in various studies that these energy crops can support a wide diversity of invertebrates and birds in particular. In general, the overall effect on wildlife values, where these crops replace intensive agricultural production, is likely to be positive but where it replaces improved grassland, it will have little overall effect.

It can be an issue in some jurisdictions where the promotion of energy crops on a large scale has the knock-on effect of more land having to be brought into food production elsewhere, or intensified elsewhere, in order to make up for the resultant food crop displacement. Given the scale of the Irish bio-energy scheme and the relative productive land base available for food production in Ireland this is not regarded as a significant issue.

It is concluded that subject to the Best Practice Guidelines (as published by Teagasc) for the growing and harvesting of Willow and Miscanthus being followed the overall impact of the RDP in supporting this initiative is environmentally positive.

Some local, minor, landscape impacts will inevitably result through the changed visual pattern presented by these crops. However overall these changes are considered to be subjective and neutral (neither positive nor negative).

#### Summary of Environmental Implications

Firstly, and most importantly, the bio-energy scheme has the potential to deliver benefits in the context of climate change. Secondary environmental benefits include:

- protection of surface water and groundwater through the greater level of bio- absorption of contaminants originating from farm animals;
- potentially positive impacts on biodiversity, most notably invertebrates and birds, through the provision of additional types of habitats;
- positive impacts in maintaining rural populations through locally produced energy.

Subject to the mitigation measures described below there should be no adverse environmental impacts of note associated with this scheme.

In the broader context of promoting the use of bio-energy nationally, the measure facilitates the development of the downstream infrastructure necessary to utilise biomass. The existence of this infrastructure allows not only the energy crop biomass to be utilised but also provides an outlet for other agricultural wastes and for certain industrial and domestic wastes. As a consequence the measure has the capacity to provide an alternative, equally environmentally acceptable, disposal route for agricultural biomass wastes to that of composting.

The environmental receptors most likely to be impacted upon are presented in the matrix below.

**Bio- Energy**  
**SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS**

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>		<i>Positive</i>		
<b>Population</b>		<i>Positive</i>		
<b>Human Health</b>	<i>Minor (positive)</i>			
<b>Fauna</b>		<i>Positive</i>		
<b>Flora</b>		<i>Positive</i>		
<b>Soil</b>			<i>Positive</i>	
<b>Water</b>			<i>Positive</i>	
<b>Air</b>		<i>Positive</i>		
<b>Climatic Factors</b>			<i>Positive</i>	
<b>Material Assets</b>		<i>Positive</i>		
<b>Cultural Heritage (Archaeology, architecture)</b>	<i>None</i>			
<b>Landscape</b>	<i>None</i>			
<b>Materials consumption</b>		<i>Positive</i>		

Consideration of alternatives with a view to preventing adverse effects

From the above environmental impact analysis it is evident that no adverse impacts of consequence arise from the implementation of the Bio-Energy Scheme and that overall it has the potential to make a positive contribution to the environment. Consequently there would be no merit in adopting alternative approaches within this element of the RDP.

An additional, rather than alternative, Bio-Energy opportunity relating to agriculture that is worthy of consideration is that of anaerobic digestion of animal wastes. (See Section 6).

Mitigation measures to reduce the significance of the potential effect

The principal mitigation measure is the adherence by the Bio-Energy Scheme participants to the guidelines that have been produced in respect of both Willow and Miscanthus. These Best Practice Guidelines, produced by Teagasc, include details on the potential for adverse environmental effects and on how to manage, mitigate and/or avoid such impacts.

#### Indicators

- Level of uptake based on number of holdings / beneficiaries supported.

#### Monitoring

Each application under the scheme is recorded from application stage, pre-planting approval stage, payment claim stage for those who planted, and records maintained on total expenditure and areas planted per application. At any stage information in relation to how the measure is progressing is available as there is a dedicated unit within the Division with responsibility for administering the Bio-Energy Scheme.

## **4.5 KNOWLEDGE TRANSFER MEASURES**

### **4.5.1 KNOWLEDGE TRANSFER GROUPS**

#### Context for Intervention

Increasing the knowledge base in the sector can contribute to increased efficiency, effectiveness and competitiveness by addressing knowledge gaps in areas such as financial and risk management, grass management practices and animal health and welfare. Similarly, knowledge transfer in relation to environmental and climate change issues will contribute to the development of a more sustainable sector.

Discussion Groups currently operate in the sector as a vehicle for knowledge transfer. Discussion Groups involving some 10,000 participating farmers (7,000 beef and 3,000 sheep farmers) are currently running and are primarily focussed on profitability and herd health issues.

#### Purpose and Approach Taken

DAFM is considering innovative delivery solutions that will go beyond the traditional approach followed in the existing discussion groups and where possible to avail of additional expertise such as that of veterinary practitioners. This measure also takes into account the need for increased best practice and knowledge transfer in relation to environmental issues highlighted in the Environmental Analysis of Food Harvest 2020.

The scheme objectives will be to contribute to knowledge acquisition and the adoption of best practice in the sector. This will serve to improve the profitability of participants' enterprises by focusing on selected areas of farm level performance including those associated with:

- financial management;
- grassland management;
- herd health;
- sustainability; and
- animal breeding/welfare.

#### Areas to be Funded

The proposed areas for the establishment of Knowledge Transfer Groups are grouped in priority order as follows:

#### Priority Bundle 1

- Dairy expanders and new entrants – focused on animal health, financial management, grass management, sustainability (carbon navigator), milk recording, breeding.
- Beef and sheep - focused on animal health, financial management, grass management, sustainability (carbon navigator), breeding.
- Pig / Poultry – focused on animal health and welfare and manure management.
- Equine – focused on breeding and animal health and welfare.

#### Priority Bundle 2

- Dairy other - focused on animal health, financial management, grass management, sustainability (carbon navigator)
- Tillage – focused on integrated pest management and profit monitor.

These groups may be linked to other proposed RDP measures. For example, participation in beef sector Knowledge Transfer Groups may be linked to participation in the Beef Data and Genomics measure. Decisions in relation to which areas to support will be linked to both DAFM priorities and available funding.

It is expected that knowledge transfer will also promote good crop husbandry practises and assist in the achievement of the targets outlined in the Tillage Sector Development Plan compiled by the Teagasc “Tillage Crop Stakeholder Consultative Group”.

#### Budget and Costings

Costings are currently being developed in line with the Rural Development Regulation. These will include participant’s costs for travel, per diem expenses and replacement farmer costs . The overall financial allocation for the RDP period is anticipated to be €100m over the lifetime of the RDP.

#### Environmental Considerations in Relation to Priority Bundles 1 and 2

From an environmental perspective Priority Bundles 1 and 2 have a number of important elements. These include: grass management, manure management, integrated pest management, sustainability (carbon management), risk management, animal health and welfare, and breeding. Many of these are overlapping issues and some are the subject of existing specific guidance of particular environmental relevance.

#### Grassland Management

Teagasc produces a range of guidance and advice notes on grassland management. The knowledgeable application of these has the potential to deliver environmental benefits through, for example, the avoidance of overgrazing, and avoidance of excessive application of fertilizers and slurry.

### Integrated Pest Management

The incorrect use of pesticides has the potential to have both immediate and long term adverse implications for human health and the environment. Environmental impacts can include contamination of water supplies, build up in the human food chain and reductions in biodiversity. A key Directive in managing the use of pesticides in a sustainable way is Sustainable use of Pesticides Directive 2009/128/EC. Among other requirements this Directive includes the requirement that Member States develop and apply a National Action Plan for their sustainable use. Such a plan, “The National Action Plan for the Sustainable Use of Pesticides” has been published by DAFM in 2013.

### A “Carbon Navigator”

This is a software based tool developed and promoted by Teagasc and Bord Bia (The Irish Food Board) for the reduction and mitigation of GHG emissions. It is designed for use at individual farm level.

### Animal Health and Welfare

The potential environmental impacts in the case of Animal Health and Welfare is described under “Proposed Targeted Advisory Service on Animal Health and Welfare (AHW)” below.

### Summary of Environmental Implications

The objective of Priority Bundles 1 and 2 is to improve overall farming practice by the transfer and propagation of knowledge, including environmental knowledge and best practice, at local level and by extension, throughout the farming community. These core objectives have the potential to make an important contribution to both the efficiency and quality of farming activity in Ireland. While improved efficiency has the potential to increase output, and hence raise the environmental footprint of agriculture overall, its close linkage to environmental knowledge and environmental best practice has the potential to greatly increase the depth and quality of the application of environment protection and enhancement at individual farm level. This can be regarded as a positive impact on the primary environmental receptors of farming activity, namely soil, surface water, ground-water, biodiversity and climate (the latter in the context of GHG emissions). Key environmental benefits that can result from this approach include the following:

- Effective management of land through appropriate grazing, fertilizer application, and pesticide use are all positive environmental outcomes. Sustainable land management also enhances and protects the long term use and value of land as a Material Asset.
- As the sustainable use of pesticides is a complex issue with potentially significant impacts in the event of misuse, targeted Knowledge Transfer in this field can provide critical skills that benefit and protect human health and the environment.
- The scheme design will have a more enhanced focus on environmental and climate change issues reflecting the multifunctional role of agriculture. In particular, the proposal to roll out the carbon navigator to a large number of farmers in these groups will be a clear link to the climate change objective.
- The focus on best practice in all aspects of farming means that participants in such groups are more likely to farm in a way that complies with environmental requirements including maintaining biodiversity.

