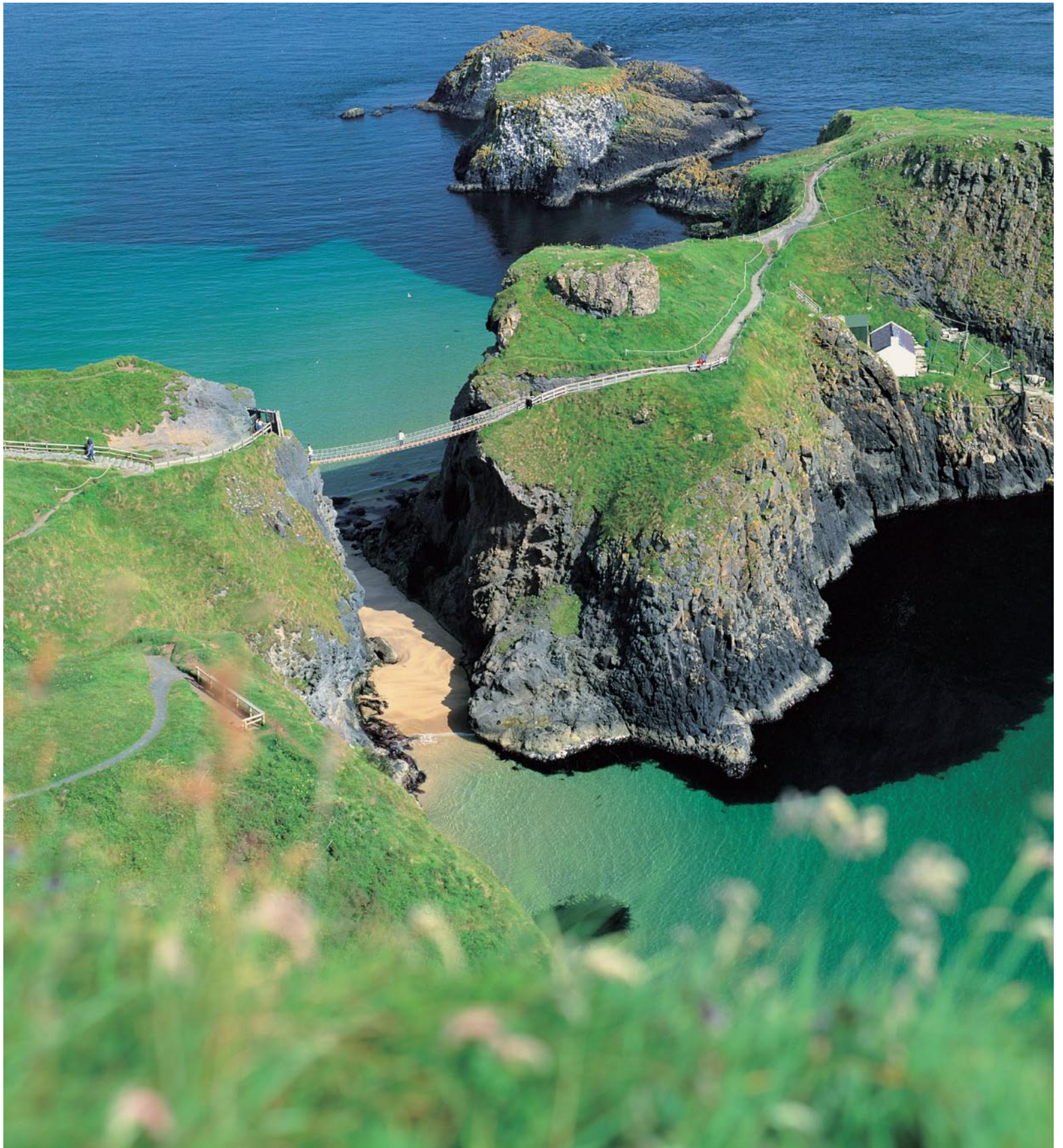


# Valuing Our Environment

The Economic Impact of the Environment in Northern Ireland



# Northern Ireland An Environment Worth Investing In

# Supporting Our Environmental Economy

02



The environment of Northern Ireland is one of its greatest assets, with stunning landscapes, an outstanding coastline, a complex variety of wildlife, and a rich built and cultural heritage.

These environmental riches include 9 Areas of Outstanding Natural Beauty, 191 Areas of Special Scientific Interest, 1,500 scheduled monuments, 8,500 listed buildings and 15,000 archaeological sites. This environment is not only valuable and essential in its own right, but also has huge significance for our economy.

