



Sectoral and Cross-Sectoral Integration of Biodiversity in Ireland

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1. Introduction

Ireland reported¹ on National Development Plan 2007-2013; Rural Development Strategy and Programme 2007-2013 (RDP); other programmes and measures of significance for biodiversity; incentives; adoption of the ecosystem approach (mainstreaming) and biodiversity; environmental impact assessment (EIA) and biodiversity; strategic environmental assessment (SEA); Ireland's overseas development assistance (ODA) and biodiversity.

2. National Development Plan 2007-2013

The *National Development Plan 2007-2013* has a greater emphasis on, and a larger financial allocation for, measures that are relevant to biodiversity conservation than previous Plans. The Department of Finance is the lead Department in strategic economic planning. *Chapter 6: Environmental Sustainability* includes sub-programmes that have an influence on biodiversity conservation either directly or indirectly. These are briefly described below.

Natural Heritage Sub-Programme

This sub-programme is implemented by the National Parks and Wildlife Service of the Department of Environment, Heritage and Local Government. The measures being implemented include:

- Purchase of Natura 2000 sites and habitat-rich sites and designated raised bogs.
- Compensation to landowners in designated areas (e.g. de-stocking in commonages and NPWS Farm Plan Scheme)
- Conservation planning
- Species and habitats monitoring
- Research

Water Services Sub-Programme

The Water Services Investment Programme 2004-2006 targeted 869 water and sewerage schemes in Ireland and involved improvement, expansion and rehabilitation of wastewater treatment and networks. The programme is implemented by local authorities and coordinated by the Department of Environment, Heritage and Local Government. The budgeted expenditure was €5 billion. Sewage treatment schemes are of particular importance for biodiversity conservation, assisting in meeting water quality standards to comply with the EU Water Framework and Urban Wastewater directives.

<http://www.environ.ie/en/Environment/Water/WaterServices/WaterServicesInvestmentProgramme>

Agriculture and Food Sub-Programme

The Department of Agriculture, Fisheries and Food is the lead department. This programme

¹ Ireland (2010). 4th National Report to the Convention on Biological Diversity, 14 May 2010, 90 pp.

encompasses the agricultural measures included in Ireland's 2007-2013 Rural Development Strategy and Programme.

- Rural Environment Protection Scheme
- National Nitrates Action Programme
- Farm Waste Management Support
- Forestry and environment measures

3. Rural Development Strategy and Programme 2007-2013 (RDP)

The Department of Agriculture, Fisheries and Food is the lead Department in Ireland for the current RDP. The Department web site has a dedicated section on biodiversity and the actions for which it is responsible:

<http://www.agriculture.gov.ie/media/migration/ruralenvironment/environment/biodiversity/Biodiversity%20page%20May2009%20final.pdf>

The RDP includes the following measures of most relevance to biodiversity conservation:

Rural Environment Protection Scheme (REPS)

Farmers may choose from a wider range of farm management options than in previous REPS. These options, which are designed to enhance biodiversity, are in addition to the basic environmental management requirements of the Scheme. They include:

- Traditional Hay Meadows: assists in conserving and increasing diversity of wild plant species associated with this habitat
- Increasing Watercourse Margin: aims to improve water quality by protecting river margins from livestock damage and protecting riparian habitats.
- Nature Corridors: protection and enhancement of field margins to increase plant and animal diversity.
- Hedgerow Maintenance: hedgerows retained and managed; cutting prohibited during the bird nesting season.
- Traditional Irish Orchards: creation of orchards with native Irish apple varieties protects the genetic resource
- Conservation of Rare Breeds: Assisting farmers to rear animals of specific breeds native to Ireland, which are in danger of being lost to farming.
- LINNET Habitats (Land Invested in Nature, Natural Eco-Tillage): planting small plots of cereals in grassland areas as a source of over wintering food for finches and other bird species.

The current Scheme, REPS 4, was introduced in 2007. As of July 2009, no new entrants were allowed into the REPS and a smaller, revised scheme is expected to be put in place in 2010.

Biodiversity within Sustainable Forest Management (SFM)

The maintenance and enhancement of biodiversity is being pursued within the context of SFM, of which biodiversity forms an essential component.

