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# TOWARDS A LAND STRATEGY FOR NORTHERN IRELAND

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A report prepared in  
collaboration with the  
Land Matters Taskforce

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## ACRONYMS

<b>AD</b>	Anaerobic Digestion	<b>NCALO</b>	Nature Conservation and Amenity Lands Order
<b>ANC</b>	Area of Natural Constraint	<b>NIAE</b>	Northern Ireland Environment Agency
<b>AONB</b>	Area of Outstanding Natural Beauty	<b>NIE</b>	Northern Ireland Executive
<b>BGS</b>	British Geological Survey	<b>NISRA</b>	Northern Ireland Statistics and Research Agency
<b>CAAN</b>	Countryside Access and Activities Network	<b>TNI</b>	Tourism Northern Ireland
<b>CAP</b>	Common Agricultural Policy	<b>NLS</b>	National Landscape Strategy
<b>CC</b>	Climate Change	<b>ORESAP</b>	Offshore Renewable Energy Strategic Action Plan
<b>DAHG</b>	Department of Arts, Heritage and the Gaeltacht	<b>RBD</b>	River Basin District
<b>DETI</b>	Department of Enterprise, Trade and Investment	<b>RBMP</b>	River Basin Management Plan
<b>DOENI</b>	Department of the Environment Northern Ireland	<b>RDP</b>	Rural Development Programme
<b>DTNI</b>	Development Trusts Northern Ireland	<b>RDS</b>	Regional Development Strategy
<b>ELC</b>	European Landscape Convention	<b>SCAMP</b>	Sustainable Catchment and Management Plan
<b>GES</b>	Good Ecological Status	<b>SPG</b>	Supplementary Planning Guidance
<b>GHG</b>	GreenHouse Gas	<b>SPPS</b>	Strategic Planning Policy Statement
<b>LCA</b>	Landscape Character Assessment	<b>SWMI</b>	Significant Water Management Issue
<b>LFA</b>	Less Favoured Area	<b>UKFS</b>	United Kingdom Forestry Standard
<b>LMA</b>	Local Management Area	<b>WEAG</b>	Woodland Expansion Advisory Group
<b>LMTF</b>	Land Matters Task Force	<b>WFD</b>	Water Framework Directive
<b>LSNI</b>	Land Strategy Northern Ireland		
<b>MHT</b>	Mourne Heritage Trust		



## FOREWORD

Central to any consideration of a land strategy is the issue of who owns and occupies the land. This has long been an emotive and contentious subject in Ireland, reflecting, and to some defining, the turbulent history of the island. There has been a long sequence of change over the past millennium which, with accompanying shifts in social and political systems and in settlement patterns, has added layers of complexity to an original unusual system of land holding.

In early Ireland tenure was based on ownership by a kinship group, with inheritance by division between sons, with periodic reassignments, but complicated by obligations to the family. These stipulated that land could not be disposed of without the consent of the kindred, and it had to be cared for so as not to reduce its value or harm the interests of fellow kinsmen. This system was accompanied by a non-nucleated settlement pattern reflecting the pastoral nature of agriculture, dictated by the soils and climate of the island.

The Anglo-Normans introduced a very different system of land tenure following their invasion of Ireland in the 12th century. This was the feudal system, rooted in lordship rather than ownership, whereby the king ultimately owned all of the land but granted tenure over most of it to a descending sequence of tenants: senior barons, barons, knights and freemen. These were all obliged to provide service, often military, to their overlord in the sequence. This was accompanied by a shift in settlement patterns to more nucleated settlements, based on the manors of the senior tenants. The traditional and new systems had little or nothing in common, and the seeds of conflict were sown in mutual incomprehension.

Over the succeeding centuries the imposed system, with accompanying periods of confiscation and, particularly in the north, plantation, evolved to become a patchwork of large estates, each with many tenants who paid rent rather than providing service. The introduction of the potato, a food crop ideally suited to the Irish climate, led to a rapid increase in population in the 18th century, with much sub-division of holdings into very small parcels of land. Abuses of the landlord/tenant relationship, combined with long-term resentment of confiscations and finally the terrible famine of the late 1840s, led to significant and growing agrarian unrest in the second half of the 19th century. Eventually this resulted in a series of Land Acts, starting in 1881, which provided mechanisms for tenants to purchase their land from landlords through a system of loans from the government. This process was initially slow but gathered huge momentum with the 1903 Land Act (the Wyndham Act) which provided conditions that were attractive to both landlords and tenants. The process culminated in the post-partition Northern Ireland Land Act of 1925 which made the completion of tenant purchase compulsory.

The primary outcome was the complete break up of all estates producing a very large number of small owner-occupied landholdings. The continuing existence of the Land Acts meant that land could not be let as a tenancy, and a new system of land letting was developed, whereby

the tenant rented the land for 11 months of any year, with the owner retaining it (often in theory only) for the twelfth month so that the tenant could not acquire it by right. This system, known as conacre, has persisted to the present mainly because it provides certain fiscal advantages, though the Land Acts were finally repealed in 2005.

A secondary result was the retention in most cases of certain rights associated with the land, including those of turbarry, shooting and fishing, by the original owners. This separation of rights has further complicated the land tenure picture, and often been a source of conflict.

In many ways the current system of land ownership has much in common with the early Irish model. It is ownership-based, with strong individual and family attachment to the land, meaning that very little land changes hands, even though most holdings are no longer viable on their own as agricultural enterprises. There is still a strong preference for rural dwelling, outside of nucleated settlements, with a perception that family members should be able to live on family land. The main difference is that inheritance by primogeniture is now the norm, so that holdings are not becoming progressively smaller. However the relatively recent (re)acquisition of the land means that in general the primary focus of landowners tends to be on ownership rather than stewardship. As Kevin Whelan has written in the Atlas of the Irish Rural Landscape (1997):

*'By comparison with the actual ownership of land, the use made of it was of secondary importance; the symbolic rather than the use value of the land counted. Hardly any land passed onto the market; there was little or no rationalisation. The actual land-structure pertaining at the time of the transfer to owner occupancy was fossilised.'*

This has led to a strong emphasis on the rights rather than the responsibilities that accompany the possession of land. There is a resistance to change, particularly to anything that might be seen as eroding any of those rights. For example there is no system of public rights of way across land in Northern Ireland, and very strong opposition to any form of wider public access. Similarly there has been deep suspicion about any form of landscape protection, with widespread antipathy to the introduction of National Parks and statutory management of Areas of Outstanding Natural Beauty.

A Land Strategy for Northern Ireland must recognise the often strongly held views of landowners, communities and other stakeholder groups, and work with them to find a way forward that can be accepted by all. This will not be easy, and requires engagement with landowners early in the process, and a clear explanation of what might be involved in a Strategy, and how it would be in the best interests of everybody, both now and in the foreseeable future, given the increasing and conflicting demands on our finite and limited resource.

**Patrick Casement LMTF Deputy Chair**  
January 2015



## EXECUTIVE SUMMARY

Land is a finite resource, under strain from ever-increasing societal demands, with a number of major global issues having a marked impact on how land is used in Northern Ireland.

*Land is one of Northern Ireland's most important assets, providing the goods and services upon which human existence depends, and the source of future societal well-being and prosperity.*

This report reviews the contributions that land makes to the economic and social fabric of Northern Ireland and the realisation of sustainable development and the principle pressures placed on the overall resource. Compilation of this report was informed by a range of stakeholder perspectives, and from detailed observation of the development of the Scottish Land Use Strategy.

The principal recommendation of the review is to progress the planning, development and implementation of a Land Strategy for Northern Ireland by 2016. The vision of such a strategy would be for land and landscapes to be managed for the benefit of people's well-being and prosperity, respecting the views of communities, groups and individuals, striving for environmental excellence, and making best use of its multi-functionality. Such a strategy would sit above the suite of sectoral policies, and aim to provide a framework to manage conflicting policy priorities and balance competing demands on land.

However, a Land Strategy cannot, and should not, determine actual land use in specific localities; this should be informed locally by communities, groups and individuals. Rather, the nature of the strategy set out in this report is one which provides an overarching framework to ensure that local and regional policy and decision-making around land contributes to fulfilling the strategic needs of Northern Ireland. It also comprises a set of guiding principles which accord with the three tenets of sustainability and provide an overall context for decision-making on the use of land, irrespective of the level at which decisions are made.

A Land Strategy would provide strategic guidance to assist in planning for, and managing, the ongoing pressures for change. It should be developed on a cross-Departmental basis and sit above the Strategic Planning Policy Statement (SPPS) in the existing hierarchy of Northern Ireland Government strategies, to help align public and private aspirations for economic and societal well-being and prosperity, through the strategic use of land.

*The successful implementation of the Land Strategy would contribute to ensuring that the land base in Northern Ireland is maintained and enhanced to provide continued and improved benefits to society both now and in the future.*



## 1 INTRODUCTION

The LMTF recognises 'land' and 'landscape' as overarching contexts leading to and arising from 'land use'.

Land use refers to the distinct types of use for areas of land. Land use planning seeks to spatially order and regulate human use and development of land to avoid conflicts between uses, both at the local and regional / national scale. Land use planning practice is dependent on a specific interest in the land (usually land ownership or land management) and is driven by sectoral demands (e.g. energy, tourism, agriculture). Whilst this approach can avoid conflict between uses, often the development of one use does not enhance opportunities for other uses; land use is often perceived as mono-functional, without sufficiently concentrating on enhancing and sustaining the environmental and cultural resource on which it depends.