In 2006, a partnership of nine leading environmental NGOs together with the Environment and Heritage Service of Northern Ireland commissioned a study into the economic significance of Northern Ireland's environment, termed its 'Environmental Economy'. The report was completed by GHK Consulting and the Countryside Consultancy. The research reveals that –

- Economic activities related to the environment of Northern Ireland contribute £573 million to the regional economy
- These environment-related economic activities support 32,750 full-time equivalent jobs

03



To ensure that the major economic benefits of a high quality, well-managed environment are retained and further enhanced the following steps are needed:

- 1 A healthy environment is important for a strong, vibrant and modern economy, and should be recognised by all parts and levels of Government as an opportunity rather than a constraint for economic development in Northern Ireland.
- 2 The strong linkages between Northern Ireland's environment and economy, and the economic opportunities from environmental enhancement identified in this report, should be recognised in relevant policy and strategy developments.
- 3 Links between the environment and economy should be recognised in the Review of Environmental Governance. An independent Environmental Protection Agency would provide a stronger voice in calling for adequate resources to be devoted to environmental enhancement, and in raising awareness of the linkages between the economy and the environment.
- 4 Effective funding and implementation of the NI Sustainable Development Strategy are essential if Northern Ireland is to make the transition to a sustainable economy. A variety of actions in the Strategy, if fully implemented, will offer opportunities for both the environment and the economy. In implementing the Strategy, the Government and its partners should recognise the importance of the environmental economy in achieving the transition to sustainability, and take steps to promote its development.
- 5 Opportunities for the environment and economic development provided by local government reform should be maximised under the Review of Public Administration. Local councils should be encouraged to promote the development of their local environmental economies by undertaking environmental economy audits to establish areas of environmental economic strength and potential and by establishing cross departmental environmental economy teams to identify and take forward opportunities for developing the environmental economy.
- 6 Further research into the linkages between the environment and economy in Northern Ireland should be undertaken, including research into :
  - The size and development potential of the environmental industries
  - The links between tourism and the environment (built and natural)
  - The opportunities for strengthening the links between the local food industry and the environment

Further specific recommendations for developing the environmental economy are listed at the end of this summary report.

# Defining the Environmental Economy

# Protection & Management of the Environment

04



Following a similar approach to studies carried out in England and Wales, the Northern Ireland Environmental Economy was defined in this study as comprising the following:

## PROTECTION & MANAGEMENT OF THE ENVIRONMENT

Nature, landscape & built heritage conservation, water management, waste management, renewable energy, environmental technologies & services

## SUSTAINABLE USE OF NATURAL RESOURCES

Sustainable agriculture, food, forestry, fisheries, minerals extraction

## ENVIRONMENT-DEPENDENT TOURISM & RECREATION

Tourism and recreation, the creative industries

## ENVIRONMENTAL MANAGEMENT IN INDUSTRY & GOVERNMENT

Environmental management measures within industry and government

## THE EFFECTS OF THE ENVIRONMENT ON THE WIDER ECONOMY

Ecosystem services, inward investment, migration, house prices

The study found that jobs and value added within the overall Northern Ireland Environmental Economy were broken down across the key sectors as follows:

	FTE Jobs	GVA (£m)*
Protection & Management of the Environment	9,413	226
Sustainable Use of Natural Resources	17,071	211
Environment Dependent Tourism & Recreation	6,125	130
Environmental Management in Industry	140	6
<b>TOTAL</b>	<b>32,749</b>	<b>573</b>

To aggregate estimates of full time, part time, temporary, contract and seasonal employment, estimates in this report are converted to Full Time Equivalent (FTE) jobs, where 1FTE is defined as a year round job involving at least a 35 hour week. A full time, six month seasonal job or a year round job with 17.5 hours per week would both equate to 0.5 FTE jobs.

\*Gross Value Added (GVA) measures the contribution to the economy of individual producers, industries or sectors, and is equivalent to their gross output less their purchased inputs.

05



Protection and management of the environment of Northern Ireland involves a wide range of the public, private and voluntary sector organisations. The study found this activity contributes a total of £226 million GVA to the regional economy, supporting 9,413 jobs.

