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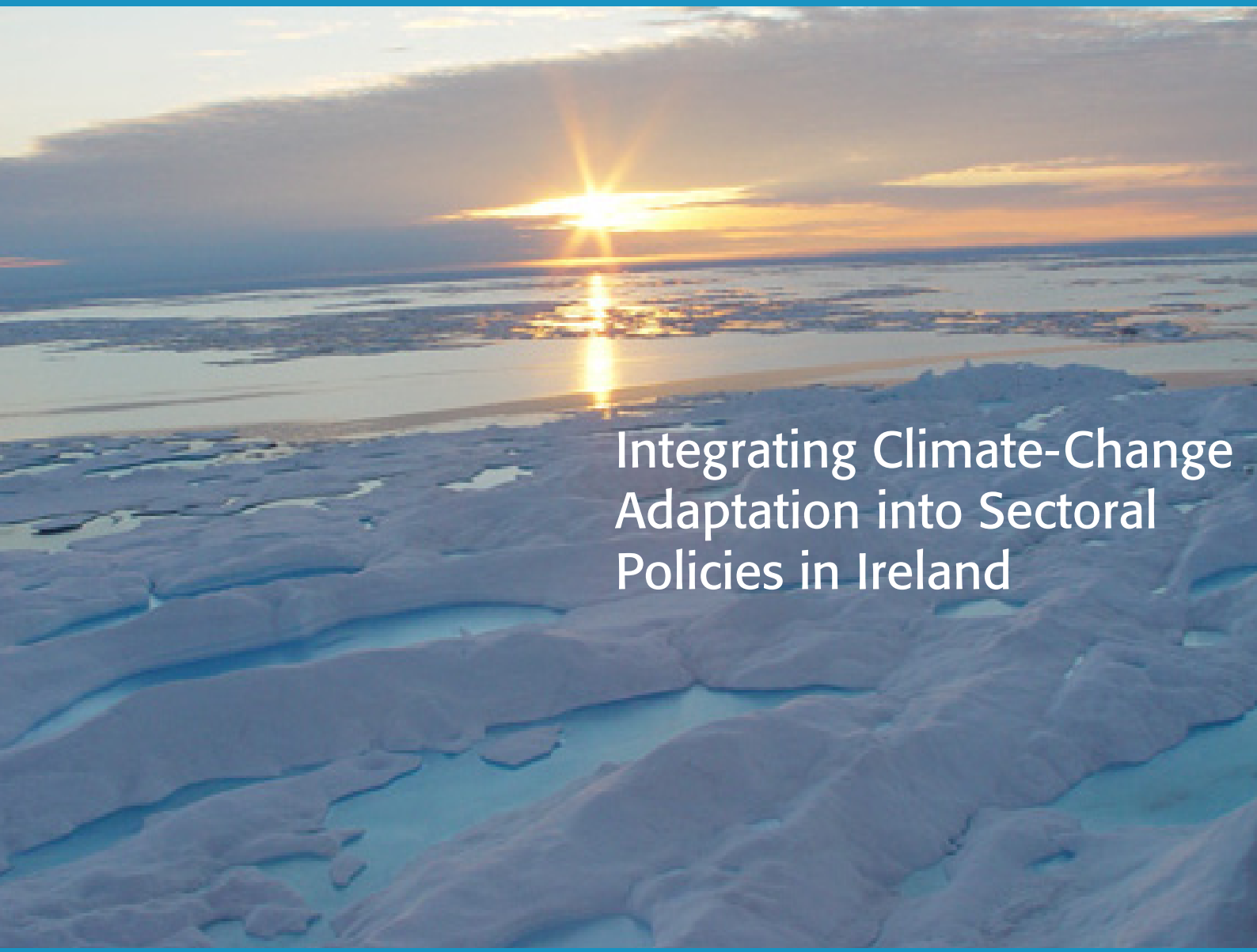

Integrating Climate-Change Adaptation into Sectoral Policies in Ireland

SSTI
Strategy for Science, Technology and Innovation

Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

Environmental Protection Agency

The Environmental Protection Agency (EPA) is a statutory body responsible for protecting the environment in Ireland. We regulate and police activities that might otherwise cause pollution. We ensure there is solid information on environmental trends so that necessary actions are taken. Our priorities are protecting the Irish environment and ensuring that development is sustainable.