Landscape (an internationally recognised term defined by the European Landscape Convention) refers to the living action and interaction in places of natural and human (including cultural) factors, represented physically, visually, ecologically, culturally and intangibly, and interconnected between all areas, scales and time. A landscape approach aims to reconcile specific spatial land use with natural and cultural processes (connected between all areas, scales and time) as a means of enhancing and protecting cultural and natural resources, both site-specifically and benefitting all other areas, time and scales.



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## 1.1 BACKGROUND

The Northern Ireland Land Matters Task Force (LMTF) identified the positive contribution that a Land Strategy could make in Northern Ireland. This report presents proposals and recommendations for such a Strategy, including a vision, rationale, and set of principles. The report was commissioned by the LMTF, while the content was planned and developed by the James Hutton Institute and Queen's University Belfast, in consultation with members of the LMTF and other stakeholders in Northern Ireland.

Experience of developing the Scottish Land Use Strategy (Scottish Government, 2011) informed initial thinking which was then debated and revised to reflect the particular needs and aspirations of Northern Ireland. The process of engagement included telephone interviews with stakeholders, a stakeholder workshop and ongoing feedback from the LMTF which informed the creation of a vision and underlying principles of a Land Strategy.

*This report is not an exhaustive overview of land related issues. Rather, the report examines some of the key topics that a land strategy should consider and a number of key challenges that it should seek to address.*

## 1.2 LAND OWNERSHIP

As in many other countries, the topic of land ownership is an emotive issue in Northern Ireland (Murphy, 1999; Bull, 1996). Deep cultural attachment to land in Northern Ireland stems from many factors including the desire to maintain livelihoods and/or, control and protect private interests in land, and rights to land secured over many years, in addition to ethno-national allegiances and the emotional connection between people and the memory of how land was acquired and held for many generations.

In Northern Ireland, the framework for land ownership and thus future land uses was set out in the Irish Land Tenure Acts of the 1800s and early 1900s, two examples of which were the Landlord and Tenant Law Act (Ireland) of 1860, the Land Purchase Acts of 1885, and the repeal of the Land Acts in 2005 opening new forms of tenancy. Progressively, these legal reforms ended the feudal arrangements between landlord and tenant, introducing new contract-based arrangements and enabled tenants to purchase a

freehold interest in land. An outcome of these Acts is a transfer of almost all land to small tenant holdings from previous land owners, and the progressive development of a pattern of land ownership in rural areas split between small private agricultural holdings, large private estates, the public sector, NGOs and private trusts, such as the National Trust.

A characteristic of Northern Ireland is that due to the lengthy process ('struggle') of reform of land ownership, land owners have cultural, social and business reasons to maintain their land holding. As a consequence, there are few sales of land each year. Figures for 2000 to 2005 show that there were between 44 and 174 per annum (average 74) sales, of land areas between 520 and 1,614 ha (average 823 ha) (Department of Agriculture and Rural Development, 2013). In 2013 there were 24,503 registered farms managing 1 million ha. Most farms include some rented land. In 2013 48% were entirely owner-occupied, 46% with a mix of owned and rented, and 5.9% entirely rented or leased (Department of Agriculture and Rural Development, 2013). In 2007 (latest figures available) 68.5% of the area agricultural land was owner-occupied. Unique to Ireland is a system of 'conacre', i.e. a system of short-term lettings, nominally for 11 months or 364 days. This amounts to c. 33% of agricultural land (2007 figures). Other forms of rights to land also exist, such as commonage of grazing, and Turbary Rights to the cutting of peat for fuel. Some of these rights are held by different people, resulting in a complex governance of land, and rights to its uses

The highly fragmented system of land ownership (average farm size of 40ha in Northern Ireland, and in some areas such as the Mourne AONB the average farm size is c.15 ha), with small field sizes and a high number of owner occupied farms or rights holders creates difficulty in obtaining consensus around how land is used, functions and appears and in striking a balance between the private and public interests. Indeed, the economic viability of small farms is of ongoing concern (e.g. Davidova et al., 2013), with farms in Northern Ireland highly dependent on the Single Farm Payment of the Common Agricultural Policy (CAP). Significant changes in support mechanisms or ownership could lead to considerable change in the character of landscape.



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In Northern Ireland 25% of land is designated under AONB status (341,400 ha) which comprises land in both public and private ownership. AONB status allows the Department of the Environment to create and support arrangements for the management of land for purposes of conservation and recreation (see also Section 5.2, Landscape), including the promotion of enjoyment of special qualities of the area. However, compared to other UK regions, there are limited formal rights of way across Northern Ireland. Public access in Northern Ireland is commonly 'de facto' in nature and as the Mourne AONB Access Study (Countryside Access and Activities Network, 2007) demonstrates, access can create tension between users and landowners. For example, the study reported concerns around property damage, insurance, liability and maintenance. In certain places, partnerships between landowners and management bodies (such as Mourne Heritage Trust (MHT), Causeway Coast and Glens Heritage Trust, Lagan Valley Regional Park and Cuilcagh Mountain Global Geopark) have often successfully managed the pressures posed by recreational access. However, resources to these bodies tend to be limited and inconsistent by comparison to those managing similar areas in the rest of the UK, while other areas have no such management arrangements. Thus, significant pressures and tensions still go unaddressed.

A land strategy would not result in any change to the system of land ownership in Northern Ireland. Rather, the process of developing the strategy should seek direct input from land owners, managers and other stakeholders.

*The strategy would aim to deliver more strategic use of land to help contribute to sustaining the livelihoods (both now and in the future) of those who depend on the land, while ensuring land is maintained and managed so that it continues to provide multiple benefits to society (clean water, food, renewable energy opportunities for recreation, clean air, aggregates, maintaining landscape quality and natural capital).*



## 2 RATIONALE FOR A STRATEGY

Land is one of Northern Ireland's most important assets; it not only provides the goods and services upon which human existence depends (food, water and energy for example) but provides the source of future societal well-being and prosperity. Land serves multiple functions as it is used for recreation and enjoyment, housing, employment, energy production, agricultural production and carbon sequestration to name but a few. Indeed, Northern Ireland's unique landscape gives physical/visual and experiential expression to a rich cultural heritage and legacy of human interaction with the land.

However, land is a finite resource which is under strain from ever-increasing societal demands (Environment and Heritage Service, 2008). A number of major global issues are having, and will continue to have, a marked impact on how land is used in Northern Ireland. For example, rising energy prices and energy security concerns drive the need for indigenous energy production. Meanwhile, changing patterns of climate and weather have implications for agricultural productivity, soil erosion and flood risk management, whilst management responses to these threats must account for obligations around biodiversity. A strategic approach to managing land will help Northern Ireland adapt to changing conditions.

The Northern Ireland Programme for Government (2011-2015) aims to create 'a vibrant economy which can transform our society while dealing with the deprivation and poverty which has affected some of our communities for generations'. The way in which the precious land resource is maintained and regulated will impact fundamentally on well-being and prosperity. Therefore, it is important to undertake a strategic evaluation of the capabilities and potential of land resources, whilst recognising that this may change with environmental pressures. Indeed, land ownership, rights and governance structures ultimately determine how land is actually used; therefore, people must be at the heart of this process.

Land is subject to many policies and regulations emanating from different tiers of government (Global - Europe - UK - Northern Ireland – local authorities). Between and within these tiers, policies do not always exist in harmony. In fact, there are often clear conflicts. Thus, agricultural production (driven, for example, by national targets) can impact upon water quality and terrestrial and aquatic habitats, thus jeopardising compliance with the EU Water Framework Directive (European Union, 2010) and the Habitats Directive (European Union, 1992). Meanwhile, renewable energy infrastructure constructed to meet EC Renewable Energy Directive targets can have a detrimental impact on local habitats and landscape quality and land available for agricultural production. Landscape-based tourism, an important element of the Programme for Government objectives for rural economic development can, if unmanaged, place a strain on the environmental jewels that attract and support this activity.

A more integrated approach aimed at the harmonisation of policy is required. A Northern Ireland Land Strategy would sit above the suite of sectorial policies and alongside other strategic documents in Northern Ireland (see Appendix 10.1). It would help provide the framework to manage conflicting policy priorities and balance the competing demands on land. A strategic approach to land management will help ensure that land continues to provide goods and services to society while minimising adverse impacts on the natural resource (land) base. However, a Land Strategy cannot, and should not, determine actual land use in specific localities; this should be informed locally by landowners, communities, groups and individuals. Rather, a strategy would provide an overarching framework to ensure that local and regional policy and decision-making contributes to fulfilling the strategic needs of Northern Ireland. At a time of local government reform, it would provide strategic direction and ensure appropriate consistency across the new Council areas.

### 3 A VISION FOR NORTHERN IRELAND'S LAND

*Land and landscapes managed to deliver well-being and prosperity, respecting the views of communities, groups and individuals, striving for environmental excellence, and taking advantage of the multiple functions of land.*

### 4 GENERAL PRINCIPLES

A Land Strategy should contain a number of high-level principles. The principles identified below accord with the three tenets of sustainability (society, economy and environment), and provide an overall context for decision-making on the use of land, irrespective of the level at which decisions are made. A Northern Ireland Land Strategy should include the following overarching principles:

- A)** Land should be recognised as multi-functional and opportunities for deriving multiple benefits should be encouraged and incentivised.
- B)** Regulation should protect essential public interests whilst avoiding placing an onerous burden on businesses and landowners.
- C)** Where land is highly suitable for a key primary function (for example food production, flood management, tourism and recreation, carbon storage), this function should be recognised in decision-making.
- D)** Different ecosystems provide different benefits, though it should be recognised that they are not discrete entities existing in isolation from each other. It is important to recognise that decisions by individual land managers can have implications at a broader scale which can affect the delivery of those benefits.
- E)** Decisions regarding land use and management can have dramatic impacts on landscape quality and character, including its cultural history and endowment; decisions must therefore respect the vulnerability of landscapes to change and the deep cultural sensitivities around land.
- F)** The opportunities and threats posed by climate change must be central to decisions about how land is used in order to contribute effectively to climate change adaptation and mitigation.
- G)** Derelict, vacant or underused land represents a missed economic, social and environmental opportunity, and in some cases an environmental hazard; its utilisation and/or stewardship should be prioritised and incentivised whilst respecting that some land has an inherent value in its undeveloped nature.