The environmental receptors most likely to be impacted upon are presented in the matrix below.

## Knowledge Transfer Group - Priority Bundles 1 and 2

### SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>			<i>Positive</i>	
<b>Population</b>	<i>Minor (positive)</i>			
<b>Human Health</b>			<i>Positive</i>	
<b>Fauna</b>			<i>Positive</i>	
<b>Flora</b>			<i>Positive</i>	
<b>Soil</b>			<i>Positive</i>	
<b>Water</b>			<i>Positive</i>	
<b>Air</b>		<i>Positive</i>		
<b>Climatic Factors</b>			<i>Positive</i>	
<b>Material Assets</b>		<i>Positive</i>		
<b>Cultural Heritage</b> (Archaeology, architecture)	<i>None</i>			
<b>Landscape</b>	<i>None</i>			
<b>Materials consumption</b>		<i>Positive</i>		

#### Consideration of alternatives with a view to preventing adverse effects

Since the environmental consequences are considered to be overwhelmingly positive the consideration of alternatives is not relevant in this instance.

#### Mitigation

While supports for the development of agriculture aimed at increased efficiency also increase output and potentially associated negative environmental implications the driver of that proposed increase is knowledge based. It is apparent from the nature of the knowledge transfer elements that most involve and closely link Best Agricultural Practice with Best Environmental Practice and of itself acts as a powerful mitigation measure.

#### Performance Indicators

- Expenditure - €100
- Total number of participants trained - 30,000 farmers, each trained for on average 3 years under various KT Groups.

#### Monitoring

Ongoing monitoring of progress will be achieved through the use of predetermined reporting arrangements with each Knowledge Transfer Group. This will encompass appropriate monitoring arrangements on individual performance.

## 4.5.2 EUROPEAN INNOVATION PARTNERSHIPS

### Context for intervention

The challenge of meeting the forecast for additional food demand and producing more from less in a sustainable fashion is considerable. European Innovation Partnerships (EIPs) will play a significant role in this regard and can act as a catalyst for change, thereby helping to bring grassroots innovative ideas to implementation using an interactive and bottom up approach.

Support for EIP operational groups is integrated with a number of other proposed measures in the new RDP, e.g. EIP operational groups can feed into the wider delivery of agri-environment and climate change measures or underpin the linking of innovative practice to production methods via the proposed Beef Data and Genomics measure.

Current and future research, and the adaptation of it, can play an important part in nurturing best practice in a wide range of areas such as maximising nutrient efficiencies, reducing emissions, informing adaptation and mitigating impacts of climate change. The EIP on Agricultural Productivity and Sustainability can encourage the alignment of research to the needs of end-users. It is anticipated that EIPs will fill the current gap between farmers, rural enterprises, and advisors, on the one hand, and science on the other to allow the sector to take full advantage of innovation to produce more with less.

Support for EIP operational groups will also reflect some of the themes emerging from the environmental assessment of Food Harvest 2020.

### Purpose and Approach Taken

It is expected that EIPs could play an important part in nurturing best practice in a wide range of areas such as maximising nutrient efficiencies, reducing emissions, informing adaptation and mitigating impacts of climate change. EIP operational groups will allow the main actors – e.g. farmers, NGOs, private sector bodies, research institutions etc. to establish partnership approaches to identifying practical and implementable solutions to problems relating to the above. The groups will integrate the different perspectives of these actors in the interest of linking research with resulting innovative and best practice.

In summary the purpose of the EIPs is to promote the sustainable development of agriculture and help the Irish agricultural sector to become more productive and efficient by:

- supporting operational groups to address issues in areas such as environment and climate change, biodiversity and sustainable production;
- bringing together farmers, NGOs, private sector bodies, research institutions and advisors in a partnership type approach to address challenges identified;
- disseminating information through appropriate channels including the EIP Network.

Following on from the consultation process, it is now envisaged that support for EIP operational groups is to be channelled towards the setting up of new operational groups structured around a competitive fund. This would entail DAFM, in consultation with external stakeholders, identifying priority issues as a basis for a call for proposals. Such a call for proposals, and the subsequent evaluation of proposals received would necessarily draw on the relevant expertise.

Currently it is expected that once priority areas/issues are identified a call for proposals and selection of project proposals will follow based on following well-established public procurement principles.

The dissemination of the research findings through the EIP Network will ensure that the lessons learned are communicated beyond local level and thereby contribute to the overall objectives of sustainable agriculture production across the EU.

#### Budget and Costings

It is proposed to provide a total of €4million for the EIP measure over the period of the RDP. Costs eligible for support include feasibility studies, animation costs, running costs, and promotion activities.

#### Environmental Considerations in Relation to Elements (a), (b) and (c)

It is clear that Element (a) actions with its focus on locally led Agri-Environment projects has the potential to deliver positive environmental outcomes. The environmental mediums to be impacted upon will be dependent on the nature of the specific projects, as will the scale and importance of the resultant impacts. Irrespective of the nature and scale of the particular EIP projects however it is reasonable to conclude that there is little possibility for anything other than positive environmental impacts resulting from Element (a).

Element (b) “Beef Genomics and Data Programme” (BGDP) is assessed under that specific theme heading later in this report. There are no specific identifiable environmental implications that can be associated with, as yet undefined, Element (c).

#### Consideration of alternatives with a view to preventing adverse effects

As the environmental assessment of Element (a) is found to have a strong environmental focus with a consequent positive environmental impact and Element (c) to have an impact that may be positive, or at worst neutral, it is considered that the issue of consideration of alternatives within the RDP is not relevant in the context of avoiding, reducing or mitigating their likely environmental effects.

#### Mitigation

For the same reasons as in the consideration of alternatives above, the issue of mitigation of the impacts for these elements does not arise.

#### Performance Indicators

Performance indicators for the EIPs include:

- Expenditure - €5m
- Total number operational groups to be supported, established and operating 10

#### Monitoring

While the delivery of EIP operational groups will necessitate input from across the Department, the responsibility for delivery of these operational groups will be located in a single division which will oversee the 3 main elements of the suite of Knowledge Transfer measures in the RDP. This division will oversee the operation of each group and will be responsible for ensuring appropriate oversight.

### 4.5.3 CONTINUED PROFESSIONAL DEVELOPMENT OF ADVISORS

#### Context for Intervention

Participation in continuing professional development activities will ensure farm advisors appropriately up-skill and ensure that they are familiar with the latest techniques and regulatory requirements in a rapidly changing agricultural industry. It will promote the development of knowledgeable, professional and competent advisors, and thereby enhance the quality of service provided to farmers.

Additionally the success of a number of measures proposed under the RDP, including GLAS and Knowledge Transfer Groups, will build on suitably qualified advisors dispensing up-to-date advice to farmers. Continued Professional Development (CPD) will ensure that advisors are properly trained in priority areas identified by DAFM such as climate change mitigation and adaptation and biodiversity management.

#### Purpose and Approach Taken

The purpose of CPD is to enhance the skills of advisors through delivery of targeted training courses across a range of measures and therefore to:

- improve their technical skills;
- enhance their regulatory knowledge; and
- develop their client facing skills.

#### Budget and Costings

Overall financial allocation for RDP period is to be €2m. A maximum amount of €200,000 over 3 years will apply for the delivery of this CPD by any one provider. These provisional costings will include operating costs, personnel costs, training costs, and travel costs for course providers.

#### Target groups

CPD will be targeted at advisors across disciplines who will be engaged in the delivery of GLAS and Knowledge Transfer Groups. Together with the traditional agricultural advisor, it may include personnel from the veterinary, financial and environmental streams.

#### Environmental Considerations in Relation to CPD

Despite significant progress being made nationally over the past decade in moving towards the goal of more sustainable agriculture, biodiversity continues to decline. There are various measures and initiatives within the proposed RDP aimed at halting that decline. The success of those measures is dependent of the appropriate knowledge and skills being available and effectively targeted. This can only be achieved by the continual upgrading and up-skilling of those persons charged with delivering that knowledge to the farming community. As is proposed, the CPD will involve a wide range of disciplines, including financial disciplines, and will not simply be confined to those more obvious or mainstream “environment” related themes. The importance of finance lies in that it is a necessary prerequisite of any environmental measure implemented at farm level to be economically viable if it is to succeed, i.e. for it to be “sustainable”.