The EPA is an independent public body established in July 1993 under the Environmental Protection Agency Act, 1992. Its sponsor in Government is the Department of the Environment, Community and Local Government.

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- the contained use and controlled release of Genetically Modified Organisms (GMOs);
- large petrol storage facilities;
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- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

MANAGEMENT AND STRUCTURE OF THE EPA

The organisation is managed by a full time Board, consisting of a Director General and four Directors.

The work of the EPA is carried out across four offices:

- Office of Climate, Licensing and Resource Use
- Office of Environmental Enforcement
- Office of Environmental Assessment
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet several times a year to discuss issues of concern and offer advice to the Board.

EPA Climate Change Research Programme 2007–2013

Integrating Climate Change Adaptation into Sectoral Policies in Ireland

(2008-CCRP-2.1a)

CCRP Report

Prepared for the Environmental Protection Agency

by

The Office of Climate, Licensing and Resources, EPA, Dublin

Authors:

Margaret Desmond and Tara Shine

ENVIRONMENTAL PROTECTION AGENCY

An Ghníomhaireacht um Chaomhnú Comhshaoil
PO Box 3000, Johnstown Castle, Co.Wexford, Ireland

Telephone: +353 53 916 0600 Fax: +353 53 916 0699
Email: info@epa.ie Website: www.epa.ie

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Details of Project Partners

Dr Margaret Desmond
Research Specialist
Climate Change Research Programme
Office of Climate, Licensing and Resource Use
Regional Inspectorate
McCumiskey House
Richview
Clonskeagh Road
Dublin 12
Ireland
Tel.: +353 (0)1 268 0200
Email: m.desmond@epa.ie

Dr Tara Shine[1]
Climate Change Research Fellow
Coastal Marine Research Centre
University College Cork
Haulbowline Island
Cobh
Co. Cork
Ireland
Tel.: +353 (0)21 470 3100
Email: tara.shine@mrfcj.org

1 Current address
Mary Robinson Foundation – Climate Justice
Trinity College
6 Sth Leinster Street
Dublin 2
Ireland
Tel.: +353 (0)1 6618 427

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Executive Summary

An analysis of Ireland's capacity to adapt to the impacts of climate change in the context of regional and global actions and developments was carried out in 2010. The aim of the analysis was to inform options for developing Ireland's approach to climate change adaptation. It provided: (i) a policy context review within which adaptation will take place; (ii) an assessment of current adaptive capacity; and (iii) recommendations for possible actions for enhancing adaptive capacity.

This report sets out the findings of the policy context review within which adaptation will take place and focuses on the integration of climate change adaptation into sectoral policies. It will be of use to policy-makers and planners with an interest in climate change adaptation. The assessment of adaptive capacity actions is outlined in the supporting report, *Assessing Ireland's Capacity to Adapt to Climate Change* (Shine and Desmond, 2011).

To a large extent, the challenge of climate change adaptation is a test of the effectiveness of policy integration *across* and *between* different policy sectors. Nationally, some policy sectors have begun to engage with the issue of climate change by including adaptation thinking in their decision-making processes. In most cases, this is driven by international and European Union (EU) obligations. Other sectors have recognised that climate change will have consequences for their activities and have taken voluntary action. However, a number of other sectors have yet to engage with the issue. This report identifies opportunities for the integration of climate change adaptation for each of the sectors analysed in the study[2].

A number of existing environmental planning tools such as strategic environmental assessment (SEA), environmental impact assessment (EIA), appropriate assessment (AA) and regulatory impact assessment (RIA) can play important roles in assessing climate risk and in helping to integrate climate change into policy, planning, programme and project-level decision-making. These approaches are well established and proven in the context of environmental protection. Planning instruments – especially those set out in spatial planning – also offer good potential for adaptive management, particularly at the regional and local level and across a number of sectors such as water, land use and the built environment.

Approaches such as disaster-risk reduction can also increase adaptive capacity, whereby projected climate change impacts are integrated into risk-management strategies with a view to reducing vulnerability and enhancing resilience. Insurance mechanisms may contribute to adapting to climate change by covering the residual risks and providing incentives for risk reduction.

Coordination is critical for effective climate change governance. A number of existing structures provide a good basis upon which to establish an effective climate change coordination process, to reduce vulnerability and enhance resilience. Successful coordination requires up-to-date information about climate change, knowledge of developments in other sectors and recognition of potential synergies and conflicts between sectors. Such coordination needs to be implemented at the highest levels of policy-making. Progress towards implementation should be monitored and reported on regularly.