- H)** Where agreed, responsible access to land and provision of green and historic spaces and places for outdoor recreation should be encouraged to deliver improved health and well-being and opportunities for tourism.
- I)** There is a need for greater awareness of, and engagement from, wider civil society in Northern Ireland in land-related matters; over time this will promote a more broadly based and inclusive approach to policy and decision-making.
- J)** Adequate designations, management arrangements and resources to protect and enhance Northern Ireland's most precious landscapes and sustainably develop their potential to deliver economic and social benefit.



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## 5 PRINCIPAL USES AND ISSUES

*It is acknowledged that the following is not a comprehensive list of the uses and issues impacting on Northern Ireland's Land, but is only a representative selection. Amongst other matters not discussed herein, settlement and building, infrastructure and communications, economy and commerce are important. The Land Strategy advocated by this document will serve to pursue and benefit each of these uses and issues integrally.*

## 5.1 CLIMATE CHANGE

Climate change (CC) is an issue of global importance with direct consequences for Northern Ireland. Northern Ireland will face a number of detrimental climate change impacts (for example, increased urban runoff, increased storm surge, temperature changes, coastal flooding and sea level rise) throughout the coming century as society and land interacts with an increasingly disrupted atmospheric system. CC is a cross-sectoral issue and, as such, is relevant to the other thematic areas addressed in this report. Agriculture (26%), transport (21%), energy supply (19%) and the residential sector (19%) contribute 85% of Northern Ireland's greenhouse gas (GHG) emissions (DoENI, 2013). These emissions are inextricably linked to the way in which Northern Ireland uses its land resource.

While there is no CC legislation specific to Northern Ireland, the region is still committed to CC action under the UK Climate Change Act (2008). The Northern Ireland Programme for Government (2011-15) sets an emissions reduction target of 35% on 1990 levels by 2025. Projections in the Cross-Departmental Working Group on Climate Change, (2013) reports that GHG emissions will only be 28.3% lower in 2025 than in 1990. A positive step for Northern Ireland is the production of a Northern Ireland Adaptation Programme (2014-2019) (DoENI, 2014a), which outlines strategic objectives in relation to climate change (with key areas for action identified as flooding, water, natural environment, agriculture and forestry), including the proposals and policies through which each government Department will meet these objectives, and the proposed timescales for delivery. In the context of both reducing emissions and adapting to CC impacts, the way in which land is used is paramount to responding to CC.

*Successful management of Climate Change in Northern Ireland will depend on furthering understanding of the connectedness of the atmospheric system to the land surface and the ways in which it is used.*



Thus, delivering effective mitigation and adaptation will directly impact on land, in terms of how it functions, appears and responds to weather events. It will require cross-sectoral cooperation as well as collaboration between, and a commitment to action from, all government Departments. Indeed, actions in all sectors are inextricably linked and can determine how effectively climate change mitigation and adaptation is delivered. For example, there is a range of ways in which CC mitigation may be approached in the agricultural sector that include:

- better livestock and nutrient management delivering reduced emissions
- management of biodiversity, forestry and agriculture for carbon sequestration and storage (partially offsetting emissions)
- assessment of form and type of energy production
- flood management- land will be required to mitigate the effects of changed rainfall patterns and sea level rise

Some of these are being addressed by the Greenhouse Gas Implementation Partnership (GHGIP), established by DARD, focussing on improved farmer awareness and implementation of on-farm efficiency measures to reduce the carbon intensity of local food production.

CC adaptation requires a strategic re-assessment of how land should be used and managed. Land management needs to adapt to changing weather patterns to ensure that land can provide continued and improved benefits to society (ecosystem services). For example, the capacity of land to contribute to flood alleviation (through water storage) is a vital consideration that needs to carry weight in decision-making. This kind of land use brings with it wider benefits in terms of open space and recreation, with knock-on effects for societal health and well-being. This is the kind of multi-benefit outcome that a strategic assessment of land use in Northern Ireland can deliver.

**5.2 LANDSCAPE PLANNING, PROTECTION AND MANAGEMENT**

The European Landscape Convention (ELC; Council of Europe, 2000) defines landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.” The ELC covers rural and urban areas and includes degraded as well as everyday landscapes. It recognises landscape “as a resource favourable to economic activity” with the potential for transformation due to developments in sectors such as agriculture, forestry, transport, tourism and recreation”. Indeed, a principle aim of the ELC is to “promote landscape protection, management and planning”.

The Republic of Ireland has developed a National Landscape Strategy (NLS) (DAHG, 2011) which sits alongside the National Spatial Strategy (2002-2020) (Department of Environment and Local Government, 2002) and the National Climate Change Strategy (2007-2012) (Department of the Environment, Heritage and Local Government, 2007). The NLS is strongly influenced by the principles of the ELC, that the value of all places (urban, rural, coastal, marine, natural, manmade) are interconnected, and all people and actions are responsible for their quality. The NLA has been established as a means to manage the changes affecting all places sustainably.



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Its aim is not to preserve landscapes in their existing state. While aspects of the strategy are discussed from an ‘all-island’ perspective, the assessments of LCA for Northern Ireland and the Republic of Ireland have been undertaken separately. In Northern Ireland, the ELC has yet to be fully adopted and implemented. However, a Draft Landscape Charter (Northern Ireland Environment Agency, 2014a) has been published, and DOE has indicated its intention to prepare a Landscape Strategy for Northern Ireland to

directly meet Northern Ireland’s obligations as ratified within the ELC, and outlining policy objectives through to the mid-2020s. This Landscape Strategy has been proposed to reconcile specific spatial land use with natural and socio-cultural (including economic) processes, multifunctionally, and connecting, enhancing and protecting between all areas, scales and time. It will be informed by an updated regional level Landscape Character Assessment (LCA; Northern Ireland Environment Agency, 2014b) and evidence accrued about the impacts of forces for change on landscapes (e.g. climate change, renewable energy, demographics, settlement patterns). Landscape Character Assessment maps the historic interaction between farming systems and the natural characteristics of the land and provides a framework for articulating place agendas making the vision locally relevant. It can also provide the framework for delivery through co-operation between the public and private sectors.

Landscapes in Northern Ireland are under increasing strain from socio-economic and biophysical pressures (for example, see sections 5.5 on Woodland and 5.7 on Renewable Energy). Indeed, landscape integrity is being jeopardised by a planning and regulatory system that lacks strategic vision and guidance along with inconsistent and relatively poorly resourced arrangements for landscape management services. To date, in Northern Ireland, the implementation of policies for management, protection or planning of landscapes includes formal landscape designations and the Landscape Character Assessment.

Area of Outstanding Natural Beauty (AONB) designation is intended to support the management of land for purposes of conservation and recreation. Under the Nature Conservation and Amenity Lands Order (NI) 1985 (NCALO), AONBs have four aims: (i) conserve or enhance the natural beauty or amenities of an area; (ii) conserve wildlife, historic objects or natural phenomena within it; (iii) promote its enjoyment by the public; and (iv) provide or maintain public access to it. An aim of the draft Tourism Strategy for Northern Ireland to 2020 (DETI, 2010a) (see Section 5.8 on Tourism and Recreation) was to support proposals for National Park designation. However, following consultation, national parks have not been progressed. Therefore, the eight AONBs (covering c.25% of the land area of Northern Ireland) are the principal mechanism for protection and enhancement of landscapes, (although it should be noted that there are organisations, like Belfast Hills Partnership, Lough Neagh Partnership, Marble Arch Caves Global Geopark and some of those funded under the Heritage Lottery Fund’s Landscape Partnership initiative, working to protect and enhance areas without a landscape designation).

AONB management bodies in Northern Ireland are primarily non-statutory. In comparison to other parts of the UK, they are poorly resourced in their extent and security of funding and receive limited protection through the planning system.



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*The limitations of existing arrangements for landscape protection and enhancement need to be addressed if these assets (upon which the well-being and prosperity of local communities and NI as a whole depend) are to be maintained.*

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The Northern Ireland LCA identifies 130 distinct character areas and sets out descriptions of each character unit, including an overview of landscape condition and sensitivity to change and principles for their management and for accommodating new development. Use is made of the LCA in a number of guidelines including those for wind energy development (Northern Ireland Environment Agency, 2010). Recently, Seascape character areas (Northern Ireland Environment Agency, 2014b) have been identified to inform the protection, management and planning of seascapes, and contribute to delivery of the ELC. Knowledge of the direct and indirect impacts of environmental and human influences on landscapes and seascapes will improve understanding of individual landscape features (e.g. iconic features), and the wider cultural significance of landscapes including as community assets. Such understanding is a key aspect of the ELC and can inform improved strategies for protection, mitigation of risks and increased resilience of landscapes.

The combination of landscape and seascape character provides a framework within which biophysical and cultural aspects of landscapes are integrated, with relevant landscape concepts (such as stewardship, naturalness, complexity and, visual scale; Tveit et al., 2006) providing a basis for the assessment of the sensitivity of landscapes to the pressures for change. Such sensitivity may be to visual, physical or experiential aspects of landscape.