In summary it is apparent that the CPD for advisors will be fundamental to the successful implementation of the GLAS and Knowledge Transfer measures of the RDP. It can be readily concluded therefore that the environmental impact of CPD will be entirely positive and that in its absence the goal of sustainable agriculture would be compromised.

Consideration of alternatives with a view to preventing adverse effects

Given the pivotal role of CPD in delivering an overall positive environmental outcome of RDP the issue of adopting alternatives to this element of the programme does not arise.

#### Mitigation

There is no adverse environmental dimension to CPD. Consequently, mitigation measures are not relevant in this instance.

#### Performance Indicators

The key indicators for the implementation of CPD are:

- expenditure: €2m;
- number of training courses provided: 500;
- number of advisors trained: 1,500.

#### Monitoring

A dedicated Knowledge Transfer/Innovation section will be established to oversee the delivery of the suite of KT measures, including CPD. This will ensure that appropriate oversight and control mechanisms are in place. Data will be collected on an ongoing basis regarding the number of courses provided, the number of advisors in attendance and the subjects/topics covered.

### **4.5.4 TARGETED ADVISORY SERVICE ON ANIMAL HEALTH AND WELFARE**

#### Context for intervention

Given the high financial costs associated with animal diseases there is a strong economic rationale for targeting investment at efforts to manage and eliminate them. Increased animal health and welfare will feed into the increased efficiency and competitiveness that underlies the Food Harvest 2020 strategy.

#### Purpose of the Approach Taken

This proposed measure will complement the animal health element in the proposed Knowledge Transfer groups and will use approved trainers, including trained veterinary practitioners. The advice offered will be farm-specific to individual farmers on request.

As the measure is aimed at addressing diseases with a national distribution, the relevant region is the entire national territory.

The measure will strategically target a number of core areas for the control of diseases such as Johne's disease<sup>1</sup>, BVD<sup>2</sup>, SCC<sup>3</sup> and PRRS<sup>4</sup>. The savings to Irish agriculture arising from the eradication of these diseases is very substantial, amounting to some €200m or more per annum.

#### Note:

1. Johne's disease is a chronic infectious disease caused by a bacterium. It is highly contagious and causes cattle to gradually lose condition and finally die. It is regulated by the Johne's Disease Order, 1955(S.I. No. 86 of 1955).
2. BVD (Bovine Viral Diarrhoea) is a highly contagious viral disease of cattle. It is estimated that approximately 80-90% of Irish herds have been exposed to BVD virus. The cost to fertility, calf health and overall production makes BVD one of the most costly diseases on a dairy farm.

3. SCC (Somatic Cell Count). SCC- dairy cow mastitis- can result in serious economic losses in the dairy cattle population as a result of impaired animal welfare and consumer concerns.
4. PRRS (Porcine Reproductive and Respiratory Syndrome) is a viral disease in pigs, it also known as blue-ear disease.

#### Budget and Costings

Overall financial allocation for RDP period is expected to be €6m.

#### Environmental Considerations in Relation to AHW Proposals

Animal health and welfare is subject to the Animal Health and Welfare Act 2013. A focus on Animal Welfare has the obvious merit of improving the quality of life of farm animals but is of no notable “environmental” consequence. The focus on Animal Health however has an important environmental dimension in two respects. Firstly closely managed animal health has the potential to ensure the appropriate, controlled and measured use of veterinary products. For example, it has been established that some complex chemical substances used in maintaining animal health (e.g. in managing certain gut parasites) are of necessity poisonous and can persist for a period in animal manures and in the environment and potentially affect human health. Similarly unnecessary use or over dependence on antibiotics through poor animal health management can undermine the long term antimicrobial effectiveness of these important agents. Secondly, it is evident that where diseases are inadequately identified and controlled in their early stages they can rapidly spread and have serious social, economic and environmental consequences. This is apparent from previous outbreaks of animal disease such as bovine tuberculosis and foot and mouth disease. While the animal health measures indicated in the RPD do not specifically mention these latter two diseases it is clear that ready access to expert animal health advice can provide an opportunity for early detection and isolation of all contagious diseases. Apart from the obvious social and economic consequences of a major disease outbreak they also present significant environmental challenges and threats as a result of having to dispose of large numbers of infected animal carcasses. Such disposal has implications for landfill capacity, groundwater pollution and air borne pollution (the latter from burning of carcasses).

It is concluded on the basis of the above that all of the AHW proposals have the potential to have positive environmental benefits.

#### Mitigation

There are no adverse environmental impacts associated with improving animal health and welfare. Consequently, the issue of mitigation does not arise.

#### Performance Indicators

The key performance indicator is:

- expenditure €4m

#### Consideration of alternatives with a view to preventing adverse effects

As only positive environmental impacts are likely to result from the AHW measures the matter of consideration of alternatives or changes to the RDP does not arise in this instance.

#### Monitoring

The relevant national database (currently –the Irish Cattle Breeding Federation - ICBF) will hold information on the number of completed interventions between the trained specialist advisor and the farmer, and on the outcome of these. This information will be directly accessible by AHW Division, allowing the required information to be gathered centrally. Paper records will also be maintained by trained advisors and by farmers.

#### **Summary of Environmental Implications of Knowledge Transfer Measures**

From the above environmental impact analysis it is evident that no notable adverse impacts of consequence have been identified. This is particularly so given the knowledge based focus of the Theme, including environmental elements, and the significant monetary resources to be applied in achieving its aims.

The expenditure on knowledge based actions under the Programmes will require a “value for money” (VFM) analysis at regular intervals, or at least as a mid-term evaluation. That VFM analysis will of necessity be required to look at the effectiveness of Theme 4 in delivering its stated objectives. As many of the objectives have a positive environmental action at their core the degree to which they have been achieved, as measured in the VFM, will serve to measure both the environmental effects and the effectiveness of the Programme. In addition, at a subsidiary level, actions such as the creation of European Innovation Partnerships (EIPs) will, as with all adequately constructed partnerships, have in-built measures to monitor progress in achieving its various pre-stated objectives, expenditure limits etc.

The environmental receptors most likely to be impacted upon are presented in the matrix below.

**Knowledge Transfer**  
**SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS**

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>			<i>Positive</i>	
<b>Population</b>			<i>Positive</i>	
<b>Human Health</b>	<i>Minor (positive)</i>			
<b>Fauna</b>			<i>Positive</i>	
<b>Flora</b>			<i>Positive</i>	
<b>Soil</b>			<i>Positive</i>	
<b>Water</b>			<i>Positive</i>	
<b>Air</b>	<i>Minor (positive)</i>			
<b>Climatic Factors</b>		<i>Positive</i>		
<b>Material Assets</b>		<i>Positive</i>		
<b>Cultural Heritage</b> (Archaeology, architecture)	<i>Minor (positive)</i>			
<b>Landscape</b>		<i>Positive</i>		
<b>Materials consumption</b>		<i>Positive</i>		

## 4.6 COLLABORATIVE AND QUALITY FOCUSED MEASURES

### 4.6.1 SUPPORT FOR COLLABORATIVE FARMING

#### Context for intervention

The level of farm partnerships in Ireland is very low relative to many of our competitors. Currently the only form of farm partnership provided for within the suite of agriculture legislation is Milk Production Partnerships. Such partnerships were introduced in 2002. Today there are approximately 600 Milk Production Partnerships (MPPs) in existence in Ireland, and of this total, roughly 430 are child/parent partnerships.

#### Purpose and Approach Taken

The overriding objective of this measure is to encourage greater engagement by the farming community with the concept of collaborative farming, and in particular farm partnerships. The measure will be aimed at those farmers who are proposing to establish a new Farm Partnership (or some other acceptable collaborative arrangement). It is aimed at attracting partnerships across the full range of agricultural activity (cereals, beef, sheep, as well as dairying) and across a range of collaborative arrangements (e.g. share farming, calf rearing, land leasing, as well as farm partnerships). Beneficiaries may be required to participate in an appropriate Knowledge Transfer Programme.

Providing support for increased levels of collaborative farming will have a number of benefits, including:

- entering a partnership offers farmers increased returns through the ability to achieve scale at a lower capital cost; the reduction of costs, which are duplicated between farmers; and risk sharing;
- land mobility: - access to land is a critical constraint facing the dairy sector. Collaborative farming arrangements offer a new route to access land;
- skills – Partnerships offer the possibility of sharing best farming and business management practice;
- social benefits -Joint farming ventures can help to address the social challenge of the ‘one man farm’ model making farming a more attractive occupation.

#### Budget and Costings

It is proposed that this measure should make a contribution (50%- up to a maximum of €2,500) to legal and other administrative set up costs associated with developing a Registered Farm Partnership. Overall financial allocation for RDP period is to be €3m.