Forest Biodiversity Guidelines

The Forest Biodiversity Guidelines apply to all forest operations and focus on how best to conserve and enhance biodiversity, through appropriate planning, conservation and management. The Forest Biodiversity Guidelines require approximately 15% of the forest area to be treated with particular regard to biodiversity. A target of 30% annual broadleaf afforestation has been set for the duration of the Rural Development Programme.

Forest Environment Protection Scheme (FEPS)

The FEPS aims to encourage the establishment of high nature value forestry on farms that participate in REPS. Farmers planting under FEPS will have to adhere to enhanced environmental objectives, which will focus on biodiversity, habitats, species mix, environmental impact and visual considerations. Expenditure on grant aid from 2007 to 2009 was €13.9 million, covering 4,084 ha.

Native Riparian Woodlands – A Guide to Identification, Design, Establishment and Management

The Forest Service and Woodlands of Ireland (a State/NGO body) are developing a series of information notes to address key issues relating to native woodland ecology and management and complement the Native Woodland Scheme.

Forestry and Freshwater Pearl Mussel Requirements

Ireland supports 46% of the EU Freshwater Pearl Mussel, *Margaritifera margaritifera* population. It is currently in serious decline throughout the island of Ireland and the rest of Europe. Ireland has the only known location of *Margaritifera durrovensis*, which is also in serious decline. Sedimentation and nutrient enrichment from a variety of land uses, including forestry, have contributed significantly to this decline. The Forest Service, in partnership with the NPWS and Coillte Teo, has developed *Forestry and Freshwater Pearl Mussel Requirements - Site Assessment and Mitigation Measure*. The *Requirements* apply to all forest activities within identified portions of the catchments of Freshwater Pearl Mussel populations in rivers designated as candidate Special Areas of Conservation (cSACs) for the species.

4. Other programmes and measures of significance for biodiversity

The Burren is the largest area of limestone pavement in Ireland and has many associated habitats and species. The **Burren LIFE Project** is largely funded by the EU LIFE programme, with a partnership between the NPWS, Teagasc (Irish Agriculture and Food Advisory Authority) and Burren farmers. The objective is to develop a new model for sustainable agriculture in the Burren in order to conserve the relevant habitats listed in Annex 1 of the EU Habitats Directive. It has carried out a valuable programme of work developing alternative landuse management systems that contribute to conserving habitats and also in fostering good relationships between the partners and, in particular, the farmers of the Burren. <http://www.burrenlife.com>

The Environmental Protection Agency (EPA) and the Council for Forest Research and Development

(COFORD) co-funded the **BIOFOREST Research Programme** (2001 to 2006). The aims were to provide basic information on biodiversity in Irish plantation forests and illustrate the effects of different aspects of management on biodiversity within forests, with the overall objective to update forest policy and practice in relation to biodiversity management.

The BIOFOREST research team was comprised of the Department of Zoology, Ecology and Plant Sciences UCC, the Department of Botany TCD and Coillte. The study included four main groups of species: spiders, hoverflies, birds and plants. The individual projects concluded that, in general, forest plantations can make a significant positive contribution to biodiversity, but only if properly planned and managed. Fifty-seven recommendations were made, addressing different aspects of forestry, from strategic planning to localised planning and practice. The recommendations are being considered by the Forest Service in the formulation of forestry measures under the Rural Development Programme 2007-2013.

A new PLANFORBIO Programme 2007-23 aims to gather additional information to promote improved biodiversity conservation and enhancement in Irish plantation forests. The programme consists of four projects:

- Management of biodiversity in a range of Irish forest types.
- Achieving effective control of *Rhododendron ponticum*, a serious invasive alien plant in Irish native woodlands.
- Optimum scenarios for conservation of the Annex 1 species Hen Harrier in Ireland.
- Implementation of an assessment and monitoring programme for biodiversity in Irish and Scottish forests.