A Land Strategy should reflect the integrated nature of landscape, the relevance of single and cumulative effects of pressures for change on the highly valued and everyday landscapes, and the significance of both short and long-term changes on the evolving character of landscapes.



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### 5.3 AGRICULTURE

Agriculture has shaped much of the landscape of rural Northern Ireland, occupying approximately 73.9% of the total land area (DARD, 2013), producing food and a range of public goods on which the people of Northern Ireland depend. Today, grassland and therefore livestock farming takes precedence, accounting for the majority of the agricultural area. The agriculture sector employs 3.5% of the total workforce in Northern Ireland, well above the UK average of 1.2% (DARD, 2013). However, DARD (2013) classifies 77.8% of farms in Northern Ireland as very small, and 12.5% as small. Indeed, the annual Agricultural Census for Northern Ireland illustrates a steady decline in farm numbers, an increase in farm households seeking off-farm work, an increase in part-time farming, and the progressive formation of larger size production units.

Since WWII, farming in Northern Ireland has changed significantly to cope with increasing demands from industry and consumers. Technological improvement combined with a temperate climate means that Northern Ireland has relatively sophisticated and productive livestock farming systems though this is limited by small farm size and investment capability. However, an unintended consequence of modern farming in some areas has been a reduction in other countryside qualities that are needed and valued: wildlife, landscape character, carbon storage, and water and soil quality (Principles a and d). Indeed, agricultural activity, driven by the EU Common Agricultural Policy (CAP), can have both positive and negative impacts upon the countryside. The latest reform of the CAP and design of the new Rural Development Programme (2014-2020) should ensure adequate resources are available to help farming achieve agricultural output in a sustainable manner.

In April 2013, the Agri-Food Strategy Board produced 'Going for Growth', a strategic action plan for growth in the sector up to 2020. The strategy is very ambitious in terms of projected growth in employment (15%) and sales (60% overall, with 75% of sales outside Northern Ireland). There is acknowledgement that this expansion must be carried out whilst 'sustaining our land' and 'sustaining our water quality', to take advantage of marketing Northern Ireland produce as 'clean and green' as promoted by the Northern Ireland Tourist Board (Northern Ireland Tourist Board, 2013).

The most recent Northern Ireland State of the Environment Report (Northern Ireland Environment Agency, 2013) identifies four major areas of concern:

- ammonia emissions, mostly due to livestock, pose a risk to sensitive habitats and ecosystems
- only one quarter of rivers achieve the requirements of the EU Water Framework Directive (WFD) (European Union, 2010) objective, due to diffuse nitrate pollution impacting on the chemical status of surface waters
- continued loss of semi-natural habitats mainly due to agricultural conversion and rural building
- farmland wading birds have declined by 83% since 1987 signaling problems elsewhere within the ecosystem.

As outlined in the Agri-Food strategy, the projected increase in production, with the resultant by-products (slurry and poultry litter in particular) may put further pressure on the environment and a diminishing land resource. Measures to reduce pollution are possible through agri-environment schemes or riparian tree



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planting, but this requires adequate resourcing and, on rented and conacre land, the willingness of both the landlord and tenant to participate (Principle i). Crop diversification and Environmental Focus Areas of the CAP greening measures package offer little environmental enhancement opportunities to Northern Ireland as only arable areas are eligible. The requirement to maintain the permanent grass area (which covers over half of Northern Ireland) should help to secure soil carbon stocks; this is particularly relevant to Northern Ireland where high levels of soil organic carbon prevail over much of the rough grazing land in comparison to much of the rest of the EU. As Northern Ireland moves towards an area based distribution of the Single Farm Payment, analysis should be carried out on the environmental and economic impacts of this payment shift.

*Food production is a vital activity on which we all depend; however the challenge lies in the ability to increase agricultural production to sustain livelihoods and meet the growing demand for food in a way which does not negatively impact upon the multiple benefits of a sustainably-farmed landscape.*

The CAP provides an important framework within which the agricultural industry operates (Principle b). However, the ambitious business case contained in the 'Going for Growth' strategy must be matched with an equal desire for environmental sustainability. In the absence of an overall land strategy to facilitate sustainable growth, it is questionable how this will be achieved without further compromising environmental quality.

DARD is developing an agricultural land use strategy, however unlike the land or landscape strategy advocated by LMTF and DOE, this is expected to be sectoral and less of a holistic approach to land use.

#### 5.4 BIODIVERSITY

Biodiversity in Northern Ireland sits within a broader international context, notably the Convention on Biological Diversity which came into force over 20 years ago and its associated targets and the European Union 2020 Biodiversity Strategy. One of the aims of the Northern Ireland Biodiversity Strategy (DoENI, 2014b) was to halt biodiversity loss by 2016. A review conducted by the Northern Ireland Biodiversity Group (2009) reported that “progress has been made with the processes and mechanisms of halting biodiversity loss” but “there is little hard evidence that the deterioration of Northern Ireland’s biodiversity is actually slowing down”. This is supported by the State of the Environment report (Northern Ireland Environment Agency, 2013), backed up by the Lawton Review (Lawton, et al. 2010), which states that key elements of Northern Ireland’s biodiversity remain in decline, triggered presumably by the decline in habitats upon which many species rely. This was progressed through the Natural Environment White Paper ‘The Natural Choice: securing the value of nature’, which was published on 7 June 2011, followed by a number of subsequent progress reports.

*Pressures on biodiversity in Northern Ireland stem from multiple factors including climate change, land abandonment, infrastructure development, invasive species and agricultural intensification.*

For example, changes in the agricultural sector have resulted in a general increase in land reclamation, drainage, agricultural production and increased silage production, stocking rates, reductions in mixed farming with impacts for water and air quality. As highlighted above, the target to grow the agri-food sector by 60% will heighten the challenge of halting biodiversity loss. For example, increasing intensive pig and dairy productions, in some cases adjacent to vulnerable areas such as bogs could have adverse effects on habitat condition. Similarly water quality issues (see Section 5.6 on Water) remain with diffuse nutrient pollution and chemical status of the water environment, both partly attributable to current land management practices.

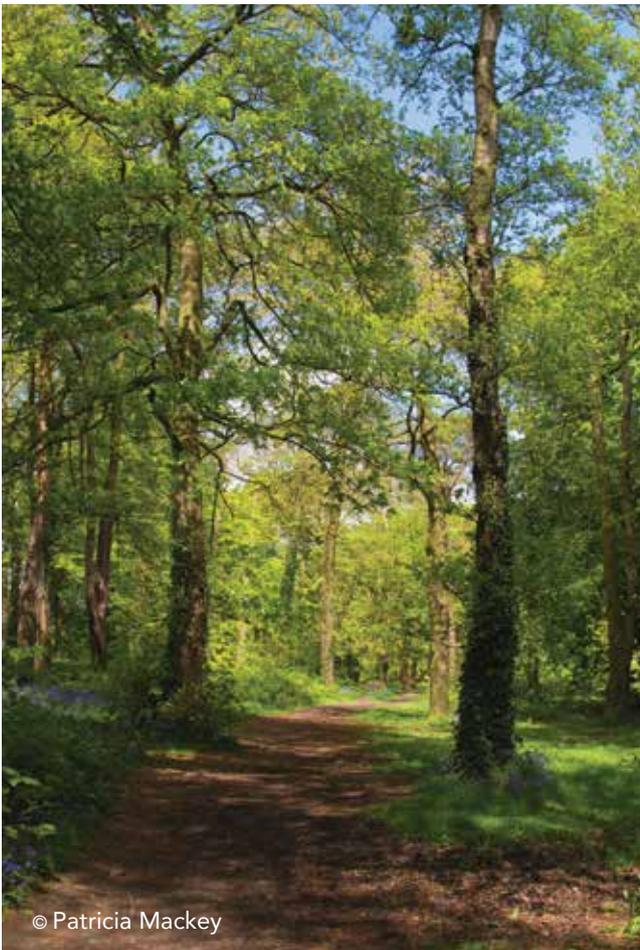
These examples demonstrate the ‘dependency’ between different components of our environment. The State of Environment Report (Northern Ireland Environment Agency, 2013) recognises that “to address these challenges we need to recognise the full value of the services our natural environment and built heritage provide in underpinning a healthy economy, prosperity and well-being in all our decision-making”. This implies a holistic rather than sectoral approach to managing land, and an overarching Land Strategy is an important step to realising this.



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## 5.5 WOODLAND

While some changes in land use are subtle and can result from changes in management within existing land uses, woodland expansion is among the more tangible and visibly dramatic aspects of land-use change. Forestry management in Northern Ireland is guided by the Forestry Act (Northern Ireland) 2010, which includes a duty to manage and develop forests in a way that contributes to the protection of the environment, biodiversity and the mitigation of, or adaptation to, climate change. Guidance on forestry management is also given through the UK Forestry Standard (UKFS).



Forestry occupies approximately 111,000 ha, or 8% of Northern Ireland's land mass (in 2013), of which 55% is managed by the Forest Service and 45% by the private sector. On average the rest of Great Britain has 13.0% (Forestry Commission, 2011a), while Scotland has 17.8% (Forestry Commission, 2011b). The Northern Ireland Forestry Strategy (Forest Service, 2006) included an aim to double woodland cover in Northern Ireland over the next 50 years, predominantly through the transfer of land from agricultural use to forestry. Achieving this target would require conversion annually of over 1,700 ha of open ground to woodland, well in excess of the current rate of 500 ha per annum. This expansion will be funded from the Northern Ireland Rural Development Plan,

although it should be noted that previously there was an underspend in this priority area. A number of factors may be responsible for this, including the rules governing the incentive scheme, the economics of forestry, supply chain issues and the long term nature and impact of converting agricultural land to woodland.