#### Environmental Considerations in Relation to Collaborative Farming

This element of the RDP essentially promotes collaborative farming at all levels of activity and arrangements, ranging from land leasing to farm machinery contract hire. The improved work practices and knowledge sharing, efficiencies and economy of land use that will ensue from the shared skills, assets and experience should result in lower transport/fuel use, lower water wastage and more efficient use of electricity. These increases in efficiency will make a small but valuable contribution to the improvement of the environment and consequently to the objective of sustainable development. Additional, minor, positive impacts could potentially be improved human (mental) health through increased social interaction that a partnership entails and a consequent reduction of farmer isolation, an issue in some rural locations (for this reason the summary matrix for Theme 5 is rated as of “Some Significance” for Human Health).

Other than in the case of some joint undertaking or shared contract with an environmental dimension such as land drainage, collaborative farming has little or no potential to adversely impact on the natural environment. In some circumstances such works may require formal consent. For example, depending on the scale and location of land drainage, use of semi-natural areas for intensive agriculture, and restructuring of rural holdings, EIA may be required in accordance with the European Communities (Environmental Impact Assessment) (Agriculture) Regulations S.I. 456, 2011). The requirement is based on the scale and location of the development. It applies irrespective of the activity being carried out collaboratively or otherwise. . This coupled with other elements of the RDP, most notably the Knowledge Transfer measures should negate any such risk (as noted above beneficiaries may be required to participate in an appropriate Knowledge Transfer Programme).

#### Mitigation

Well considered and operated collaborative farming has little or no potential to have any negative environmental implications. Consequently, no specific mitigation measures are considered necessary.

#### Performance Indicators

The key performance indicators are:

- expenditure €3m

- number of collaborative operations supported 1200

Consideration of alternatives with a view to preventing adverse effects

Given the predicted absence of any negative environmental impacts of note the consideration of alternative approaches is unnecessary.

Monitoring

Dedicated resources will be assigned to the development of the new Register of Farm Partnerships and the implementation of this measure will form part of this structure. As there are no negative environmental impacts anticipated this register will be used for administrative purposes only and need not serve in providing derived environmental data.

#### **4.6.2 ARTISAN FOOD COOPERATION SCHEME**

The Artisan Food Cooperation Scheme is to be assigned to the Community Led Local Development (CLLD) element, LEADER. As in the past LEADER will continue to be delivered via the Department of the Environment, Community and Local Government. For editorial reasons the Artisan Food Cooperation Scheme is addressed below.

Context for intervention

Food Harvest 2020 has identified the need for improved marketing of local food and uptake of EU quality systems. A number of specific challenges have been identified which underlie the need for intervention in this areas, including entry barriers, the need for shared understanding, skills/training, marketing and business skills deficits.

Purpose and Approach Taken

The approach proposed here is to provide support for collaborative proposals which seek to improve product quality, enhance relevant skills, and improve access to relevant markets. Applicants must be registered food producers and propose a joint plan to improve market knowledge and insight, product quality, production sustainability and/or marketing of their food products and developing new and innovative routes to market.

The proposed scheme will consist of annual grant support for collaborative proposals and activities to assist artisan food producers to:

- Improve and validate production quality; to increase laboratory testing and improve access to best practice through advice, workshops, farm visits and exchanges.
- Improve awareness and marketability of locality and niche category products through access to market insight, support for developing routes to market, identifying and exploiting on-line publicity and sales opportunities, developing presence at food festivals, networking and clustering to provide impact in terms of food trails, and centres of food excellence through improved access to best practice.

Budget and Costings

LEADER is to be allocated a total of some €250m, of which €15m is to be shared between the Artisan Food Support and the Regional Product Development supports.

#### Environmental Considerations in Relation to the Artisan Food Cooperation Scheme

The development, production and promotion of artisan foods is generally regarded as socially desirable promoting as it does collaboration, sharing of knowledge and enhanced social interaction, all usually at a local level. The inherent attraction of artisan foods for customers is that they are regarded as meeting the highest of quality standards and must be produced in a manner that is environmentally acceptable and sustainable. Consequently the successful promotion of this theme has no potential for significant adverse environmental impacts.

#### Mitigation

There are no adverse environmental impacts anticipated, consequently the need for mitigation does not arise.

#### Performance Indicators

- expenditure
- No. of cooperative projects supported

#### Consideration of alternatives with a view to preventing adverse effects

There are no adverse impacts anticipated, consequently the need for consideration of alternatives does not arise

#### Monitoring

To be monitored under LEADER.

### **4.6.3 REGIONAL PRODUCT DEVELOPMENT SUPPORT**

Regional Product Development Support is to be assigned to the Community Led Local Development (CLLD) element, LEADER. As in the past LEADER will continue to be delivered via the Department of the Environment, Community and Local Government. For editorial reasons the Artisan Food Cooperation Scheme is addressed below.

#### Context for intervention

The importance of quality assurance schemes was noted in the SWOT analysis. In addition, the benefits of collaborative approaches to particular issues is a theme in the development of the new RDP. This proposed measure will marry these two elements by providing support for group proposals aimed at primary producers implementing quality schemes (with a particular focus on the beef and lamb sector, but open to other sectors also).

#### Purpose and Approach Taken

Quality schemes will work to address specific issues identified for primary producers in attempting to improve their competitiveness. The collaborative element of the measure will encourage producers to address particular barriers which would be more difficult to overcome as single operators.

It is proposed to provide grant support for developing Group proposals for marketing of distinctive local agricultural products and foodstuffs, particularly beef and lamb and/or for registration and promotion of products under the EU Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), and Traditional Specialty Guarantee (TSG) quality regimes. Such activities carry costs in terms of developing a group dynamic, agreeing specification and control protocols and marketing. The Bord Bia initiative, the "Origin Green" programme, also has a role to play here.

Budget and Costings

LEADER is to be allocated a total of some €250m, of which €15m is to be shared between the Artisan Food Support and the Regional Product Development supports.

Monitoring

To be monitored under LEADER

Environmental Considerations in Relation to Support for Quality Schemes

The concept of quality can extend beyond the established norms of, for example, freshness and taste. Increasingly “quality” is regarded as extending to include aspects such as freedom from residual chemicals, production in an environmentally responsible manner and with due regard to animal health and welfare. Consequently the promotion of quality at all levels of the food production chain can be regarded as having little or no potential for adverse environmental impacts. Furthermore, given an appropriate level of emphasis on the verifiable environmental credentials of foods the scheme has the potential to provide some minor positive environmental benefits. Participation in the EU regulated, PGI and TSG schemes for the promotion and protection of quality agricultural products and foodstuffs (and to be promoted by the RDP) also have the potential to result in some environmental benefits.

The environmental receptors most likely to be impacted upon are presented in the matrix below.

## Support for Collaborative and Quality Focused Actions

### SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>	<i>Minor (positive)</i>			
<b>Population</b>	<i>None</i>			
<b>Human Health</b>		<i>Positive</i>		
<b>Fauna</b>	<i>Minor (positive)</i>			
<b>Flora</b>	<i>Minor (positive)</i>			
<b>Soil</b>	<i>Minor (positive)</i>			
<b>Water</b>	<i>Minor (positive)</i>			
<b>Air</b>	<i>None</i>			
<b>Climatic Factors</b>	<i>Minor (positive)</i>			
<b>Material Assets</b>	<i>None</i>			
<b>Cultural Heritage</b> (Archaeology, architecture)	<i>None</i>			
<b>Landscape</b>	<i>Minor (positive)</i>			
<b>Materials consumption</b>	<i>Minor (positive)</i>			

#### Consideration of Alternatives with a view to preventing adverse effects

The above environmental impact analysis suggests that minor positive environment related benefits are likely to result from the Theme 5 proposals. Importantly, no adverse impacts of consequence have been identified that would warrant alternative approaches to be adopted in the RDP.

#### Mitigation measures to reduce the significance of the potential effect

As all environmental impacts under the above analysis are deemed to be minor but positive, no mitigation measures are required.

#### Performance Indicators

The key performance indicators are:

- Expenditure;
- no. of holdings supported;
- no. of cooperative projects supported.

Monitoring proposals to measure the environmental effects of the Theme

The Theme does not have objectives that could be classed as “environmental objectives” and only minor indirect environmental impacts (all positive) will likely result. Consequently it is not considered that specific monitoring proposals are necessary in this instance. Monitoring of the uptake and effectiveness of the Theme under the overall management of the RDP may yield some incidental environmental data of merit.

## **4.7 TARGETED SUPPORT**

### **4.7.1 BEEF GENOMICS AND DATA PROGRAMME (BDGP)**

Context for Intervention

Ireland has the fourth largest beef cow herd in the EU and specialist beef production is the predominant type of farming enterprise in the country. The long-term strategy for the development of the sector envisages a 20% increase in output value by 2020 (using the 2007-09 average as a baseline). This goal is based on a consensus among stakeholders that future growth in the sector can best be achieved by improving output efficiency, quality and sustainability rather than simply increasing numbers. Genetic advances and genomics offer the potential to deliver greater profitability at farm level through enhanced productivity and identifying desirable product qualities that will add value in the marketplace. Using genomics to increase genetic improvement in cattle, Ireland can further exploit its advantage of a grass-based production system and in terms of traceability and quality assurance.