The aim of the **Agbiota** project, which ran from 2001 to 2005, was to develop national expertise in biodiversity research within the context of modern agriculture. The project was funded by the EPA under the National Development Plan. <http://www.ucd.ie/agbiota/index.htm>

Sea Change: A Marine Knowledge Research and Innovation Strategy for Ireland 2007-2013 was launched in 2007. This strategy targets economic stimulation and diversification, research capacity, administration and improved environmental quality and management. <http://www.marine.ie/home/research/SeaChange>

PreCAST (Policy and Recommendations from Cetacean Acoustics, Surveying and Tracking) is a partnership between the Irish Whale and Dolphin Group and Galway Mayo Institute of Technology (GMIT), funded by the Marine Institute and National Parks and Wildlife Service. The three-year project, which began in 2008, involves offshore surveys to map cetacean distribution and relative abundance, obtaining passive acoustic monitoring data and carrying out satellite tracking of fin whales off the south coast of Ireland. The collected data will be used in a GIS of the Celtic Sea to explore the relationship between cetaceans and their physical and biological environment. <http://www.iwdg.ie/precast/?id=92>

The National University of Ireland Galway (UCG) was the Irish partner in the **HERMES** project (Hotspot Ecosystem Research on the Margins of European Seas) which ran from 2005 to 2009. HERMES was an international, multidisciplinary research programme investigating Europe's deep marine ecosystems and

their environment. http://ec.europa.eu/research/research-for-europe/environment-hermes_en.html

UCG is also a partner in the **CoralFISH** project (<http://www.eu-fp7-coralfish.net>) which involves assessment of the interactions between corals, fish and fisheries in order to develop monitoring and predictive modeling tools for ecosystem-based management in the deep waters of Europe and beyond. Research under this project has confirmed the existence of a major new coral reef province on the southern end of the Porcupine Bank off the west coast of Ireland.

5. Incentives

This report has already described compensation schemes provided for landowners to de-stock commonages to curb overgrazing and thus to assist in recovery of overgrazed sites. Other NPWS incentives include, for example, that for the recovery of the natterjack toad (Section 2.3.4, Case study 2). The positive and negative aspects of incentives other than those offered by the NPWS are briefly described below.

Agricultural incentives

Until recently, EU headage payments and the Ewe Premium encouraged overstocking and overgrazing of large areas of commonage, and intensification leading to direct loss of habitat and eutrophication.

The Single Farm Payment, introduced in 2005, has replaced the previous headage and premium schemes. This new scheme replaced output incentives with area-based payments. It is linked with cross-compliance measures (such as adherence to a code of good agricultural practice) and has reduced the incentive to overstock. The Single Farm Payment is synergistic with the REPS and NPWS Farm Plan Scheme.

The REPS pays farmers for measures which should be of benefit for nature although there is little clear evidence of what impact REPS has had to date on biodiversity. However, it has formed an important proportion of incomes for less-intensive farmers. It appears that the most positive, but indirect, impact of the REPS to date has been the reduction in water pollution through better stock and manure management. It also helps sustain pastoral farming in areas where land abandonment is most likely to occur. (<http://www.teagasc.ie/publications/reps1999/paper1.asp>).

Criticism of the REPS has included the low level of involvement of ecologists in making farm plans and a lack of proper auditing in order to evaluate the effects on biodiversity. A new agri-environmental scheme with a lower budget and an emphasis on capital projects has been proposed for 2010.

Forestry incentives

In the past, commercial afforestation grants were awarded without due consideration for biodiversity conservation. The annual rate of planting has declined dramatically in the last few years and the Afforestation Grant Scheme is no longer co-funded by the EU. There is still a widespread perception among forestry professionals and landowners that broadleaves are uneconomic. This perception has reduced the effectiveness of the larger grants and annual premiums offered for broadleaf afforestation.

The negative effects of commercial afforestation incentives have been somewhat reduced in recent years by the requirement to comply with Forest Service Biodiversity, Water and Harvesting guidelines, improved strategic planning and better communication and consultation by the Forest Service with the NPWS, Regional Fisheries Boards, local authorities and other official bodies.

The Native Woodland Scheme has contributed to the conservation and planting of 5000 ha of native woodland since its introduction, and is viewed by conservationists as a very positive measure. From 2002 to 2009, 526.80 ha of new native woodland have been established on 58 sites, and 2,324.44 ha of existing woodland have been restored on 136 sites. The NWS is currently suspended following recent budgetary cutbacks.