Northern Ireland is lagging some way behind the annual afforestation rate required to achieve its expansion target. In most circumstances, new woodland directly replaces the existing land use (agro-forestry is an exception), with consequences for land users in other sectors. However, woodland provides multiple benefits to society (Principle a), including, recreational opportunities with associated health and well-being benefits (Principle h), employment creation through sustainable forestry, carbon sequestration to facilitate delivery of greenhouse gas reduction targets, renewable energy through biomass production, (Principle f and Section 5.1, Climate Change), water storage and flood alleviation (Principle c and Section 5.6, Water), promotion of biodiversity (Section 5.4), as well as offering educational experiences (Principle j). Under-used or derelict land also provides opportunities for new woodland and the 'greening' of degraded land (Principle g).

The Woodland Expansion Advisory Group (2012) in Scotland identified innovative options for fostering integration between sectors to ensure that woodland offers multiple benefits across a variety of sectors, for example, the use of woodlands as shelter belts for grazing livestock, as riparian woodlands to reduce water pollution, or as silvopastoral agro-forestry. New woodland needs to recognise the sensitivities of landscape change and the cultural associations that landscape evokes (Principle e): new, appropriately-sited woodland, can provide obvious environmental benefits but is not appropriate everywhere, such as on already established protected sites or peatland. It also provides social benefits (e.g. recreational opportunities to improve mental and physical well-being) and potentially new economic opportunities through recreation and sustainable forestry.

*Given the multiple benefits that woodland provides to society, expansion targets should be pursued in a strategic manner, through the identification of appropriate sites and the encouragement of adapted practices.*



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## 5.6 WATER

Overall policy objectives for freshwater are driven by the Water Framework Directive (WFD). The general objective of the WFD is to achieve 'Good Ecological Status' (GES) for all rivers, lakes and marine waters by 2015, with no downward movement between classes. Northern Ireland is at risk of not meeting the 2015 or 2021 objectives for surface waters and groundwaters, as required by the WFD (e.g. approximately 30% of surface waters in both the Neagh Bann and North-eastern Basin Districts are classified as failing to reach GES). Perhaps of more concern is that 17% are identified as at risk of deterioration. According to the State of Environment report (Northern Ireland Environment Agency, 2013), about 30% of rivers across the country are in bad or poor condition, with most lakes in Northern Ireland in less than good condition. Overall, less than 30% of all water bodies are of sufficient quality to meet the requirements of the WFD.

The Bathing Water Directive sets quality standards for Bathing Water, with EU Member States obliged to meet these standards. In 2013, all 23 beaches monitored in Northern Ireland met the EC Bathing Water Directive mandatory standards. However, as of 2011, only one third of marine water bodies met the WFD and Marine Strategy objectives.

The EU Floods Directive is also of relevance, the regulatory function of which is the responsibility of the Rivers Agency in Northern Ireland. Appropriate land management can enhance the ability of the soil to retain water, with inevitable consequences for flood management/alleviation. For example, strategic tree planting and controlled flooding upstream can help alleviate flood risk.

*The role of land in storing water should be recognised in decision making, while the location of new developments should avoid flood plains and areas vulnerable to sea level rise or incursion during storm events.*

Delivery of the WFD in Northern Ireland is divided into three River Basin Districts, two of which are shared with the Republic of Ireland, and managed at a local level through Local Management Area (LMA) Action Plans. Following the publication (2009) of River Basin Management Plans (RBMP) for the three River Basin Districts (RBD), the Northern Ireland Environment Agency (NIEA) have led the process of implementation, along with stakeholders and other relevant government Departments.

Of the five Significant Water Management Issues (SWMIs) identified in each River Basin District (see [www.doeni.gov.uk/niea/water-home/swmi.htm](http://www.doeni.gov.uk/niea/water-home/swmi.htm) for more information), there are two directly related to land and its use - diffuse and point source pollution from agriculture and forestry. A number of measures are already in place such as the Nitrates Action Programme and the Phosphorus (Use in Agriculture) Regulations which have reduced inputs of nutrients to water. The new Countryside Management Scheme, with a more targeted approach to delivering environmental objectives (such as clean water), could provide opportunities for action in this area. Impacts from forestry are increasingly a legacy of old practices and more sustainable silviculture, such as Continuous Cover Forestry, is now a key element of the Forest and Water Guidelines and the Forestry Act (2010).

Diffuse pollution from farm, road, residential and commercial run-off contributes directly to aquifers, rivers, lake and wetland contamination. Given that agriculture is a major source of diffuse pollution in Northern Ireland, this sector is key to identifying and delivering potential solutions.

*Farmers and landowners could be incentivised to deliver freshwater environment objectives through, for example, the creation of riparian woodlands which would also provide new habitats, amenity and landscape diversity.*

Habitat networks could develop over time through optimising the location of agri-environment measures to reduce diffuse pollution; this would require a strategic overview of opportunities (something that a land strategy could fulfil) coupled with more innovative incentive schemes, with groups of landowners working together on complementary schemes across an entire catchment. Such measures would also help future-proof the environment against projected wetter winters and changing rainfall patterns (see UKCP09, [www.ukcip.org.uk](http://www.ukcip.org.uk)). One example of this is the Sustainable Catchment and Management Plan (SCaMP) approach currently being taken forward by Northern Ireland Water. The SCaMP project seeks to improve raw water quality before treatment, on a catchment basis partnering landowners and Environmental NGOs. A second example is the collaboration between Northern Ireland Water, the UFU and farmers in the Derg valley on a voluntary initiative to reduce the impact of pesticides.



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**5.7 RENEWABLE ENERGY**

*Secure, affordable and sustainable energy supply is crucial to achieving economic success. Therefore, the current high dependence on imported fossil fuels in Northern Ireland is at odds with delivering future prosperity and well-being. An important function of land over the coming decades will be to provide sustainable forms of energy through investment in renewables.*

European Union agreements and strategies are seeking competitive, sustainable and secure energy, to cut greenhouse gas emissions, move to low carbon energy systems and identify and exploit new energy alternatives, while recognising the entitlement of people to affordable energy. Principal goals for energy policy (security of supply, competitiveness and sustainability), are presented in the Lisbon Treaty (European Union, 2008). This is translated into the Europe 2020 Strategy for smart, sustainable and inclusive growth, which states that 'secure energy supplies and affordable prices are crucial for our growth, job creation and quality of life'.

Current (2013) European Union targets for energy efficiency and renewable energy sources aim to reduce GHG emissions by 80% by 2050, with the consumption of primary energy reduced by 20% by 2020, by which time renewable energy sources should increase to 20% of final energy consumption. Specific targets are set for sources of renewables and sectors (such as transport, and domestic/commercial energy use and efficiency), progress towards which is monitored under the Renewable Energy Directive (European Union, 2009). New targets for 2030 being discussed for the EU include a 40% cut in emissions and 30% for renewables, possibly with a single emissions goal, sub-sector goals (e.g. agriculture and transport), and nationally set targets. To achieve such targets the role of marine renewables is recognised.

Since the year 2000 there has been rapid growth in the use of land in Northern Ireland for renewable energy generation. The Strategic Framework for Northern Ireland Energy (DETI, 2010b) endorses altering the energy mix to increase diversity and security with a target of 40% renewable electricity by 2020. Between 2003 and 2011 planning consent rates for renewable energy in Northern Ireland (90%) were higher than any other UK jurisdiction (Cowell et al., 2013). Approximately 15% of Northern Ireland's annual electricity is now supplied from indigenous renewable sources. This represents significant progress in terms of contributing to renewable energy targets (NIEL, 2013). The dramatic expansion of renewable energy capacity in Northern Ireland has been achieved primarily, but not exclusively, by onshore wind developments. The planning system plays a crucial role in facilitating and regulating the provision of renewable energy infrastructure.

While PPS18 has facilitated the growth of wind energy generating capacity in Northern Ireland, it has not necessarily had a 'strategic eye' in encouraging appropriate forms of development as exemplified by the spread of large single wind turbines across Northern Ireland. The increasing interest in Solar Farms in the UK, also now evident in Northern Ireland, is an example of the potential for rapid uptake of other new technologies for which there is no strategic plan and capacity studies.



Wind turbines can be intrusive both from a noise and visual perspective which can have significant impacts on landscape quality and amenity. The appropriate siting, design and management of renewable energy infrastructure can minimise negative landscape and local environmental impacts, including disturbance and loss of important bird populations and other habitats and species (BirdLife Europe, 2011). Clustering of turbines can also minimise the level of visual intrusion per MW of electricity generated. The identification of Strategic Search Areas (as adopted in Wales, Welsh Assembly, 2005) provides an option for addressing the highly dispersed pattern of large single wind turbine developments in Northern Ireland. Updated Landscape Character Assessments combined with landscape capacity and environmental sensitivity studies (Section 5.2 on landscape) would enable the identification of spatial zones which encompass land suitable for major wind power developments.

Other unintended consequences of renewable energy infrastructure should also be accounted for. For example, the siting of wind turbines can result in the loss of large



amounts of carbon (in the form of CO<sub>2</sub>) through the removal or drainage of peat around foundations and access roadways which can jeopardise the net carbon savings of the development (Smith et al., 2013). Meanwhile, anaerobic digestion (AD) which has emerged as a partial solution to managing farm waste, could contribute to changes in agricultural land use, with potential implications for issues such as water quality (Section 5.6, Water).