Recommendations

The key recommendations from the policy integration review are summarised below;

- **Information management, communications and awareness raising:** Further develop the knowledge base, which should be formalised through a lead organisation; sustain resources for data and monitoring systems; disseminate information through a suitably resourced national climate change information system.

2 The study looked at the key policy sectors which may be impacted by climate change (as identified in CCRP1) and which may need to adapt now or in the future.

- **Coordination:** Establish or mandate a national high-level body to coordinate action on climate change adaptation and mitigation; establish a multi-level stakeholder group to ensure vertical coordination; ensure coherence between sectoral policies and measures aimed at adaptation.
- **Policy-integration tools:** Integrate climate change adaptation into all policies, plans, programmes and projects; develop guidance on climate change integration for existing assessment tools such as SEA, EIA, RIA and AA.
- **Planning instruments:** Fully utilise existing/ forthcoming planning instruments to integrate adaptation into local level decision-making.
- **Implementation and review:** Develop mechanisms, criteria and indicators for regular evaluation of the effectiveness of adaptation policies and plans.

1 Introduction

A constant climate is an implicit assumption in most current decision-making processes. Climate change overturns this belief and introduces an additional element into decision-making. This is particularly the case for decisions on medium- to longer-term developments. Our knowledge of the extent and rate of future climate change is however limited by key factors such as scientific uncertainties and the effectiveness of future global actions to mitigate emissions of greenhouse gases (GHGs).

Decision-making, planning and investment need to respond to the challenges posed by climate change. The solution is to design systems that can adjust to this combination of factors and enable robust decision-making at various levels. The ability of a system to adjust to climate change is referred to as its 'adaptive capacity' (Intergovernmental Panel on Climate Change [IPCC], 2007a). Here, this concept is used to focus on governance and decision-making systems and their ability to adjust to the consequences of climate change. This is determined by their ability to carry out a number of key activities, including impact, vulnerability and risk assessment; prioritisation of adaptation needs; coordination; information management; and policy integration.

As part of a body of research being undertaken with the support of the Environmental Protection Agency's (EPA) Climate Change Research Programme (CCRP), existing information on climate impacts in Ireland was made available in the *Summary of the State of Knowledge on Climate Change Impacts for Ireland* report (Desmond et al., 2009). The next step was to carry out an assessment of Ireland's capacity to adapt to the consequences of climate change. The study findings are contained in this report (*Integrating Climate-Change Adaptation into Sectoral Policies in Ireland*) and a second report, *Assessing Ireland's Capacity to Adapt to Climate Change* (Shine and Desmond, 2011).

This first report outlines the main findings of an analysis of climate change adaptation integration in Ireland. Specifically, the report provides:

- An analysis of the global, regional and national policy context for adaptation actions;
- Identified opportunities for climate change adaptation integration in sectoral policies;
- Recommendations on how integration might enhance adaptive capacity.

The information contained in the report is based on an extensive literature review, workshops, interviews and correspondence with a large range of stakeholders. The report findings aim to inform policy and planning.

2 Methodology

The approach taken provided an outline of the policy context within which adaptation takes place. This was based on a review of the current international, national and sectoral policy frameworks; available integration tools such as strategic environmental assessment (SEA), environmental impact assessment (EIA); and planning instruments and processes, which could support climate change adaptation.

The aim was to identify opportunities for the integration of climate change adaptation into decision-making processes. Mickwitz et al. (2009, p. 19) define policy integration as 'the incorporation of the aims of climate change … adaptation into all stages of policy-making in other policy sectors (non-environmental as well as environmental.' It is anticipated that the outputs of the analysis will inform decision-makers of the processes and opportunities within their operational sectors where climate change adaptation is/can be integrated.

At different policy levels (i.e. international, national and sectoral), integration can occur at various points in the decision-making cycle – during policy formation, planning, resource allocation and implementation, including monitoring and evaluation. Adaptation will be undertaken by a wide range of actors, including individuals, communities, civil society, governments and private actors (Organisation for Economic Co-operation and Development [OECD], 2009). A key consideration is the identification of opportunities or 'entry points' for integrating climate change adaptation into different policy levels. An entry point is defined as 'one or more opportunities for incorporating specific climate change adaptation considerations into a given plan, programme, or project' (United Nations Development Programme [UNDP], 2010). The entry points identified here include: policy review and development, planning and review, implementation (including the development of guidelines and tools), and institutional arrangements. In addition to the identification of existing entry points, possible future entry points have also been suggested.