The FEPS (Forest Environment Protection Scheme) aims to encourage high nature value forestry on farms participating in the REPS. The FEPS was introduced in 2007 in response to criticism that afforestation grants and premiums conflicted with REPS objectives. An additional premium of up to €200/ha for five years is currently available, which when added to the annual 20-year forestry premium can provide a total annual payment of up to €773/ha for some participating farmers.

Forest Stewardship Council (FSC) certification can be regarded as an incentive. Coillte, which manages 444,000 ha or roughly two-thirds of the national forest estate, has been operating to FSC standards since 2001. Although it is difficult to quantify the benefits to biodiversity, certification has encouraged Coillte to conserve biodiversity to a higher standard than that required by national forestry policy.

The Biodiversity Fund

The objective of the Biodiversity Fund was to support site conservation and management to enhance biodiversity at the local level. The fund was administered by the Heritage Council and offered funding for capital projects for the management of sites to protect, conserve and enhance biodiversity up to a maximum of €50,000 per year and up to a maximum of 80% of total project costs.

Priority was given to projects that assist the management of sites which contain habitats of special conservation importance or which support threatened or vulnerable species. Priority was given to site management works that are part of a conservation management plan, or part of a larger scheme established to benefit Ireland's biological diversity.

The scheme was open to individuals, non-profit organisations, local authorities, statutory institutions, academic institutions and private companies. Applications from community groups, offshore island communities and NGO groups or for projects assisting the conservation of the biological diversity of islands, were encouraged.

€700,000 was available for projects to be completed in 2008. Examples of funded projects include: clearing invasive species such as rhododendron from native woodlands; recreating spawning areas for salmon in rivers; the conservation of different native agricultural breeds of cattle such as Irish Moiled

Cattle; the reintroduction of the Red Kite in Wicklow; creating ponds and wetland habitats; and protecting vulnerable sand dunes.

Other incentives

Tax incentives designed to stimulate development in certain areas, such as those for seaside resort areas (introduced in 1995), the Island Renewal Scheme (1996-1999), and the Upper Shannon region (1998-2004) contributed to the pressures on biodiversity in these areas. These schemes are unlikely to be renewed. The proposed scheme for the Mid-Shannon region, announced in 2007, has yet to be confirmed.

6. Adoption of the ecosystem approach (mainstreaming) and biodiversity

Until very recently, biodiversity policy was seen as independent of, and separate from, sectoral policies in Ireland. This was demonstrated in the sectors that have the most impacts on biodiversity: agriculture, forestry, fisheries and tourism/recreation. The current National Development Plan and the Rural Development Programme, for example, show that the ecosystem approach is slowly beginning to be accepted. This is mainly due to the need to meet EU plan and programme reporting requirements. Obstacles towards fuller recognition of mainstreaming at government level include poorly-developed inter-departmental structures and lack of dedicated personnel.

Some progress has been made at local government level with the employment of dedicated personnel (i.e. Biodiversity and Heritage Officers). 18 local authorities have now drafted Local Biodiversity Action Plans, and 8 more are in preparation. The main planning instrument of local authorities is the Development Plan. Recent plans have included better planning policies, objectives and zoning to protect biodiversity. These are most effective in relation to protection of designated sites (SACs, SPAs, and NHAs) from inappropriate development. However, the lack of an ecosystem approach is demonstrated by permissions to develop at the boundaries of designated sites or which otherwise indirectly threaten such sites. Although there is increasing recognition among local authorities of the need to conserve biodiversity in the wider countryside, as evidenced in Development Plans, in practice there can be strong local and national political and economic pressure to grant permission for developments in areas that are not protected by EU and national environmental legislation.

The legislative basis for biodiversity conservation has been strengthened considerably in the last decade. The legislation requires all State departments and official agencies to take measures to protect biodiversity. Section 31 of European Communities (Natural Habitats) Regulations, 1997 requires that most works undertaken by the State within Natura 2000 sites must be subject to an appropriate environmental assessment.