However, the agriculture sector overall makes a significant contribution to Ireland's total national greenhouse gas (GHG) emissions. Under the recently published Climate Action and Low-Carbon Development Bill 2014 the Government has unequivocally committed Ireland to meeting all present and future binding International targets on reduction of emissions of GHGs, including the target to achieve a 20% reduction in the non-ETS (Emissions Trading Scheme) sectors of the economy (which includes agriculture) by 2020. It proposes successive National Low Carbon Roadmaps at least every 5 years up to 2050 with sectoral mitigation strategies and targets for each period. It also proposes sectoral adaptation plans to enable each sector to adapt to the effects of climate change. It allows for the Expert Advisory Body to undertake periodic reviews to ensure progress is maintained and that climate policy is up to date with the latest scientific, technological and policy developments. It commits each minister responsible for sectoral mitigation and adaptation plans to report on progress to Dail Eireann annually and to outline additional measures if progress has not been sufficiently effective. As an important contribution to meeting the targets, the Minister for Environment, Community and Local Government has advocated a goal of carbon neutrality in Agriculture whereby emissions will be neutralised by advances in technology, including more efficient agricultural techniques.

The draft RDP is supportive of this approach and proposes that the most effective response is a targeted measure that will deliver an accelerated improvement in the quality of the beef herd through the application of genomics technology. This will help farmers to maximise productivity in a sustainable way, while supporting improved quality and traceability in the national suckler herd.

### Budget and Costings

While specific costings are still being finalised as part of the design process, it is estimated that the actions required under the measure will form the basis for a programme rising to , €52 million per annum. The overall financial allocation for RDP period is expected to be €295m.

The beneficial outputs of the measure are:

- support for the establishment of an Economic Breeding Index (allows farmers to identify quality issues at birth and select the highest quality animals);
- support for weight gain in beef (BDGP will encourage a higher rate of more efficient animals in terms of conversion of inputs to weight, thus reducing necessary retention periods);
- extended grazing (BDGP will foster confidence in the sector and thus encourage continued adherence to traditional grass based model).

These findings are also consistent with the marginal cost abatement curve developed by the International Panel of Climate Change (IPCC). This approach is consistent with the overarching FH2020 strategy as the relevant target for the beef sector is value based rather than volume based. The BDGP will underpin increasingly efficient stock rather than increased numbers.

In terms of greenhouse gas emission, genomics will be a key tool in improving fertility and reducing age at slaughter in beef animals. Both of these will reduce the levels of enteric (gut) methane emissions, which are essentially dependent on animal numbers, through: (i) the reduction in the size of the suckler herd and (ii) the provision of beef animals more quickly, without raising the numbers in the standing herd. The measure supports efficiency gains which can help reduce carbon emissions per unit output which deliver benefits directly to the farmer in terms of output and financial return as well as to the environment as the efficiency of production systems improve.

The proposed measures will contribute to the Climate Change Mitigation and Adaptation cross-cutting objective, as set out above. Minimisation of GHG emissions in the agriculture sector can be assisted through a matching of improved breeding technologies with new grazing technologies - the measure therefore provides the potential for further positive developments in this area in the coming years.

### Environmental Considerations in Relation to BDGP

Beef sector data and genomics has as its objective the improvement of both production efficiency and quality of the animals produced. “Efficiency” can be defined as the production of the same quantity of “product” utilising less “inputs” (resources) without compromising quality. Improved efficiency therefore results in a lower level of materials and/or resource consumption per unit of production. This is regarded as a positive environmental impact in the context of “Materials Consumption”.

If the same level of resources to production as is currently applied remains unchanged then the consequence of increased production efficiency would be that the overall size of the national herd increases. This would result in a corresponding increase in the quantity of animal waste arising for disposal and of the quantities of greenhouse gases (GHG), notably ammonia, generated. Ireland’s emission ceiling for ammonia is 116 kt and this was achieved in 2003 and remains below the target. The agriculture sector (cattle population) accounts for virtually all ammonia emissions in Ireland. If cattle numbers were to increase to their pre-2000 levels then ammonia levels would rise and could become problematic.

However, as emphasised in the objectives presented in the draft RDP, the BDGP element “will underpin increasingly efficient stock rather than increased numbers”. This objective is also consistent with that of Food Harvest 2020. Consequently the issue of the measure increasing the size of the national herd giving rise to an increase in the potential environmental footprint, including the national GHG emissions footprint, from agricultural sources does not arise.

It has been noted in both the RDP as proposed and in the environmental assessment of the Food Harvest 2020 plan that improved efficiency, including altered and improved diet, coupled with genomics has the potential to reduce the GHG emissions on a per head basis. While there are various recent scientific publications that support this view there is as yet no firm evidence regarding what scale of benefits these actions might achieve. This is particularly the case in respect of “diet” as the RDP has little or no influence on the feeding regimes adopted by individual farmers. Even in accepting this reservation as to the scale of the GHG reduction that can be achieved it is apparent nonetheless that the BDGP measure has the capacity to make a positive contribution of some significance in regard to climate.

The introduction of genomics on dairy breeding has helped identify the most suitable type of animal suited to Irish grass-based production conditions. A similar programme is being planned for beef production, allowing for the identification of animal types suited to our unique natural production conditions. A grass-based beef production system is less resource intensive (e.g. consumption of artificial fertilizers and feeds) than other production systems and can be rightly regarded as “green” production.

The BDGP also supports traceability and quality, aspects which further its eligibility to be branded under the “Origin Green” initiative. Origin Green is a food development programme promoted by Bord Bia to internationally demonstrate sustainability in terms of greenhouse gas emission, energy conservation, water management, waste, biodiversity, community initiatives and health and nutrition. It is a voluntary, membership based programme and to qualify producers must be in a position to prove their “green production” claims through a credible means of measurement and verification. A consequence of participating in the Origin Green initiative is the clear linkage of an economic return at farm level to environmental sustainability at a wider level. In respect of this aspect of the programme the measure is considered as having a degree of environmentally positive outcomes for the “natural environment” (water, biodiversity etc.).

This activity also helps maximise the “Material Assets” that the genetic resource of the national herd represents.

The environmental receptors most likely to be impacted upon are presented in the matrix below.

## Targeted Supports – Beef Data and Genomics Programme (BDGP)

### SUMMARY ASSESSMENT OF POTENTIAL ENVIRONMENTAL EFFECTS

	None/Minor Significance	Some Significance	Significant	Uncertain
<b>Biodiversity</b>	<i>Minor (positive)</i>			
<b>Population</b>	<i>None</i>			
<b>Human Health</b>	<i>None</i>			
<b>Fauna</b>	<i>Minor (positive)</i>			
<b>Flora</b>	<i>Minor (positive)</i>			
<b>Soil</b>	<i>Minor (positive)</i>			
<b>Water</b>	<i>Minor (positive)</i>			
<b>Air</b>	<i>Minor (positive)</i>			
<b>Climatic Factors</b>		<i>Positive</i>		
<b>Material Assets</b>			<i>Positive</i>	
<b>Cultural Heritage</b> (Archaeology, architecture)	<i>None</i>			
<b>Landscape</b>	<i>None</i>			
<b>Materials consumption</b>			<i>Positive</i>	

#### Consideration of Alternatives with a view to preventing adverse effects

The above environmental impact analysis suggests that some positive environmental related benefits are likely to result from the these proposals. Importantly, no adverse impacts of consequence have been identified that would warrant alternative approaches to be adopted in the RDP.

#### Mitigation measures to reduce the significance of the potential effect

As all environmental impacts under the above analysis are deemed to be either none or positive to varying degrees, no mitigation measures are required.

#### Performance Indicators

The key performance indicators referenced in the programme are:

- expenditure – €295m;
- number of farmers trained in interpretation of genomic results;
- number of holdings supported.

### Monitoring

Payment of aid grants will be dependent on full compliance with the terms and conditions of the BGDP. In common with all such supports, the BGDP will be administered and controlled by DAFM using information obtained from its Animal Identification and Movement system. It is also proposed that monitoring includes on-farm inspections.

## **4.8 LEADER**

### Context for Intervention

As a community led local development approach to rural development, LEADER has formed part of the policy framework for rural development in Ireland since its inception in the 1990s. In the 2007-2013 programming period LEADER was the main method of the delivery of interventions aimed at improving the quality of life in rural areas and supporting the diversification of the rural economy. It has proven to be an effective tool for supporting the economic and social development of rural communities by providing the resources necessary for communities to support their own development.

### Purpose and Approach Taken

LEADER aims to support the sustainable economic and social development of rural Ireland. The Department of Environment, Community and Local Government (DECLG) manages LEADER implementation in Ireland.. All LEADER measures will be centrally administered via that Department's Rural Development Division (which includes Agricultural Inspectors on secondment from DAFM).