In Northern Ireland, energy scenarios explored for Development Trusts Northern Ireland (DTNI) (RICARDO-AEA, 2013) provide potential pathways to reducing GHG emissions, including increasing uptake of renewable energy and heat, efficiency of buildings and fuel types for transport. The System Operator in Northern Ireland estimates a potential for 2,163 MW of installed capacity of renewable energy in Northern Ireland by 2020, equivalent to c.50% of expected energy demand (SONI and EirGrid, 2011). The onshore renewable electricity action plan (DETI, 2013) includes five scenarios of renewable electricity generation of between 30% and 49% by 2020. All scenarios showed onshore wind as the major contributor (up to 1,350 MW), whilst noting scope for large scale biomass, albeit mainly contributing to the scenario of 49% renewable electricity. Based on the policy relevance and pathways to delivery, one can assume greater investment and uptake of renewable technologies if the current targets are to be achieved. Such targets may also be revised in light of the 5th IPCC Assessment Report (Intergovernmental Panel on Climate Change, 2014), and those from the European Union for 2030.

Both agriculture and marine renewables are likely to become more substantial components of the renewable energy mix as technologies become more reliable and affordable. Globally, there will be a potential conflict continuing between agriculture for food and agriculture for energy such as oil seed rape for biodiesel, corn for bioethanol or coppice woodland for biomass. The Scottish Government has recently published a new agri-renewables strategy (Scottish Government, 2014), which identifies the importance of agricultural businesses in supporting the achievement of targets on renewable energy and heat, and on protecting landscapes and residential amenity. It also identifies constraints to development, such as the deliberations and costs of access to electricity grid networks. This causes frustration to land managers, but is also a challenge for the companies responsible for the long-term planning of the grid, and responding to requests

for small-scale developments, often in remote areas. This Scottish Agri-renewables Strategy could be a useful guide to the development of equivalent approaches in Northern Ireland given the importance of agriculture. The Offshore Renewable Energy Strategic Action Plan (ORESAP) sets out a vision for offshore renewable energy in Northern Ireland, highlighting the importance of marine spatial planning, and the relevance of the UK Marine Policy Statement (March 2011) in setting a framework for development.

The existing pattern of renewable energy infrastructure in Northern Ireland illustrates the lack of strategic guidance underpinning land use in Northern Ireland. A significant challenge lies ahead to maximise renewable energy capacity in a way that minimises the intrusiveness of renewable energy infrastructure.

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*A land strategy could help deliver renewable energy infrastructure in a more strategic manner, taking account of current and future energy needs, landscape capacity/sensitivity, latest renewable technologies.*

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The risks of over-incentivising one particular technology and other unintended consequences to ensure that land continues to meet the needs of people, the environment and the economy, both now and in the future. Furthermore, as in Scotland and Wales, considerable importance should be attached to community engagement in the uptake of renewable energy whether as agents of delivery, or consumers of energy and natural resources.

**5.8 AGGREGATES**

For its size, Northern Ireland represents one of the most varied and complex areas of geology in the world. This diverse geological foundation has resulted in a diverse mineral heritage. Historical extraction focussed on the production of iron ore, coal, lead, salt and building stone. However, since the 1970s, deposits of gold and lignite and a variety of other minerals have been identified.

In contrast, sand and gravel resources are extensive and widespread in Northern Ireland and, as of 2010, there were 183 quarries and sand pits in Northern Ireland, producing 19.5 million tonnes per annum (Quarry Products Northern Ireland, 2010). The aggregates and quarry products are raw materials for public and private sector infrastructure including hospitals, schools, homes and transport systems. Most extraction businesses are reported as being family owned and independent, and almost exclusively in rural areas. Therefore, in addition to the wide range of end uses for quarry products, the industry provides jobs and direct input into local and national economies. However, quarrying operations have a potentially dramatic impact upon the environment and landscape. Therefore, the challenge for operators and regulators is to manage and mitigate against the negatives while contributing positively in areas such as land restoration, biodiversity, geo-diversity and protection of ecosystems.

*Decisions around planning applications for mineral extraction need to balance the need to secure supply of raw materials for the economy with the need to protect sensitive environments*

(e.g. water quality, carbon releases, habitats, landscape) and minimise the impact on other sectors such as tourism. In the new planning dispensation, with local Councils creating their own Development Plans, it is essential that they assess the supply and demand requirements for aggregates not only within their own council area, but also that of other council areas. For example, the new Mid Ulster Council and Derry and Strabane Council Areas will control potentially 90% of the sand extraction in Northern Ireland, with construction activity in Belfast dependent on this supply chain. Therefore, more coordinated decision-making is required to sustain the vital construction material supply chain. The planning system has an important role

to play in safeguarding aggregate and mineral resources. Decisions around the siting and scale of quarry operations should also be informed by landscape capacity studies, landscape character assessments and the location of designated sites and AONBs.

The future uses of quarrying sites should be planned at an early stage in the decision-making process. Once quarrying operations have ceased, land can be 'recycled' or reused. Creative restoration planning can improve the environment in and around quarry sites, or create new land uses such as landfill, agriculture, habitat creation, social amenities, combined wildlife and social amenities, housing, flood management and business or commercial properties.

The quarrying industry is required to meet high standards of environmental performance set by Government with biodiversity and geo-diversity action plans becoming increasingly common throughout the Industry. However, fit-for-purpose regulation is required to reward compliant operators and deliver more robust enforcement action against those who breach planning regulations. For example, there are currently 23 quarries operating outside of the consented areas in Northern Ireland (Northern Ireland Assembly, 2014). British Geological Survey (BGS) provide mineral resource maps which include data on minerals, locations of existing developments and selected landscape, nature conservation and planning designations, while baseline information for Northern Ireland is available through the Mineral Resource MAP (launched in 2012). Sources for such resource assessments have recently included the Tellus Project, which supports the exploration for, and development of, mineral and hydrocarbon resources, informs land-use planning and provides a country-wide environmental baseline.



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*A land strategy would ensure that policies and decisions are informed by a strategic assessment of the role of and future need for (supply and demand) quarrying, amidst the mix of other competing land uses and pressures for landscape change.*

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The principles of a strategy can also be used to inform approaches to new pressures and opportunities for change, such as the currently topic issue of shale gas exploration through hydraulic fracturing (fracking). A planning application for commercial fracking in Northern Ireland has yet to be submitted, however geological sampling is underway to determine the commercial viability of fracking in parts of Northern Ireland. There are gaps in understanding around the long-term consequences of fracking operations and there is a scarcity of reliable information upon which to base a comprehensive analysis of the potential impacts in Northern Ireland specifically. Scientific literature is dominated by studies from the USA which is contextually very different to the UK and indeed Northern Ireland. For example, regulatory regimes, geological formations, landscape scale and form (richly inhabited Northern Irish landscapes), governing arrangements and the system of land ownership all differ. Thorough and robust research is required to better understand the full range of social, economic and environmental impacts associated with this industry and to assess the capacity of the regulatory system in Northern Ireland to regulate an activity such as fracking.

## 5.9 TOURISM AND RECREATION

*Reconnecting people with nature through enhanced recreational opportunities in open and green spaces can help deliver health, social and ultimately economic benefits. In addition to improving physical and mental well-being and enriching cultural identity, Northern Ireland's distinct natural, built and cultural heritage represents an asset that, if utilised in a sustainable manner, can make a significant contribution to delivering economic prosperity in Northern Ireland.*

Tourism and recreation already contribute significantly to the Northern Ireland economy. Between October 2012 and September 2013 there were approximately 4.2m overnight trips in Northern Ireland (NISRA, 2014), an increase of 8% over the previous year, worth an estimated £716m. The draft Tourism Strategy for Northern Ireland to 2020 (DETI, 2010a) reports that tourism provides over 40,000 jobs (c.2010) and a value of £536m (2010 forecast), with a target to grow visitor numbers to 4.5m with an annual revenue of £1 billion by 2020.

The draft Tourism strategy sets out a number of priorities relevant to land: to demonstrate a commitment to increase the amount of agricultural land under environmental enhancement agreement and to conserve and enhance the natural and built environment. The strategy also recognises the role of local authorities in creating 'quality places' for visitors and residents while emphasising the importance of the planning system in delivering sustainable tourism development, through effective policy design and implementation.

Following successful completion of the NI2012 'Our Time, Our Place' campaign, tourism expenditure increased by 7% in 2012 to £683 million (Northern Ireland Executive, 2013). Northern Ireland is now ahead of schedule in terms of the Programme for Government's ambition for revenue from tourism. To help turn the aim of an authentic visitor experience into a tangible business reality Tourism Northern Ireland is promoting the development of key visitor propositions around experiential pillars, including 'Unique Outdoors' 'Coasts and Lakes 'Naturally NI' 'creative vibe' and 'Living Legends'. Visitors increasingly want to be engaged and immersed in the places they visit. Much of Northern Ireland's potential to deliver distinctive experiences is bound up in land and its distinctive natural and built heritage.

Our Great Outdoors – The Outdoor Recreation Action Plan for Northern Ireland (2014) recognises Northern Ireland's spectacular landscapes, seascapes and heritage as a vital tourism product. Outdoor enthusiasts feel a strong sense of connection with wild and natural landscapes and want to see these areas protected and their special qualities maintained.

The interdependency of tourism related economic benefits with landscape quality and investment in the provision and management of formal and informal tourist infrastructure, links tourism with land sectors such as agriculture, forestry and inland waters. Northern Ireland's natural and cultural heritage assets are a key attractor in both rural and urban areas. Pressures for change due to biophysical processes (e.g. climate change, wildfire or flooding), the development of renewable energy or unmanaged recreational use have the potential to adversely impact on landscape character and amenity. Meanwhile, increasing woodland cover or providing well managed path networks for example, can open up new recreational opportunities. The Helping the Hills initiative (Mountaineering Ireland, 2014) advocates a best practice approach to the management of upland path erosion so as to ensure that interventions do not detract from the character of the upland environment.