7. Environmental impact assessment (EIA) and biodiversity

The EU Environmental Impact Assessment Directive is implemented in Ireland by the Planning and Development Acts, the Planning and Development Regulations, 2001 to 2002 and the European Communities (Environmental Impact Assessment) Regulations, 1989-2000. The EU Habitats Directive

requires that projects likely to have a detrimental impact on a protected habitat must be subject to an assessment of that impact. If that assessment is negative the project may only proceed if there is an absence of alternative solutions and, if there are no alternatives, where there are imperative reasons of overriding public interest. EIA has assisted in the making of modifications to certain large public projects such as motorways, to protect designated habitats and Annex species.

8. Strategic environmental assessment (SEA)

The EU Assessment of the Effects of Certain Plans and Programmes on the Environment (“the SEA Directive”) was implemented in Irish law in 2004 by means of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004). Successful implementation relies upon practitioners of SEA being able to apply best-practice techniques within an overall methodology that both allows compliance with the SEA Directive’s requirements and fulfils its overall purpose of contributing to sustainable development. Three statutory environmental authorities have been designated under the SEA Regulations in Ireland:

- EPA
- Department of Environment, Heritage and Local Government (DoEHLG)
- Department of Agriculture, Fisheries and Food (DAFF)

The designated environmental authorities must (by reason of their specific environmental responsibilities) be consulted by competent authorities (plan/programme makers) during the environmental assessment process. The steps involved in the environmental assessment are:

- The preparation of an environmental report
- The carrying out of consultations
- The integration of environmental considerations
- The publication of information on the decision

The significant environmental effects of the implementation of plans/programmes are required to be monitored.

The current National Development Plan has not been subjected to SEA. However many of the programmes and policies that come under the auspices of the NDP either have or will be subjected to this process.

As of July 2008, a total of 117 SEAs were at various stages. Of the 11 sectors specified in the Directive, land use planning has had the most significant take-up. The EPA noted that, in particular, the forestry, tourism and transport sectors have yet to engage meaningfully in the process. The effectiveness of SEA will be evaluated during 2008/2009 through an EPA STRIVE research project (EPA, 2008). Examples of SEA carried out in Ireland include:

- Recent local authority development plans and regional plans.
- All River Basin Management Plans made under the EU Water Framework Directive (including two in Northern Ireland).
- Frontier Exploration Licences for the Porcupine Basin, which includes two SACs.

At this time, there is insufficient information to comment on the outcome of SEA in terms of the

observed changes in status and trends of important biodiversity components. The authors of *Economic and Social Aspects of Biodiversity* (DoEHLG, 2008) remark that

"...a strong framework for identifying, monitoring and targeting the critical ecosystem services which support development within each sector is still required."

9. Ireland's Overseas Development Assistance (ODA) and Biodiversity

Irish Aid is the arm of the Department of Foreign Affairs that is responsible for ODA. The budget for Ireland's official ODA was €920 million in 2008.

Irish Aid has published an information booklet: *Biodiversity and Poverty Reduction* (<http://www.irishaid.gov.ie/Uploads/3%20Environment%20and%20Bio-diversity.pdf>) to accompany its Environment Policy for Sustainable Development.

Key strategies for implementing the policy are quoted as (a) mainstreaming, where the environment is recognised as a critical part of sustainable development and is taken into account in all policies, programmes, activities and funding decisions; and (b) partnership, where Irish Aid works with national governments, multilateral organisations, international agencies and civil society organisations to contribute to sustainable development. An example of the inclusion of biodiversity conservation in Irish ODA is provided in the box, below.

Role of Irish Aid in relation to biodiversity conservation in the Bale Mountains, Ethiopia

The Bale Mountains in Ethiopia are one of the most unique and threatened landscapes in the world. The mountains provide water for 12 million people in the adjacent lowlands, a habitat for endangered endemic species and hydro-electricity for over 7 provincial towns. Deforestation due to agricultural expansion and population pressure threatens to degrade the area and wipe out the livelihoods of millions of people. Irish Aid is part of a consortium working with local government and communities in Oromia region to develop a sustainable approach to managing and using the resources of the Bale massif. Communities are engaging in new livelihood activities such as bee keeping, the production of essential oils and eco-tourism, which use the resources available in the alpine forests without causing further environmental degradation.

(Source: Irish Aid, personal communication)