The continuation of the LEADER approach in rural areas is seen as critical for the future development of rural Ireland. Ireland is currently moving towards a more integrated approach to the delivery of Local Development interventions in general and the participation of communities is central to the implementation of this approach. Rural communities are best placed to identify and address the issues and challenges they face and the LEADER approach is an essential tool to facilitate this in rural Ireland.

In the context of a more integrated approach to rural development for the future and in order to address the challenges identified from the 2007-2013 programming period the delivery mechanisms for the 2014-2020 will change. The precise nature of these changes have yet to be determined however the new system will adhere to regulatory requirements and support the community led local development approach.

LEADER will continue to be delivered via the Department of the Environment, Community and Local Government. The precise projects to be supported will emerge from the bottom up approach via the development of Local Development Strategies. However, a number of central themes have emerged from consultations to date which will provide a framework for the development of these Local Development Strategies. These themes include:

- Rural Economic Development / Enterprise Development / Job Creation incorporating rural tourism, enterprise development, broadband training and rural towns;
- Social inclusion through building community capacity, training and animation; and
- Rural environment.

Innovation is one of the cornerstones of the LEADER approach and experience in the current programming period would indicate a high level of participation in projects that support environmental protection and awareness in rural communities. This is expected to continue to be the case.

#### Budget and Costings

A total of €250m is to be allocated to LEADER

#### Environmental Considerations in Relation to LEADER

While much of the detail of the LEADER measure remains to be elaborated, sufficient detail, including that of past performance, is available to evaluate the environmental dimension likely to be associated with it. The environmental implications of the Artisan Food Support and the Regional Product Development Support elements of LEADER have, for editorial reasons, already been addressed under their respective sub-headings earlier in this report.

The primary objective of the measure, to have a community led local development approach to rural development, supports the creation of local sustainable employment in small enterprises. In most instances that employment will be linked to local material assets and resources. This of itself helps to contribute to sustainable development as it is less likely to necessitate the importation of materials, associated transport etc. The creation of locally based employment also avoids employees having to commute long distances to work.

A very wide range of diverse projects can be expected to be supported by LEADER. Some, but not all (e.g. development of walking trails), of those projects will involve construction, either to provide new facilities or upgraded facilities, for the project in question. In such cases development consent under the Planning and Development Regulations 2000-2012 will be required from the relevant planning authority (the local authority). This ensures that all developments where construction works are required are appropriate to, and environmentally compatible with the specific location proposed for the project. This mechanism can ensure that no adverse environmental consequences result from the project proceeding. Also, as the projects are community based there is a strong vested interest exercised at local level to ensure that unacceptable impacts do not arise.

From an environmental/social perspective LEADER has an important role to play in supporting viable rural communities. This can be regarded as the most significant consequence of the measure.

#### Consideration of alternatives with a view to preventing adverse effects

As the likely consequences of the measure are all considered to be positive the issue of alternatives does not arise.

#### Mitigation

Many of the developments funded by LEADER will require planning consent from the relevant Planning Authority (the local authority) before being permitted to proceed. These consents have associated Development Consent “Conditions” aimed at avoiding or mitigating any of adverse environmental consequences predicted to potentially arise.

#### Performance Indicators

The key indicators for the programme will be:

- the nature of the projects;
- the number of projects funded.

#### Monitoring

As was the case in the current period all financial data will be collected using an electronic data collection and management system. This system will build on and improve the system used in the current period to develop a more comprehensive system for the collection and reporting both financial and performance related data.

In addition to financial and performance data many of the developments funded by LEADER will have associated Development Consent Conditions as issued by the relevant local authority (the Planning Authority). Any development consent compliance issues that might arise with any given project can be monitored and controlled by means of these consents.

## 5. TRANSBOUNDARY IMPACTS

SEA is required to consider the potential for trans-boundary impacts resulting from any state supported programme. In the case of the RDP the principal vectors for such potential impacts are water and air.

The Republic of Ireland shares various river basins and estuaries with Northern Ireland. With due care in the implementation of the RDP, as is the intention, the issue of water pollution arising at a scale that would adversely impact on waters outside of the Republic is extremely unlikely. This is particularly so given that there are no measures proposed in the RDP that have been identified as potentially increasing water pollution. Also, trans-boundary co-operation, most notably in respect of River Basin Management Plans, can act as a further protection measure.

The second vector, that of air, essentially relates to “climate”, as no local air quality issues in the general sense, have been found to be associated with the RDP.

Emissions of trans-boundary air pollutants are controlled by the 1999 UNECE Gothenburg Protocol under the Convention on Long-Range Trans-boundary Air Pollution (CLRT AP) and by the EU National Emissions Ceiling (NEC) Directive (EP and CEU, 2001a). The NEC directive prescribes national emissions ceilings for each EU country for four key trans-boundary pollutants: sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs) and ammonia (NH<sub>3</sub>). These requirements have resulted in substantial progress on emissions reduction in recent years.

Clearly all emissions of Greenhouse Gases have some trans-boundary impact because their effects on climate change are global rather than local. However each jurisdiction has its own legally binding limits and targets for GHG emissions so any emissions resulting from the RDP have no bearing on limits or targets of neighbouring jurisdictions. In any event, the environmental analysis indicates no increased emission for GHGs or negative impacts on climate change arising from the RDP.

Northern Ireland, through the Department of Agriculture and Rural Development (DARD), is implementing its own RDP under the EU Rural Development Regulations. For the same reasons DARD’s RDP is subject to SEA and that analysis has not identified any trans-boundary issues. Both parties (NI and the RoI) have exchanged information in regard to their respective SEAs and will continue to cooperate into the future.

## 6. RELATIONSHIP WITH OTHER PLANS AND PROGRAMMES

### 6.1 INTRODUCTION

As is referenced in the environmental assessment of the various RDP measures there are a number of national plans and programmes that can potentially have linkages with the RDP. In many respects the RDP now under consideration has been drafted with regard to these Plans and Programmes, such as in the case of the “National Biodiversity Plan 2011-2016” in the drafting of the GLAS measure. These Plans, Programmes and Strategies and the Environmental Protection Objectives they contain, are addressed in the following sections.

### 6.2 RELEVANT PLANS AND STRATEGIES

#### Food Harvest 2020

“Food Harvest 2020” – This is an ambitious industry sponsored strategy that has implications for groundwater, surface water, biodiversity and climate. The report of an independent environmental analysis of Food Harvest 2020 was published in January 2014. This report was prepared for the Department by consultants Philip Farrelly & Co.

#### National Biodiversity Plan 2011–2016

The National Biodiversity Plan 2011–2016 (DAHG, 2011) is the main vehicle by which Ireland seeks to meet its commitments under the Convention on Biological Diversity and the EU Biodiversity Strategy. The plan lists 102 actions that cover the conservation of biodiversity in the wider countryside and in the marine environment, both within and outside protected areas. Information on habitats loss and biodiversity will be supported by data gathered from National Biodiversity Data Centre for assessing current status and trends. (The organisation is the national centre for the collection, collation, management, analysis and dissemination of data on Ireland's biological diversity).

#### National Action Plan for the Sustainable use of Pesticides

The use of pesticides has important implications for human health and biodiversity. The EU Sustainable Use of Pesticides Directive introduces the concept of ‘Integrated Pest Management’. This emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms. It means careful consideration of all available plant protection methods and subsequent integration of appropriate measures that discourage the development of populations of harmful organisms and keep the use of plant protection products and other forms of intervention to levels that are economically and ecologically justified and reduce or minimise risks to human health and the environment. Pesticide residue levels in food are regulated through MRL (Maximum Residue Level) legislation (Regulation EC No 396/2005).

The National Action Plan defines a national strategy to achieve a sustainable use of pesticides and set down objectives, quantifiable measures and timeframes to reduce the risks associated with the use of pesticides. It includes the utilisation of buffer zones, safeguard zones, and restrictions on use in sensitive and designated areas.

### County Development Plans and Local Area Plans

Local authorities are required to prepare County Development Plans and Local Area Plans for spatial land use. These statutory based plans are subject to public consultation. The plans play an important role in preparing a considered approach to sustainable development and can respond to local population trends and infrastructural requirements both in the near short term (e.g. 5 years) and long term.

### National Spatial Strategy 2002-2020

The National Spatial Strategy (NSS) 2002-2020 is an important strategy for spatial planning and development for both now and the future. (In many respects the strategy is considered to have failed in terms of achieving its objectives, its intended revision remains an important consideration in land use planning).

### Sustainable Development - Our Sustainable Future, a Framework for Sustainable Development for Ireland

This framework sets out the green economy and sustainable development agendas as key elements of Ireland's economic recovery strategy. The Framework establishes the range of environmental, economic and social measures required to achieve that recovery. These measures include areas such as the sustainability of economic resilience, natural resources, agriculture, climate change, transport, public health, education, innovation and research, education, and skills and training.

### Flood Risk Reduction

It is recognised that land use planning is a major consideration in achieving the objective of reducing flooding risks. Such risks are associated with increasing hard surface areas as a consequence of urbanisation and also from agricultural land use relating to land drainage programmes and the nature and extent of land use for agriculture and forestry, particularly in upland areas. The RDP therefore is of relevance in this context.