This analysis used publicly available information, followed up where necessary using correspondence or interviews with relevant stakeholders. A draft report was commented on by relevant stakeholders working in adaptation to climate change. The analysis and stakeholder dialogue was used to provide recommendations on the next steps to be taken to coordinate climate change adaptation aims with those of other policy sectors, with a view to enhancing climate resilience.

3 The Policy Integration Review

The policy context is described under the categories: (i) international and national decision-making; (ii) sectoral decision-making; and (iii) tools and approaches, for example, SEA, EIA, regulatory impact assessment (RIA), and appropriate assessment (AA). For each sector analysed, the policy level, key actors, stages in the policy cycle where integration might occur and entry points for intervention are identified. These include existing entry points and those that could be developed in the future – all summarised in accompanying tables. Relevant decision-support tools and approaches are also described.

3.1 International Decision-making Drivers

A number of processes at the international level drive and inform Ireland's actions in the area of climate change. The work of the IPCC and the United Nations Framework Convention on Climate Change (UNFCCC) are of primary importance at a global level in providing both the scientific information to inform policy actions and the global governance structures to advance policy development.

3.1.1 The Intergovernmental Panel on Climate Change

Established in 1988, the IPCC is a scientific intergovernmental body set up by the World Meteorological Organisation (WMO) and by the United Nations Environment Programme (UNEP). The IPCC's role is to assess scientific, technological and socio-economic information related to climate change. This follows the overall mandate of the IPCC, which is to prepare comprehensive assessment reports about climate change at regular intervals, typically of about five to seven years. The IPCC assessment work is carried out by three working groups:

- Working Group I (WG I) assesses the physical scientific aspects of the climate system and climate change;
- Working Group II (WG II) assesses the vulnerability of socio-economic and natural systems to climate change, negative and positive consequences of climate change, and options for adapting to it;
- Working Group III (WG III) assesses options for mitigating climate change through limiting or preventing greenhouse gas emissions and enhancing activities that remove them from the atmosphere;

The IPCC's *Fifth Assessment Report* (AR5) is due to be published over the 2013 to 2014 period. Ireland officially engages with all stages in this process through the Department of the Environment, Community and Local Government (DECLG).

3.1.2 The United Nations Framework Convention on Climate Convention

The UNFCCC is the principle body for the development of global policy to address climate change. As stated in Article 2, the objective of the UNFCCC is to stabilise 'greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'. Article 2 goes on to state that such a level should be achieved 'within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner'.

Article 4 states that the parties should 'cooperate in preparing for adaptation to the impacts of climate change' (UNFCCC, 1992, 5).

Ireland ratified the UNFCCC in 1994, and the 2007 Bali Action Plan (UNFCCC, 2008) established adaptation as one of the key pillars of future actions on climate change. The process resulting from the Bali Action Plan recognises the need for enhanced action on adaptation as part of a future international agreement on climate change. This is reflected in the Copenhagen Accord (UNFCCC, 2009), and the Cancún Adaptation

Framework (UNFCCC, 2011). Further development of international policy on adaptation is expected at future Conferences of the Parties (COPs). Ireland officially engages with the UNFCCC through the DECLG.

Developed country parties to the UNFCCC must submit National Communications on Implementation of the Convention to the COP on a periodic basis. Ireland's *Fifth National Communication* (DEHLG, 2010b) focused primarily on activities during the three-year period 2005–2007. It included progress on vulnerability assessment, climate change impacts, research, and adaptation measures. The *Report of the In-depth Review of the Fifth National Communication of Ireland* (UNFCCC, 2010b, 26) commended Ireland for 'its well-organized and systematic approach to developing a climate change adaptation strategy based on a good understanding of vulnerabilities and encourages Ireland to complete the development of the strategy'.

3.1.3 Kyoto Protocol

The Sixth UNFCCC COP meeting took place in Kyoto, Japan in 1997, where the Kyoto Protocol (KP) to the UNFCCC was agreed. The KP recognised that developed countries should act first to mitigate climate change based on the principle of common but differentiated responsibilities and capabilities. The KP also established legally binding emissions targets for industrialised countries, which included the then European Community (EC). The aim was to reduce emissions by an average of 5% relative to 1990 levels over the five-year period 2008–2012. The protocol also established flexible market mechanisms such as Emissions Trading and the Clean Development Mechanism (CDM).