*Adequate regulation of development in the countryside through the planning system, combined with effective landscape designations and management (see Section 5.2), are crucial to maintaining the resource upon which the future of the tourism industry depends.*

In the context of local government reform and the imminent return of planning powers to local Councils, an overarching land strategy will help deliver more strategic and consistent decision-making across local Council areas (See Section 5.10, Planning), ensuring that land is used in a way that provides sustainable, continued and improved recreational and tourism opportunities. Such a strategy can also help to guide the activities of local authorities and their partners in providing effective infrastructure and services for visitors, and delivering improved environmental management.





## 5.10 LAND USE PLANNING

The overall purpose of the planning system in Northern Ireland is to 'regulate development and use of land in the public interest (PPS1)'. The guiding principle is that 'development should be permitted, having regard to the development plan and all other material considerations, unless it would cause demonstrable harm to interests of acknowledged importance.'

*The planning system plays a crucial role in delivering appropriate forms of development to serve the needs of society, while ensuring that the vital asset (land) that will deliver long-term prosperity and well-being does not become exhausted or degraded.*

The interpretation of development trends suggests that the planning system is not providing a strategic approach to regulating development across the Northern Irish countryside, as exemplified by, among other issues, the proliferation of large scale single wind turbines (See Section 5.7) and single houses (Murray, 2010). Such pressures have increased the need to consider cumulative impacts on landscapes.

The Regional Development Strategy (to 2025) provides a strategic, spatial, framework for development in Northern Ireland, while setting out high level guiding principles for the planning system. There are also 23 Planning Policy Statements (PPS's) that cover a range of land uses and sectors, including natural heritage, renewable energy, flood risk, housing in settlements, waste management, built heritage, economic development, tourism, open space, transport and sustainable development in the countryside. The PPS's are being condensed into one Strategic Planning Policy Statement (SPPS) for Northern Ireland (currently, April 2014, in Draft format). In the Draft SPPS the purpose of the planning system is described as: "to secure the orderly and consistent development of land with the objective of furthering sustainable development and improving well-being". The change in emphasis implied in the SPPS statement of purpose, and in the core planning principles, reflects the importance of planning in a context of international conventions and obligations which stress sustainability, human well-being, and inclusiveness in decision-making. However, it focuses on sustainable economic development rather than on delivering sustainable development.

In light of local government reform, the SPPS explains how the proposed structures will enable greater engagement from communities, individuals and groups in shaping local areas and in the formulation of local plans. Although devolving planning powers to the new local councils can potentially facilitate more local input and involvement in planning decisions, a major challenge emerges to ensure that decision-making does not become parochial at the expense of wider public interests, thus jeopardising the delivery of regional strategic objectives.

Yet, an opportunity is now emerging to link the high-level spatial strategy of the RDS with the two-tier structures of the SPPS, with land as the focus. A land strategy sitting above the RDS could help to deliver more strategic and consistent decision-making across Council areas and ensure that development is promoted in line with the regional/public interest and in the interests of delivering long-term prosperity and societal well-being. The principles of a LSNI could then be used to guide the translation of the aims of the SPPS into specific spatial contexts of the Local Development Plans.



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## **6 CONCLUSIONS AND RECOMMENDATIONS**

Overarching demands from land include the production of goods and services, mitigation of GHGs, and the provision of high quality habitats and landscapes. Current patterns of land ownership are split between private and public sector, and range between large and small sized holdings. This system of land ownership is overlaid by formal and informal governance arrangements (e.g. types of tenure, designations, strategic zoning). Indeed, increasing pressure for change (e.g. market prices, renewable energy targets, demographic change) means that land is subject to many potential competing objectives, interests and expectations.

A Land Strategy for Northern Ireland would provide strategic guidance to assist in planning for, and managing, the ongoing pressures for change.

*The successful implementation of a high level land strategy would contribute to ensuring that the land base in Northern Ireland is maintained and enhanced to provide continued and improved benefits to society, both now and in the future.*



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A Land Strategy should be developed on a cross-Departmental basis, with cross-sectoral inputs, and should sit above the SPSS in the existing hierarchy of Northern Ireland Government strategies. This would help to align public and private aspirations for economic and societal well-being and prosperity, through the strategic use of land.

### **PRINCIPAL RECOMMENDATION:**

*To progress the planning, development and implementation of a Land Strategy for Northern Ireland by 2020.*

### **SPECIFIC RECOMMENDATIONS:**

1. Adopt a set of principles to guide creation and uptake of opportunities for land, its management and changes in use. A candidate set has been prepared in this report.
2. Develop a programme of liaison with strategic stakeholders to refine and develop a shared understanding of the vision, principles and content of a Land strategy.
3. Compile an evidence base to inform the scope of a Land Strategy. This should provide data on the contemporary uses of land, the role land plays in delivering statutory and non-statutory obligations, and an assessment of the types of pressures on land over a meaningful timeframe.
4. Prepare an action plan for the implementation of a Land Strategy, to include 'on the ground' examples and the identification of specific sectoral actions to facilitate implementation of the strategy.
5. Develop mechanisms to monitor changes in how land functions, appears and is used and assess changes in landscape character.
6. Link the aims of a Land Strategy to the education curriculum to garner long-term understanding of the importance of land amongst all sections of society.
7. Identify a Department to lead the development of the strategy, and monitor progress.

To reflect the breadth of land sectors of relevance to a LSNI it will be beneficial to establish a cross-Departmental working group within government to coordinate the design, delivery and implementation of such a strategy for Northern Ireland, thus avoiding the limitations of a sectoral or Departmental approach.



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## 7 IMPLEMENTATION

2020 onwards should be viewed as an achievable timescale for full implementation. Five main steps have been identified:

### CONSULTATION

To engage with all stakeholders to develop an agreed overarching vision and objectives for a land strategy, as a basis for developing the content.

### PLANNING

- (I) Prepare background information to inform the development of the strategy, predominantly the evidence base for supporting the key aspects of implementation, such as the issues to be addressed in the strategy
- (II) Consult stakeholders on the information gathered and revise accordingly.

### DEVELOPING

Preparing strategy and consult using the relevant statutory mechanisms.

### IMPLEMENTING

Developing an action plan for the specific proposals or activities which will deliver the vision and objectives. This should include the identification of responsibilities for specific actions or outputs, and a plan for monitoring and reporting progress on the land strategy. A successful implementation plan will only be achieved if there is clarity in the agenda and actions based on collaboration with land owners and adequate incentives through a reconfigured pattern of existing public investment.