Recent flooding events, possibly linked to global climate change issues, are seen to be of increasing concern nationally. Various guidelines and objectives have been established in respect of reducing the risk of flooding. These include the "Planning System and Flood Risk Management –Guidelines for Planning Authorities", 2009 prepared by the Department of Environment, Community and Local Government and the Office of Public Works (OPW). Such plans and guidelines are co-ordinated with the preparation of the River Basin Management Plans (RBMP's) under the EU Water Framework Directive and future work required to prepare Flood Risk Management Plans under the EU Floods Directive by the OPW.

### River Basin Management Plans (RBMP)

Seven River Basin Management Plans (RBMPs) have been prepared for Ireland. These RBMPs include measures for:

- controlling inputs of phosphorus and nitrogen
- controlling inputs of organic pollutants such as silage and sewage
- controlling pathogens in water
- elimination of dangerous substances from water bodies
- maintaining sufficient water volumes in surface waters
- controlling hydromorphological conditions (physical characteristics) in rivers

“A National Landscape Strategy for Ireland” (Strategic Issues for Consultation) 2011.

This document, prepared by the Department of Arts, Heritage and the Gaeltacht, sets out Ireland’s aims and objectives with regard to landscape and positions it in the context of existing strategies, policies and objectives as well as the framework of the European Landscape Convention.

National Renewable Energy Action Plan

Article 4 of Directive 2009/28/EC on renewable energy requires each Member State to adopt a national renewable energy action plan (NREAP) to be submitted to the European Commission. The plan is to set out the Member State’s national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020, demonstrating how the Member State will meet their overall national target established under the Directive. Ireland submitted its National Renewable Energy Action Plan, prepared by the Department of Communications, Energy and Natural Resources, to the European Commission in July 2010. The plan includes objectives relating to increasing biomass availability for energy generation from various sources including agriculture and forestry. There are also a number of regional energy plans (the Bio-Energy Strategy and Action Plans for the Mid West Region, 2009 and the South East Region Bio-Energy Implementation Plan 2008-2013)

In 2013 the Government published a Strategy for Renewable Energy ‘2012 - 2020’. As part of this strategy Ireland has a binding target to produce 16% of its consumed energy from renewables by 2020. This 16% straddles the electricity, heating and transport sectors.

Tillage Sector Development Plan - A Plan for the Development of the Irish Tillage Crop Sector

This plan compiled by the Teagasc Tillage Crop Stakeholder Consultative Group sets out a plan for the development of tillage in Ireland. It includes a SWOT analysis of the environmental issues presented by the development of tillage.

Origin Green

This is a unique sustainability development programme by Bord Bia (The Irish Food Board) to internationally demonstrate the commitment of Irish food and drink producers to operating sustainably - in terms of greenhouse gas emission, energy conservation, water management, waste, biodiversity, community initiatives and health and nutrition. It is a voluntary, membership, based programme.

### **6.3 RELEVANT DIRECTIVES AND INTERNATIONAL OBLIGATIONS**

There are a number of environmental Directives and international Agreements that can potentially have linkages with the RDP. Where it is required to establish these in Irish there are also corresponding implementing regulations. The relevance and importance of these is that many set the legal framework of environmental rules and requirements under Irish within which rural development takes place. In many respects these statutory rules and requirements serve as an important, and sometimes the primary, “Control Measure” for the proposed RDP 2014-2020. These include, but are not limited to, the following:

Habitats Directive-

The Habitats Directive is implemented in Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011),

### Nitrates Directive

The Nitrates Directive (91/676/EEC) has been introduced in Ireland through a series of Regulations, the most recent of which was the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations S.I. No.31, 2014. The purpose of these Regulations is to give effect to Ireland's Nitrates Action Programme for the protection of waters against pollution caused by agricultural sources. It requires each member state to prepare a Nitrates Action Programme and includes a requirement to produce regular progress reports on that programme. As issues of surface and groundwater quality relate to the storage and disposal of animal wastes these Regulations are an important consideration in any agricultural development plan.

### EU Water Framework Directive

The EU Water Framework Directive is an important piece of EU environmental legislation which aims at improving our water environment. It requires governments to take a new holistic approach to managing their waters. It applies to rivers, lakes, groundwater, estuaries and coastal waters. Member States must aim to achieve good status in all waters by 2015 and must ensure that status does not deteriorate in any waters. This website is an information resource for interested parties and holds extensive documentation relating to WFD-related studies and River Basin Management Plans. Also of note is the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations S.I. No.31, 2014.

### EU Floods Directive

European Directive 2007/60/EC on the assessment and management of flood risks aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive applies to inland waters as well as all coastal waters across the EU. The Directive requires Member States to carry out a preliminary assessment by 2011 in order to identify the river basins and associated coastal areas at risk of flooding. Associated Guidelines are:- "Planning System and Flood Risk Management –Guidelines for Planning Authorities", 2009

Waste Framework Directive (WFD 75/442/EC)- The primary objective of the WFD is to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment, and in particular: without risk to water, air, soil, and plants and animals; without causing a nuisance through noise or odours; without adversely affecting the countryside or places of special interest: the prevention and reduction of waste; the recovery of waste by means of recycling, its re-use, reclamation etc; and the use of waste as a source of energy.

### Trans-boundary Air Pollutants

Emissions of trans-boundary pollutants are controlled by the 1999 UNECE Gothenburg Protocol under the Convention on Long-Range Trans-boundary Air Pollution (CLRT AP) and by the EU National Emissions Ceiling (NEC) Directive (EP and CEU, 2001a). The NEC directive prescribes national emissions ceilings for each EU country for four key trans-boundary pollutants: sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs) and ammonia (NH<sub>3</sub>).

### The Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations S.I. No. 137 of 2013

These Regulations are part of the Integrated Pollution Prevention and Control licensing legislation implementing the EU Directive on the licensing of emissions. Under IPPC certain categories of activities require a licence from the EPA prior to commencing the activity. Activities include certain

categories of intensive animal rearing facilities above specified thresholds. Licenses contain a wide and comprehensive range of enforceable environmental conditions.

*Environmental Impact Assessment (EIA) Directive 2011/92/EU, on the assessment of the effects of certain public and private projects on the environment.*

This codified version of the Directive on EIA sets the nature and thresholds for a wide range of developments that must be assessed under a formal, public participative, permitting process prior to being permitted to proceed. It involves a systematic evaluate of the likely significant environmental impacts and the mitigation/control of those impacts. The Directive is implemented in Ireland through a range of regulations, including cross-cutting regulations on planning and development.

*European Communities (Environmental Impact Assessment) (Agriculture) Regulations S.I. 456, 2011).*

Under these Regulations farmland developments relating to “restructuring of rural holdings”, “commencing to use uncultivated land or semi-natural land for intensive agriculture” an “land drainage works on land used for agriculture” may, depending on their scale and location, be subject to EIA.

*Pesticides Directive 2009/128/EC*

Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides, more commonly referred to as “the Sustainable Use Directive”, was transposed into Irish law by Statutory Instrument No. 155 of 2012, European Communities (Sustainable Use of Pesticides) Regulations 2012. Among the requirements of the Directive, is the requirement to adopt a National Action Plan (NAP) for the sustainable use of pesticides.

*Planning and Development*

The principal regulations underpinning the Planning and Development Acts 2000-2012 are the Planning and Development Regulations 2001. They also consolidate all previous Regulations made under the 2000 Act and replace the Local Government (Planning and Development) Regulations 1994-2000.

## **6.4 BEST PRACTICE GUIDELINES**

Teagasc and others have produced comprehensive Best Practice Guidelines for advising on a very wide range of agricultural activities. These set out the environmental implications of various agricultural activities and establish specific best practice measures to mitigate any associated adverse environmental implications. As such they form part of an important operational support and can play a necessary part in the Knowledge Transfer Measures proposed under the RDP. Others, such as “Origin Green” through its requirement for participants to demonstrate environmentally sustainable production also serve as an indirect environmental control measure. Some relevant examples that are of direct relevance to the RDP are presented below.

*“Miscanthus Best Practice Guideline”*

This is a comprehensive guide prepared by Teagasc on managing the environmental issues that may be associated with growing this energy crop.

“Short Rotation Coppice Willow Best Practice Guidelines”

This is a comprehensive guide prepared by Teagasc on managing the environmental issues, problems and benefits, that may be associated with growing this energy crop.

Food Labelling

Three European Union schemes of geographical indications and traditional specialities, known as protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialities guaranteed (TSG), promote and protect names of quality agricultural products and foodstuffs. They are based on the legal framework provided by the EU Regulation No 1151/2012 on quality schemes for agricultural products and foodstuff. These Regulations identify a number of goals for the food protection regimes, including improvement of food quality and the retention of populations in rural areas.