The findings of this section are summarised in Table 3.1, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.1.4 The European Union

The EU is a global leader on actions to address climate change. Combating both the causes and consequences of climate change is therefore an EU priority policy objective. The EU adopted the position that the UNFCCC's objective to prevent dangerous climate change could be achieved if the global temperature increase was kept below 2°C relative to pre-industrial temperatures. This was agreed in 1996 and subsequently in various Environment Commission (EC) and European Council conclusions, and following publication of the IPCC's *Fourth Assessment Report* (IPCC, 2007b).

The EU is developing a strategy for adapting to the impacts of climate change that can no longer be avoided. The core objective of the EU *White Paper on Adaptation* (EC, 2009a) is 'to improve European resilience to the impacts of climate change'. The implementation of the White Paper is supported by the Impacts and Adaptation Steering Group (IASG) and by technical working groups. Ireland is participating in the IASG and the relevant working groups as appropriate. The findings of this section are summarised in Table 3.2, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Table 3.1. Entry points for integrating adaptation into international climate change decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
IPCC	DECLG	All stages	Official engagement with IPCC ☑☑
	Research strategy - EPA	Enabling climate change research	Development of and funding for climate change research ☑☑
	Research community	Provision of policy relevant analysis	Scientists and researchers engage with IPCC – publishing research, report-writing and review process ☑☑
UNFCCC	DECLG	All stages	Official engagement with UNFCCC ☑☑
			Coordination of National Communication under UNFCCC ☑☑
	NGO and others	Lobby and review of policy	Contribute as observers or invited expert contributors ☑☑

Table 3.2. Entry points for integrating adaptation into European Union climate change decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible future ☑)
EU: Directorate General (DG) Climate action CLIMA, European Council	DECLG	Policy formation and planning	Engagement with EC on climate change adaptation via Impacts and Adaptation Steering Group (IASG) ☑☑
	National experts	Policy formation, planning and implementation	Expert participation in technical support groups to (IASG) such as Knowledge Base Working Group (KB-WG) ☑☑
European Parliament	European Parliament members	Policy formation	Engagement with European Parliament on climate change issues ☑☑

3.1.5 National policy and adaptation

The overarching climate change policy document is the *National Climate Change Strategy* (DEHLG, 2000, 2007). The purpose of the strategy is to show how Ireland will meet its 2008–2012 commitment and to demonstrate which strategy measures will position Ireland for the post-2012 period. As part of this policy position, the Irish government has committed to developing a national adaptation strategy. This will provide a framework for integrating adaptation issues into decision-making at both national and local level. The DECLG will lead on providing a national approach to adaptation. Research under the EPA's CCRP continues to inform this policy position. The findings of this section are summarised in Table 3.3, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.2 Sectoral Decision-making Context

In principle, all sectors of the economy affected by climate change have a potential adaptation dimension. The sectoral groupings used for this report are those used in the *State of Knowledge* report (Desmond et al., 2009) and include (i) agriculture, fisheries, forestry and biodiversity; (ii) water, flooding, coastal and marine; (iii) settlement and society, human health and tourism; (iv) transport, communication, energy, industry and insurance.

3.2.1 Agriculture, Fisheries, Forestry and Biodiversity

3.2.1.1 Agriculture

The Common Agricultural Policy (CAP) is the main driver for agricultural policy across the EU and is due to be reformed by 2013. As farmers manage about 40% of EU land, the CAP offers the largest leverage for facilitating adaptation efforts related to land-use in Europe. The EC staff working document 'Adapting to climate change: the challenge for European agriculture and rural areas' (EC, 2009b) summarises the main potential impacts of climate change on agriculture. It examines adaptation needs, describes the implications for the CAP and explores possible orientations for future action.

The Department of Agriculture, Fisheries and Food (DAFF) is engaged in an expert group on agriculture and climate change in the EC's Directorate General (DG) Agriculture and is also engaged in an ongoing review of the CAP.