## VOLUNTARY SECTOR ENVIRONMENTAL SERVICES

- The Environmental Voluntary Sector in Northern Ireland spends over £18 million p.a. in Northern Ireland and purchases over £7.7 million p.a. of goods and services from other local businesses
- The largest NGO concerned with the conservation and promotion of the natural and historic environment in Northern Ireland, the National Trust, has an annual turnover of over £5 million placing it amongst the top 1.5% of NI businesses in terms of economic size. The Trust spends over £3.3 million p.a. on goods and services from businesses located in all 26 Council Areas

## CASE STUDY: THE VALUE OF ENVIRONMENTAL VOLUNTEERING IN NORTHERN IRELAND

Voluntary work plays an important role in the work of the environmental sector in the region. A survey of voluntary sector organisations conducted by GHK for this study estimated that there are more than 32,000 environmental volunteers in Northern Ireland, completing a total of almost 360,000 hours of environmental work each year. This is the equivalent of 230 full time jobs. Based on an average hourly wage of £9.55 (Annual Survey of Hours and Earnings, DETI, 2005), the value of the time contributed by environmental volunteers in Northern Ireland amounts to more than £3.4 million per year. This compares to estimated wages and salaries of £9.5 million in the environmental voluntary sector, effectively boosting the value of the sector's work by 36%. By far the largest organiser of environmental voluntary work in Northern Ireland is Conservation Volunteers Northern Ireland, with 800 regular and 29,000 occasional volunteers completing an estimated 250,000 hours of environmental voluntary work each year. CVNI volunteers work on a total of 600 sites each year, completing an estimated 4,000 visits to these sites annually. The value of the time contributed by CVNI volunteers alone is estimated at £2.4 million and is equivalent to 162 full time jobs.

# Protection & Management of the Environment

# Sustainable Use of Natural Resources

06



## PUBLIC SECTOR ENVIRONMENTAL PROTECTION AND MANAGEMENT SERVICES

- Central government departments and agencies provide a wide range of environmental services ranging from protection of the environment and heritage, water and sewerage services, land use planning, environmental management of agriculture, fisheries and forestry and management of waterways for recreation. These activities contribute £112 million GVA annually to the regional economy
- Local Authorities also provide a wide-ranging environmental services ranging from waste management, pollution control and countryside management to the promotion of biodiversity and sustainable development. These activities contribute £36 million GVA to the regional economy and employ 2,400 people

## PRIVATE SECTOR ENVIRONMENTAL GOODS AND SERVICES

- Private Sector Environmental Goods and Services in Northern Ireland contribute £60 million GVA to the regional economy and support 2000 jobs
- Employment in the small-scale renewables sector has shown rapid growth since 2002 rising from under 10 to over 80 jobs between 2002 and 2005. According to research carried out in 2006 the renewable energy sector has the potential to create 6,000 short-term and 400-long-term jobs

## CASE STUDY: BALCAS

Balcas, formerly Ballycassidy Sawmills, is a major wood products supplier with a turnover of £65 million and 700 direct employees between its three plants in Enniskillen (sawmill and renewable energy plant with 260 employees), Estonia (sawmill) and Kildare (mouldings plant). The company employs a further 300 people in forest harvesting and haulage jobs in Ireland, with 70 of these based in Fermanagh. The company manufactures and supplies construction timber, fencing, internal mouldings, pallets and wood pellets for domestic and industrial boilers. Balcas Timber uses about 650,000 m<sup>3</sup> of logs annually at its Enniskillen plant, sourcing about 100,000m<sup>3</sup> annually from Fermanagh. In 2005 the company developed a combined heat and power plant which uses surplus sawdust and woodchips to generate renewable energy, meeting almost all of its own energy requirement, with peak surpluses being contributed to the national grid. The company has also developed a wood pellet product to fuel domestic and industrial boilers.

07



A significant amount of economic activity in Northern Ireland is generated by activities which are based on the use of natural resources in a way which also contributes to their environmentally sustainable management.

- Activities based on the sustainable use of natural resources in Northern Ireland contribute £211 million (GVA) to the regional economy and support over 17,000 FTE jobs
- Environmental Agriculture in Northern Ireland contributes over £118 million (GVA) to the regional economy and supports over 11,800 FTE jobs
- The environmental food economy (ie food which is locally produced and through methods consistent with sustainable management of the environment) currently contributes over £69 million (GVA) to the regional economy supporting 3,160 FTE jobs

## CASE STUDY: SOCIO-ECONOMIC EVALUATION OF MOURNE MOUNTAINS AND SLIEVE CROOB ESA SCHEME.

The Mourne Mountains and Slieve Croob ESA (Environmentally Sensitive Area) was designated in 1988, as the first in NI, and covers 29,000 hectares. A report by Moss and Chilton (1997) evaluated the socio-economic benefits of the first five years of operation of the scheme. Using a contingent valuation approach, involving a household survey, the study estimated the annual non-market benefits of the scheme at £13.1 million each year over a five year evaluation period.