### LAUNCH THE STRATEGY.

## 8 ACKNOWLEDGEMENTS

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**10 APPENDICES**

**APPENDIX 10.1 STRATEGIES CONSULTED**

TOPIC	STRATEGY NAME	LINK
	<b>Programme for Government</b>	<a href="http://www.northernireland.gov.uk/pfg-2011-2015-final-report.pdf">www.northernireland.gov.uk/pfg-2011-2015-final-report.pdf</a>
<b>FOOD</b>	<b>Agri-food strategy</b>	<a href="http://www.agrifoodstrategyboard.org.uk/">www.agrifoodstrategyboard.org.uk/</a>
	<b>NI Sustainable Development Strategy</b>	<a href="http://www.ofmdfmi.gov.uk/sustainable-development-strategy-lowres__2_.pdf">www.ofmdfmi.gov.uk/sustainable-development-strategy-lowres__2_.pdf</a>
<b>BIODIVERSITY</b>	<b>The second report of the Northern Ireland Biodiversity Group 2005 —2009</b>	<a href="http://www.doeni.gov.uk/niea/ni_biodiversity_strategy.pdf">www.doeni.gov.uk/niea/ni_biodiversity_strategy.pdf</a>
	<b>Valuing Nature: Consultation on a Biodiversity Strategy for Northern Ireland to 2020</b>	<a href="http://www.doeni.gov.uk/biodiversitystrategyconsultation_with_cover_web.pdf">www.doeni.gov.uk/biodiversitystrategyconsultation_with_cover_web.pdf</a>
	<b>DoE Natural Capital Paper</b>	Draft expected March
	<b>NI Invasive Alien Species Strategy</b>	<a href="http://invasivespeciesireland.com/wp-content/uploads/2010/03/Invasive-species-2013-4-web.pdf">http://invasivespeciesireland.com/wp-content/uploads/2010/03/Invasive-species-2013-4-web.pdf</a>
<b>FORESTRY</b>	<b>NI Forestry Act</b>	<a href="http://www.legislation.gov.uk/nia/2010/10/part/4/crossheading/supplementary">www.legislation.gov.uk/nia/2010/10/part/4/crossheading/supplementary</a>
	<b>NI Forestry Strategy</b>	<a href="http://www.dardni.gov.uk/strategy-for-sustainability-growth.pdf">www.dardni.gov.uk/strategy-for-sustainability-growth.pdf</a>
	<b>DARD Forest Service Business Plan</b>	<a href="http://www.dardni.gov.uk/business-plan-2013-2014.pdf">www.dardni.gov.uk/business-plan-2013-2014.pdf</a>
<b>PLANNING</b>	<b>Regional Development Strategy 2025</b>	<a href="http://www.drndi.gov.uk/text_of_draft_regional_development_strategy_for_northern_ireland_2025_made_available_to_members_of_the_northern_ireland_assembly_for_the_take_note_debate.pdf">www.drndi.gov.uk/text_of_draft_regional_development_strategy_for_northern_ireland_2025_made_available_to_members_of_the_northern_ireland_assembly_for_the_take_note_debate.pdf</a>
	<b>RDS adjustments (2008)</b>	<a href="http://www.drndi.gov.uk/rds_adjustments.pdf">www.drndi.gov.uk/rds_adjustments.pdf</a>
	<b>RDS 2035</b>	<a href="http://www.drndi.gov.uk/rds_2035.pdf">www.drndi.gov.uk/rds_2035.pdf</a>
	<b>NI Planning Bill</b>	<a href="http://www.planningni.gov.uk/index/advice/advice_legislation/advice_all_legislation.htm">www.planningni.gov.uk/index/advice/advice_legislation/advice_all_legislation.htm</a>
	<b>Planning Strategy for Rural Northern Ireland - Superseded by PPS21 (see below)</b>	<a href="http://www.planningni.gov.uk/index/policy/policy_publications/rural_strategy.htm">http://www.planningni.gov.uk/index/policy/policy_publications/rural_strategy.htm</a>
	<b>Planning Policy Statements e.g. PPS15 Flooding, PPS21 Sustainable Development in the Countryside, PPS18 Energy</b>	<a href="http://www.planningni.gov.uk/index/policy/policy_publications/planning_statements.htm">www.planningni.gov.uk/index/policy/policy_publications/planning_statements.htm</a>
	<b>Draft Strategic Planning Policy Statement</b>	<a href="http://www.planningni.gov.uk/spps">www.planningni.gov.uk/spps</a>
<b>LANDSCAPE</b>	<b>NI Landscape Charter (Draft)</b>	<a href="http://www.doeni.gov.uk/niea/landscape_charter_document.pdf">www.doeni.gov.uk/niea/landscape_charter_document.pdf</a>
	<b>Landscape Character Assessment</b>	<a href="http://www.doeni.gov.uk/niea/landscape/country_landscape.htm">www.doeni.gov.uk/niea/landscape/country_landscape.htm</a>
<b>ENERGY</b>	<b>Strategic Energy Framework</b>	<a href="http://www.detini.gov.uk/strategic_energy_framework__sef_2010_-3.pdf">www.detini.gov.uk/strategic_energy_framework__sef_2010_-3.pdf</a>
	<b>DARD Renewable Energy Strategy</b>	<a href="http://www.dardni.gov.uk/dard-renewable-energy-action-plan-2010.pdf">www.dardni.gov.uk/dard-renewable-energy-action-plan-2010.pdf</a>
	<b>Offshore Renewable Energy Strategic Action Plan 2012-2020</b>	<a href="http://www.detini.gov.uk/ni_offshore_renewable_energy_strategic_action_plan_2012-2020__march_2012_.pdf">www.detini.gov.uk/ni_offshore_renewable_energy_strategic_action_plan_2012-2020__march_2012_.pdf</a>
<b>RURAL DEVELOPMENT</b>	<b>2014-2020 Rural Development Programme</b>	<a href="http://www.dardni.gov.uk/index/rural-development/rural-development-programme-2014-20.htm">www.dardni.gov.uk/index/rural-development/rural-development-programme-2014-20.htm</a>
	<b>Action Plan for Rural White Paper</b>	<a href="http://www.dardni.gov.uk/rural-white-paper-action-plan.pdf">www.dardni.gov.uk/rural-white-paper-action-plan.pdf</a>
<b>TOURISM</b>	<b>A Draft Tourism Strategy for Northern Ireland to 2020</b>	<a href="http://www.detini.gov.uk/ni_tourism_20100308-4.pdf">www.detini.gov.uk/ni_tourism_20100308-4.pdf</a>

TOPIC	STRATEGY NAME	LINK
COASTAL	<b>Integrated Coastal Zone Management Strategy</b>	<a href="http://www.doeni.gov.uk/iczm_document-2.pdf">www.doeni.gov.uk/iczm_document-2.pdf</a>
FRESH WATER	<b>NI River Basin Management Plans</b>	<a href="http://www.doeni.gov.uk/niea/water/wfd/themes/riv_bsn_mngt_plng.htm">www.doeni.gov.uk/niea/water/wfd/themes/riv_bsn_mngt_plng.htm</a>
<b>EUROPEAN</b>		
	<b>Biodiversity Challenge 2020</b>	<a href="http://ec.europa.eu/environment/nature/biodiversity/comm2006/2020.htm">http://ec.europa.eu/environment/nature/biodiversity/comm2006/2020.htm</a>
	<b>Floods Directive: Implemented as the Northern Ireland Water Environment Regulations (2009)</b>	<a href="http://www.dardni.gov.uk/european-floods-directive">www.dardni.gov.uk/european-floods-directive</a>
	<b>Water Framework Directive</b>	<a href="http://ec.europa.eu/environment/water/water-framework/index_en.html">http://ec.europa.eu/environment/water/water-framework/index_en.html</a>
	<b>EU 7th Environment Action Programme</b>	<a href="http://ec.europa.eu/environment/newprg/">http://ec.europa.eu/environment/newprg/</a>
	<b>European Landscape Convention</b>	<a href="http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm">http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm</a>
	<b>EU Territorial Cohesion Directive</b>	<a href="http://www.eea.europa.eu/publications/territorial-cohesion-and-water-management">http://www.eea.europa.eu/publications/territorial-cohesion-and-water-management</a>
	<b>Birds and Habitats Directive</b>	<a href="http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm">http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm</a>
	<b>Nitrates Directive</b>	<a href="http://ec.europa.eu/environment/water/water-nitrates/index_en.html">http://ec.europa.eu/environment/water/water-nitrates/index_en.html</a>
	<b>Renewable Energy Directive</b>	<a href="http://ec.europa.eu/energy/renewables/biofuels/doc/biofuels/com_2012_0595_en.pdf">http://ec.europa.eu/energy/renewables/biofuels/doc/biofuels/com_2012_0595_en.pdf</a>
<b>ADDITIONAL MATERIALS</b>		
	<b>NI Countryside Survey</b>	<a href="http://www.doeni.gov.uk/niea/biodiversity/nh-research/nicountrysidesurvey-2.htm">www.doeni.gov.uk/niea/biodiversity/nh-research/nicountrysidesurvey-2.htm</a>
	<b>NI Environmental Statistics Report</b>	<a href="http://www.doeni.gov.uk/ni-environmental-statistics-report-2013.pdf">www.doeni.gov.uk/ni-environmental-statistics-report-2013.pdf</a>
	<b>NI State of Nature Report</b>	<a href="http://www.doeni.gov.uk/niea/soe_2013-2.pdf">www.doeni.gov.uk/niea/soe_2013-2.pdf</a>
	<b>NIEA Strategic Priorities</b>	<a href="http://www.nienvironmentlink.org/cmsfiles/policy-hub/files/documentation/Bio/NIEA-Strategic-Priorities-2012-2022.pdf">www.nienvironmentlink.org/cmsfiles/policy-hub/files/documentation/Bio/NIEA-Strategic-Priorities-2012-2022.pdf</a>
	<b>DARD Strategic Plan</b>	<a href="http://www.dardni.gov.uk/dard-strategic-plan-2020-english-version.pdf">www.dardni.gov.uk/dard-strategic-plan-2020-english-version.pdf</a>
	<b>NI Economic Strategy</b>	<a href="http://www.northernireland.gov.uk/ni-economic-strategy-revised-130312.pdf">www.northernireland.gov.uk/ni-economic-strategy-revised-130312.pdf</a>
	<b>Assessment of Progress on Targets NI Environment Link Assessment of Progress</b>	<a href="http://www.nienvironmentlink.org/cmsfiles/files/Vision-2020-Assessment-of-Progress.pdf">www.nienvironmentlink.org/cmsfiles/files/Vision-2020-Assessment-of-Progress.pdf</a>
	<b>Long-term water Strategy</b>	<a href="http://www.doeni.gov.uk/niea/index/about-niea/state_of_the_environment.htm">www.doeni.gov.uk/niea/index/about-niea/state_of_the_environment.htm</a>
	<b>Preparing for Climate Change in Northern Ireland</b>	<a href="http://www.doeni.gov.uk/preparing_for_a_climate_change_in_northern_ireland_executive_summary.pdf">www.doeni.gov.uk/preparing_for_a_climate_change_in_northern_ireland_executive_summary.pdf</a>
	<b>The Tellus Project</b>	<a href="http://www.bgs.ac.uk/gsni/tellus/overview/">www.bgs.ac.uk/gsni/tellus/overview/</a>

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## LAND A PRECIOUS RESOURCE UNDER PRESSURE

### ENERGY

The total % of electricity consumed from **INDIGENOUS RENEWABLE SOURCES** has increased from

**1.5%**  
IN 2001/2 TO  
**19.5%**  
IN 2013/14.

The vast majority (over 90%) of renewable electricity generated within NI is generated from wind sources.



In 2014, approximately **35%** of Northern Ireland farmland was managed under agri-environment scheme agreements.



### FORESTS AND WOODLANDS

in 2013/14, there were **290 HECTARES** of new plantings.

### NI POPULATION

**EXPECTED TO GROW BY 8% TO 1.98 MILLION BETWEEN NOW AND 2031.**



### WATER

**JUST UNDER 30%** OF ALL RIVER WATER BODIES in Northern Ireland are **DEEMED TO BE IN 'GOOD ECOLOGICAL STATUS'**



**BETWEEN 2011/12 AND 2012/13** the number of annual housing completions has **INCREASED BY 28%**



**83% DECLINE**

in breeding waders (lapwing, redshank, curlew, snipe) between 1987- 2013



Data source: DoE (2014c)

The following organisations contributed to the debate and development of this scoping report:



For more information on the proposed Land Strategy and information on the LMTF contact:

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