Table 3.3. Entry points for integrating adaptation into national climate change decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DECLG	Policy formation Implementation	Consultation on climate legislation ☑☑
National	DECLG	Policy formation	Engage with policy formation ☑☑
National	EPA	Policy support through research	Research focused on informing national adaptation policy/ planning ☑☑

Table 3.4. Entry points for integrating adaptation into agricultural decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Agriculture	DAFF	Policy formation/review	Engagement with EC on reform of CAP and associated measures to engage with climate change adaptation ☑☑
National	DAFF	Policy implementation	Administration of agricultural programmes could provide opportunities for climate information and monitoring ☑
National	DAFF	Programme implementation and resource allocation	Roll-out of AOES Single Farm Payment Schemes ☑
Sectoral research	DAFF/Teagasc	Policy formation and implementation	Agricultural research programmes to engage with climate change adaptation ☑

The DAFF *Statement of Strategy 2008–2010* (DAFF, 2008) recognises climate change as a challenge. The recently launched *Food Harvest 2020* (DAFF, 2010) report refers to the need to adapt to both the positive and negative impacts of climate change in the sector. A new environment-focused scheme for the programming period 2007 to 2013 was approved by the EC in 2007: the Agri-Environment Options Scheme (AEOS) provides for a more sustainable farming environment. In addition, under the Single Farm Payment Scheme,[3] farmers must meet minimum environmental standards, including measures to secure and enhance farmer-level ecosystems. The tools used to administer agricultural schemes may also be useful for leveraging climate change information and monitoring.

Moreover, DAFF funds some research related to climate change, water and soils,. The prioritisation of research is coordinated at a high level through dialogue between researchers and funding agencies. Teagasc[4] carries out research related to improving agricultural production systems and approaches. To date, the agriculture sector has focused on the challenges of reducing GHG emissions and exploiting alternative energy sources. The findings of this section are summarised in Table 3.4, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.2.1.2 Fisheries

Fisheries policy in Ireland is guided by the EU Common Fisheries Policy (EEC, 1983), which focuses on the management of fisheries and aquaculture. A new Common Fisheries Policy is expected at the beginning of 2012. A *Green Paper on Reform of the Common Fisheries Policy* (EC, 2009c) suggests that the new Common Fisheries Policy will play a role in facilitating adaptation efforts to projected impacts of climate change on the marine ecosystems and biodiversity. National policy responsibilities lie with the DAFF.

Research into the impacts of climate change on fisheries has been conducted at EU level. In Ireland the Marine Institute has also funded several research projects in this area. For example, the Irish Ocean Climate and Ecosystem Status Report (Nolan et al., 2009, 86) recommends research to increase confidence in estimates of certain climate impacts, including sea level rise, ocean acidification, alteration of food webs and downstream affects on coastal communities and to prepare a mitigation and adaptation strategy. The findings of this section are summarised in Table 3.5, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.2.1.3 Forestry

The EU Forestry Strategy (EC, 1998) sets out common principles for forestry management and lists international processes and activities to be followed. The EU's role is limited and designed principally to add value to national forest policies and programmes: competence for forest policy lies primarily with the member states.

National forestry responsibilities in Ireland lie with the DAFF. The national policy document, *Growing for the Future – A Strategic Plan for the Development of the Forestry Sector in Ireland* (DAFF, 1996), aims to develop a sustainable forestry sector. One of its key policy objectives is to increase the total planted land area to 17% by 2020. Under the National Climate

3 In 2003 the CAP reform introduced the Single Payment Scheme (SPS), which removes the link between production and subsidies.

4 Irish Agricultural and Food Development Authority.

Table 3.5. Entry points for integrating adaptation into fisheries decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Maritime Affairs and Fisheries (MARE)	DAFF	Policy formation	Reform of the Common Fisheries Policy offers opportunities to engage with climate change adaptation ☑☑
Sectoral research	Marine Institute	Policy implementation	Ongoing and future research into the effects of climate change on the industry and ecosystems ☑☑

Change Strategy, afforestation supports Ireland's Kyoto obligations. However, the impacts of climate change on forest growth and species distribution remains a key knowledge gap in the Irish forestry context.