## **6.5 GENERAL OBSERVATIONS ON THE ENVIRONMENTAL IMPACTS OF THE RDP**

It is evident that many of the RDP measures are aimed at improving the efficiency of agriculture through a combination of various supports, most notably investment supports and through raising the level of knowledge and skills across that sector. As in the case of all activities, whether they be agricultural or otherwise, increases in output potentially increases the environmental footprint of those activities. Avoidance or reduction of an activity’s environmental footprint can be achieved by essentially three means/mechanisms, applied either individually or in combination. These means are: placing limits on production, producing in a smarter way, or offsetting environmental losses in one aspect with environmental gains in another.

Placing limits on production, such as the outgoing milk quota system, is not a goal of the RDP nor is it within its remit. Caps on production therefore are not an option for mitigating environmental impacts in this instance.

The second option, smarter production, is a core objective of the RDP and much of the proposed financial allocation is aimed at achieving this. Smarter production reduces the unit losses of materials to the environment, whether that is milk, slurry, chemicals or other materials. This smart production is further enabled by the proposed supports for on-farm capital investments whereby appropriately designed farm structures and equipment can be constructed and installed. The effectiveness of this approach is strongly influenced by current practices within any given jurisdiction, including Ireland. This means that where poor farming and environmental management and skills are applied then providing the means and motivation for upgrading those skills will have a disproportionately positive effect. As a general view Irish agriculture can be regarded as relatively advanced and sophisticated, although not yet to a level such that important improvements cannot be achieved. The RDP targeted knowledge based measures therefore can reasonably be expected to yield positive environmental benefits overall.

The concept of offsetting indirect negative environmental impacts that prove to be unavoidable is well established in the EU and elsewhere. Examples include the protection and enhancement of natural habitats to offset impacts in other areas. The RDP has a number of Agri-Environment measures of some scale and these are integrated into the RDP at all levels. Consequently such measures must be considered as a central aspect of the programme and as one that has the potential

to yield substantial environmental benefits, both in their own right and as a means of offsetting any environmental losses resulting from the maintenance and enhancement of rural development.

A clear objective of the draft RDP is the maintenance and enhancement of rural populations. Those populations will have impacts in terms of housing needs, water supply, sewage disposal and transport infrastructure, all of which of themselves generate downstream environmental impacts. As such they are as a consequence of the RDP support. These population derived impacts are all subject to other downstream planning controls through the five yearly creation of County Development Plans and Local Area Plans etc. , and all of which are subject to SEA in their own right. Additionally as noted earlier in the ER any construction arising either directly or indirectly as a consequence of the RDP may be subject to development consent at local level. This can extend to a requirement for Environmental Impact Assessment under the EIA Directive and Regulations should those developments be regarded as having the potential for significant environmental impacts.

Many of the measures under the RDP are directly linked to a requirement for Best Environmental Practice to be adopted. Examples include the national guidelines for bio-energy crops, which include comprehensive guidelines on environmental protection.

## 7. IMPLEMENTATION AND MONITORING

As is the nature of Strategic Environmental Assessment it must adopt a broad overarching approach in assessing the likely impacts of a plan or programme. Similarly when considering how best a programme such as the RDP may be implemented and monitored it is important that an overly prescriptive approach be avoided. This is dictated by several factors, including: the diversity of measures proposed and the broad range of environments and individual circumstances in which any given measure is to be implemented. Given the current available level of definition of each of these factors it has been recommended below that a flexible approach, one that can be adapted to respond to the individual circumstances as they arise, would be the most appropriate and effective.

The implementation of the programme will be the responsibility of DAFM, including to oversee all aspects of delivery including ensuring that the environmental conditions attached to the individual supports are adhered to and that unanticipated adverse impacts do not occur. If any such adverse situations are found to arise the programme should be sufficiently flexible to allow any such deficiency to be corrected.

## 8. CONCLUSIONS

The Rural Development Regulation published by the European Commission was formally adopted on the 17th December 2013. Under that regulation it is a clear prerequisite of funding support that the RDP of each Member State take due account of environmental protection and sustainable development.. To that end it is apparent from an examination of each measure of Ireland's draft RDP that these requirements have been addressed in a fully integrated and comprehensive manner. This was achieved at the design stage of the programme, a process which included extensive consultation with all relevant stakeholders from the outset.

Ireland has now a mature environmental regulatory system in place, much of it arising as a consequence of a range of mandatory environmental protection Directives issued by the EU over the past decades. While in earlier years, and across all Member States, environmental problems arose, including from agriculture, today these issues have largely been addressed through a comprehensive range of legislative measures, National Action Plans and Guidelines. The RDP is to be implemented within this established Environmental Control regime.

Almost forty percent of the proposed funding under the draft RDP is to be allocated to the "Green Low-Carbon Agri-Environment Scheme" (GLAS). It is evident that appropriately administered and monitored this measure has the capacity to deliver important benefits for environmental protection across a wide range of environmental protection objectives including; conservation of habitats, protecting and enhancing biodiversity, protection of water quality and climate change.

The next largest proportion of the draft RDP funding is to be allocated to "Areas of Natural Constraint" (ANCs). Approximately thirty-five percent of the total budget is to be allocated to this measure. It is evident from an environmental and population perspective that the principal result of the financial support the ANC provides is that it helps prevent widespread abandonment of farmland in these rural communities. As the measure is closely linked to qualifying criteria such as having to farm in an environmentally responsible manner it is concluded that the ANC measure can have an outcome that is both socially and environmentally positive. Properly administered it has little capacity to have any negative environmental consequences.

While overall financial support for Knowledge Transfer is modest this comparatively low cost support is potentially capable of delivering a disproportionate level of positive environmental benefits. This, in particular, is because it is a central enabling mechanism for the effective delivery and utilisation of the other measures of the RDP. It is only through the development of the knowledge and skills, such as those relating to best environmental practice and sustainable farming, that the environmental benefits of those various measures can be maximised. In recognition of this it is a requirement for applicants for support under many of the measures to participate in associated knowledge and up-skilling programmes.

Pillar 2 of the Common Agricultural Policy (CAP), as implemented via the RDP, has as a primary focus the aim of increasing the quality of food output, and in turn to support the maintenance and development of rural communities. As is evident in the case of the Beef Data and Genomics Programme measure, the RDP has the objective of increased efficiency and quality of beef production rather than increased cattle numbers and outputs. This emphasis on quality rather than "headage" represents a positive shift in agricultural policies of the past towards more environmentally sustainable production for the future.

The general level of support and the range of measures proposed in the draft RDP have the capacity to improve the environmental performance of Irish agriculture and, through the GLAS measure in particular, to pro-actively support conservation. In the absence of the programme proceeding the opportunity to achieve these outcomes would be largely missed.

It is concluded that, when viewed in its totality, the RDP has little potential to result in any adverse environmental consequences of note. To the contrary, the RDP has the potential to deliver an overall positive contribution to Ireland's environment and to the communities that environment supports.

## ANNEX 1. SEA REGULATIONS (SCHEDULE 2 OF S.I. 435, 2004)

### REQUIREMENTS FOR THE CONTENT AND SCOPE OF AN ENVIRONMENTAL REPORT

***(a) An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes;***

The objectives of the RDP are detailed in the Environmental Report (ER) under each measure of the Programme. Where linkages exist between the RDP and other relevant Plans and Programmes such linkages are identified in the case of each measure of the RDP.

***(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme,***

This aspect is addressed as it arises over the course of the evaluation presented in the ER, such as land abandonment that would potentially be a concern in the absence of the RDP ANC measure.

***(c) the environmental characteristics of areas likely to be significantly affected;***

Reference is made to the State of the Environment Report 2012 (EPA –Ireland) and the key aspects relevant to the RDP are identified and summarised.

***(d) any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or the Habitats Directive;***

This issue is addressed by way of the environmental analysis within the ER, most notably in the case of the Green Low-Carbon Agri-Environment Scheme (GLAS). The proposed GLAS measure has been drafted in the light of the experience of problems and limitations of past measures in respect of the protection and enhancement of biodiversity.

***(e) the environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation;***

Various international agreements, obligations and EU Directives establish environmental protection objectives. Examples include those contained in the Convention on Long-Range Trans-boundary Air Pollution (CLRT AP), the Water Framework Directive and the Habitats Directive. These are addressed where relevant to the proposed measures of the RDP.

***(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;***

Each of the above elements was systematically examined for each measure and the findings presented in the ER.

***(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme, or modification to a plan or programme;***

The mitigation measures proposed under each of the RDP measures are provided.

***(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;***

The issue of alternatives is addressed under each measure. The methodology adopted for the ER is also described. There were no technical difficulties encountered in preparing the ER.

***(i) a description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme;***

The principal actions for monitoring the implementation of the Programme measures are constructed in a manner that also provides the central means of monitoring the environmental effects. These are detailed for each measure within the ER.

***(j) a non-technical summary of the information provided under the above headings.***

A non-technical summary is provided.