The benefits of the scheme over this period included:

- 8500 acres of rough land protected
- 217 miles of stone walls rebuilt/maintained
- 100 miles of hedge replanted/maintained
- 800 traditional farm buildings repaired
- 3000 buildings painted in environmentally approved colours

The study also found a benefit: cost ratio of 32:1 with some activities funded through the scheme having a higher benefit than others.

# Environment-Related Tourism and Recreation

# Environmental Management in Industry

08



The environment of Northern Ireland is already a key driver for economic activity in the tourism and recreation sector. In more peaceful times there is significant potential for economic activity in these sectors to increase.

- A Northern Ireland Tourist Board visitor attitudes survey in 2003, found that 'sightseeing and the quality of the Northern Ireland scenery', followed by the desire 'to discover a new destination' was the top motivation for people to visit Northern Ireland (43%)
- Environment-related tourism contributes £130 million (GVA) to the regional economy and supports 6,125 jobs
- Environment-related activity tourism in 2005 brought spending of £19.6 million to the Northern Ireland regional economy
- 69% of overnight stays and 66% of tourism expenditure worth over £283 million are spent in the countryside of Northern Ireland outside the two largest cities, and more overnight stays are spent in the Causeway Coast and Glens area than in Belfast

## CASE STUDY: TOURISM AND THE NATIONAL TRUST

A PwC study conducted on behalf of the National Trust (2004) found that the most significant contribution of the Trust to the local economy is to the tourist industry, with an estimated 1.5 million visitors to the Trust's countryside, coastal and built heritage properties every year, of which 400,000 are visitors to the Giant's Causeway. Visitors to National Trust properties contributed around £58 million in tourist expenditure, helping to support between 1,400 and 2,500 jobs in the industry. The study found that the National Trust in Northern Ireland supports a greater part of the tourism industry than in other regions, such as Wales and the South West.

09



Protection and management of the environment of Northern Ireland involves a wide range of the public, private and voluntary sector organisations. The study found this activity contributes a total of £226 million GVA to the regional economy, supporting 9,413 jobs.

## MANAGING ENVIRONMENTAL IMPACTS

Industry in Northern Ireland is making increasing efforts to enhance its environmental performance, and this is bringing commercial benefits through, for example, waste minimisation and energy efficiencies.

- The 8th (2006) ARENA Network survey of environmental activity in industry in Northern Ireland found that:
  - Participation in the survey amongst those invited has increased to nearly 60%
  - 93% of companies in the survey now have an environmental policy
  - 55% of companies surveyed have an Environmental Management System, and of these two thirds are certified to a recognised standard such as ISO 14001

## CASE STUDY: SAM MOULDINGS AND THE CARBON TRUST, SAVING COSTS AND REDUCING CARBON

The Carbon Trust, in conjunction with Invest NI, offers interest-free loans to businesses in Northern Ireland that are investing in energy efficient equipment or renewable technology. SAM Mouldings, a family run business based in Antrim, specialises in the manufacture of MDF architectural mouldings for the construction and home improvement industries, making products such as architrave, skirting, door frames, window board and stair treads.

With an energy bill of around £230,000 a year and growing energy demand due to expansion, the company contacted the Carbon Trust for advice on how to make its operations more energy efficient. The company applied for an interest-free Energy Efficiency Loan to install a biomass woodchip boiler with heat exchanger and steam turbine. The equipment would help the company to burn its waste MDF chippings and dust from the manufacturing process to generate electricity and heat. SAM Mouldings was awarded the maximum loan of £200,000 towards the cost of the project of around £1.2 million. As a result, the company will be able to generate its own electricity – the turbine will produce about 7.5million kW per year.

The turbine will generate approximately £263,750 worth of electrical energy, enabling the company to sell the surplus back to the national grid, and will save an additional £300,000 in waste disposal. The total project payback period is just over two years. Potential carbon dioxide savings total 1,195 tonnes a year.

# Ecosystem Services & Area Case Study, Fermanagh

# Recommendations for Developing the NI Environmental Economy

10



## ECOSYSTEM SERVICES

The natural environment provides essential services necessary to maintain human life. A number of studies in the past decade have sought to categorise and analyse these 'ecosystem services' and to assess their value.

- UK studies have calculated that wetlands provide flood defence services worth £1,279 per hectare per year and storm defence services worth £722 per hectare per year
- The benefits of UK woodland in reducing air pollution have been valued at between £222,000 and £11.2 million per year

Northern Ireland's environment provides a wide range of ecosystem services whose economic value has yet to be calculated. Key providers of ecosystem services in Northern Ireland include –

- The marine environment – providing important nutrient cycling and climate regulation services as well as supporting fishing, tourism, recreation and renewable energy
- Woodlands – providing water and air purification services, important natural habitats, recreational opportunities and carbon sequestration services.
- Rivers and wetlands – providing water supply, flood defences, fisheries, navigation and recreation

Ensuring the environment can continue to provide these services is not only vital for our well-being but makes sound economic sense.