The Irish Council for Forest Research and Development (COFORD[5]) supports research for the development of sustainable forestry in Ireland, including forests and climate change. The findings of this section are summarised in Table 3.6, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.2.1.4 Biodiversity

The EU Birds and Habitats Directives, collectively known as Natura 2000, form the cornerstone of Europe's nature conservation policy. The directives are complemented and supported by the EU Biodiversity Action Plan (EC, 2006a) which aims to integrate biodiversity into all sectors, including adaptation to climate change. The EU 2020 Biodiversity Strategy (EC, 2011a) sets out a new strategy to halt the loss of biodiversity and ecosystem services. Included in the strategy is a target to maintain and enhance ecosystem services and restore degraded ecosystems by incorporating green infrastructure[6] into spatial planning, which should contribute to mitigating and adapting to climate change. Nationally, Comhar SDC[7] also makes the connection between green infrastructure, resilience and climate change adaptation (Comhar, 2010). Some local authorities in Ireland (e.g. Fingal County Council and Dun Laoghaire) are already active in this area.

Responsibility for biodiversity conservation in Ireland lies primarily with the National Parks and Wildlife Service (NPWS). Ireland's policy in the area of biodiversity management and conservation is described in the first *National Biodiversity Plan* (DAHGI, 2002). In the draft *National Biodiversity Plan 2010–2013* (DEHLG, 2010a), a number of climate-related objectives are included – for example, mainstreaming research support and strengthening resilience. A number of legislative instruments with relevance to biodiversity include: the Wildlife Act 1976 (as amended by 2000 Act); the EPA Act (as amended by the Protection of the Environment Act, 2003); and the various planning and development regulations.

The National Platform for Biodiversity Research (funded by the EPA and the National Parks and Wildlife Service) aims to define national biodiversity research needs, improve the exchange of information between the research community and policy-makers, and link with European initiatives through the European Platform for

5 COFORD was integrated into the DAFF in 2010.

6 Green infrastructure is defined as 'an interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations' (Benedict and McMahon, 2002).

7 Comhar Sustainable Development Council (SDC) is a multi-stakeholder council that advises government on sustainable development.

Table 3.6. Entry points for integrating adaptation into forestry decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DAFF	Policy formation and implementation	Future review of National Forestry Plan ☑
Sectoral research	DAFF/COFORD	Policy formation and implementation	Ongoing and future research into the impacts and consequences of climate change on the sector and the development of tools and guidelines to increase resilience ☑☑

Table 3.7. Entry points for integrating adaptation into biodiversity decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Environment	DECLG	Policy formation	Review of EU Biodiversity Action Plans ☑☑
National	DECLG/NPWS	Policy, planning and implementation	National Biodiversity Action Plan ☑☑
			Climate change adaptation integration into the guidelines for appropriate assessment of Natura 2000 sites ☑
			Integrate climate change adaptation into conservation objectives and site management plans for SPAS and SACS[8] ☑
Sectoral research	DECLG/EPA	Policy implementation monitoring and evaluation	Ongoing and future research into the impacts and consequences of climate change on the sector and the development of tools and guidelines to increase resilience ☑

Biodiversity Research Strategy (EPBRS). The findings of this section are summarised in Table 3.7, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.2.2 Water, Flooding, Coastal and Marine

3.2.2.1 Water (quality and quantity)

The Water Framework Directive (WFD) (EC, 2000) consolidates and updates existing water legislation across the EU. While the directive doesn't explicitly address climate change, the guidance document, *River Basin Management in a Changing Climate*, illustrates ways in which preparations can be made for climate change within the second and third River Basin Management Planning (RBMP) cycles. The first iteration of the national RBMPs has been subject to a 'climate check'.

The DECLG has an overall coordination role in the implementation of the WFD. The EPA has responsibilities in relation to reporting, classification of waters and other technical activities. This work is supported by a number of working groups, including a national advisory committee, a national technical coordination group and advisory/ technical groups in specialist topics such as ground and surface water, risk assessment, geographical information systems, public participation and monitoring. There may be potential to set up a technical sub-group on climate change and the WFD.

The water services sector has entered into a new phase with the implementation of the WFD and the Water Services Investment Programme (WSIP) 2010–2012 (DEHLG, 2010c). The WSIP clarifies that the planning of future schemes will need to take account of best practice in relation to energy efficiency for water treatment, and other issues emerging from proposed policy on climate change adaptation. The findings of this section are summarised in Table 3.8, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