## AREA CASE STUDY – COUNTY FERMANAGH

To explore further how the environmental economy operates at a more local level, the study included an area case study looking at the Environmental Economy of County Fermanagh. Some of the key findings of the case study were that –

- 11% of County Fermanagh's land and water area is designated for nature conservation under European law
- The county also contains 9 National Nature Reserves, over 56 Areas of Special Scientific Interest, over 700 listed buildings, over 2000 scheduled monuments, and the first Unesco-designated Geoparc in the UK (Marble Arch Caves)
- Nearly 1 in 5 jobs in Fermanagh are related to the environment
- The population of Fermanagh is growing faster than anywhere else in Northern Ireland and the county has one of the highest rates of business start up
- 1 in 4 environment-related jobs in Fermanagh are in tourism and recreation
- Tourists spend 552,800 bed nights and £25.9 million annually in Fermanagh
- 2 out of every 3 visits are to attractions dependent on the natural environment which may generate a direct expenditure of £406,000 to the attraction owners
- Berthing and maintenance of boats registered on Lough Erne is estimated to generate annual expenditure £5.4 million
- Nearly 3000 visitor angling licences are sold annually in Fermanagh – over 85% of the Northern Ireland total generating direct revenue of over £178,000
- Fermanagh has a growing renewable energy sector with one quarter of Northern Ireland's windfarms, over a third of wind energy production, and the largest wood pellet-fuelled sawmill and renewable energy plant of its kind in the British Isles (Balcas)

11



The following actions will help enhance Northern Ireland's environment and help the development of particular sectors of its environmental economy.

- 1 Effective enforcement of EU, UK and NI environmental legislation and continued efforts to address key environmental concerns, including promoting waste recycling, improving air and water quality and tackling climate change.
- 2 Adequate funding and staffing of environmental programmes within government.
- 3 The effective delivery and resourcing of key environmental plans and strategies (such as the Northern Ireland Sustainable Development Strategy, Biodiversity Action Plan and Waste Management Strategy)
- 4 Further support for the development and application of clean technologies, including renewable energy.
- 5 Further increases in the proportion of agricultural budgets allocated to agri-environment schemes, especially through the new Rural Development Programme for 2007 to 2013.
- 6 Efforts by DARD, DoE and environmental NGOs to champion agri-environment schemes and highlight their role in the future sustainability and viability of the sector.
- 7 Measures to promote the local and environmental food economy and to further its development, linked to the development of recognised common standards and related environmental labelling and marketing schemes.
- 8 A clear and coherent vision and national strategy for inshore fisheries, integrating environmental concerns, including measures to reduce fishing pressure, improve fishing methods to reduce by catch, improve understanding of marine ecosystems and improve fishing practice in sensitive areas.
- 9 Delivering Biodiversity Action Plan targets for the maintenance, restoration and expansion of semi-natural woodlands, and supporting the conversion of Plantations on Ancient Woodland Sites (PAWS).
- 10 Improving the management of existing broadleaved woodlands and pursuing opportunities to connect and buffer fragmented areas of ancient woodland.
- 11 Promoting sustainable tourism through efforts to raise awareness of environmental impacts; effective environmental interpretation; schemes to embed tourism in the local community and economy; and initiatives to promote lower impact activities such as car free tourism (e.g. walking and cycling holidays).
- 12 Introducing National Parks as a means of enhancing management and appreciation and promoting sustainable recreation in high natural value areas.
- 13 Raising awareness of opportunities for clean technologies, waste minimisation and energy efficiency measures and advising companies about how they can take advantage of them.
- 14 Improving evidence and raising awareness of the value and economic significance of ecosystem services, and ensuring that implementation of key policy developments takes account of their value (including the Flood Management Policy Review; Water Framework Directive; Forestry Strategy; Marine Bill; Integrated Coastal Zone Management Strategy; new Rural Development Programme; Biodiversity Action Plan and Sustainable Development Strategy).
  - The economic significance of environmental management activity in industry and the wider economy
  - The ecosystem services provided by Northern Ireland's environment, and their significance to the regional economy.
- 15 The establishment by central government of a cross-departmental group on developing the NI Environmental Economy and a wider Environmental Economy forum involving NGOs, Local Government and businesses