8 SPA: Special Protection Area, SAC: Special Area of Conservation.

Table 3.8. Entry points for integrating adaptation into water quality decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU–DG Environment	DECLG	Policy formation	WFD technical expert group on water and climate change ☑
National	EPA	Policy implementation	Explore possibility of setting up new technical sub group on climate change and water under WFD national technical coordination group ☑
National	DECLG	Planning Implementation	Amendment legislation for waste water management and monitoring ☑
			Revision to codes of practice for waste water management ☑
Local level	Local authorities	Policy implementation	Local authority needs assessment and WSIP offer opportunities to integrate climate change adaptation ☑
Sectoral research	DECLG/EPA	Policy implementation	Develop national guidelines for the integration of climate change into subsequent iteration of RBMPs ☑

3.2.2.2 Flooding

The Floods Directive (EC, 2007a) establishes a framework for assessing and managing flood risks, which is aimed at reducing the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in Europe. The directive also provides a comprehensive mechanism for assessing and monitoring increased risks of flooding caused by climate change and for developing appropriate adaptation measures.

The Office of Public Works (OPW) is the lead agency with responsibility for implementing flooding policy and strategy in Ireland. The *Report of the Flood Policy Review Group* (OPW, 2004) sets out a comprehensive policy approach to flooding nationally. Climate change is identified as one of the key elements that need to be addressed when assessing future flood-relief measures in Ireland. Consideration of the potential impacts of climate change on flooding and flood risk forms an integral part of all of the work programmes that have been established to implement a flood risk management strategy for Ireland. Research in this area is generally undertaken by the OPW. The findings of this section are summarised in Table 3.9, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.2.2.3 Coastal and Marine (Marine Spatial Planning)

The Integrated Maritime Policy (IMP) (EC, 2007) aims to provide a coherent framework for maritime decision-making across the EU. To implement the environmental pillar of the IMP, the Marine Strategy Framework Directive (EC, 2008) has been adopted. These initiatives represent a new and evolving framework for marine and coastal management in the EU and may offer opportunities for climate change adaptation.

The DECLG will coordinate overall implementation of the Marine Strategy Framework Directive in Ireland. Regulations to transpose the directive are currently being drafted. An Interdepartmental Marine Coordination Group has been established to assist with the implementation of the directive.

Information on the marine environment which will be critical for adaptation planning is provided through research initiatives such as the Irish Sea Bed Survey and the *Marine Irish Digital Atlas* (MIDA), which is supported by the Marine Institute. The findings of this section are summarised in Table 3.10, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Table 3.9. Entry points for integrating adaptation into flooding decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Environment	DECLG	Policy formation	Future review of the Floods Directive ☑
National	DECLG	Policy implementation	Closer coordination of Flooding and Water Framework Directives in the preparation of the second iteration of RBMPs should provide opportunities to address climate change adaptation ☑
National	OPW	Policy implementation	Promotion of flood-risk guidelines to enhance adaptive capacity ☑
National	OPW	Policy implementation	Ongoing review of flood forecasting and flood warning systems should identify opportunities for climate change adaptation ☑
Sectoral research	DECLG/OPW	Policy implementation	Risk assessment of assets in the context of flooding may be needed; development of support tools would be needed ☑

Table 3.10. Entry points for integrating adaptation into coastal and marine decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Maritime affairs and fisheries	DECLG	Policy formation and planning	IMP, Marine Strategy Framework Directive opportunities for climate change adaptation ☑
National	DECLG	Policy implementation	Interdepartmental Marine Coordination Group: possible role ☑
National	DECLG	Policy implementation	Development of expert systems and climate change adaptation tools for marine-spatial planning ☑
Sectoral research	DECLG/ Marine Institute	Policy implementation	Maximise use of research such as national sea bed survey and Ireland's *Marine Digital Atlas* ☑

3.2.3 Settlement and Society, Human Health, Tourism

3.2.3.1 Settlement and society (spatial planning and built environment, education and skills, research and development, defence, foreign affairs, finance)

Spatial planning and built environment

Spatial planning provides great potential to implement and integrate climate change objectives, particularly at the regional and local level (Mickwitz et al., 2009). The built environment is an important product of spatial planning. The need to integrate climate change adaptation into long-term planning, regulations, design standards and materials for new and existing infrastructure and buildings is important from a domestic, community and business perspective.

The Minister for the Environment, Community and Local Government has overall responsibility for planning at a national level in Ireland. The *National Spatial Strategy (NSS) 2002–2020* (DEHLG, 2002) is the key national strategic planning document that aims to achieve a better balance between social, economic and physical development, across Ireland, supported by more effective planning.

Under the Planning and Development Acts 2000–2010, development plans will be required to contain objectives for the promotion of sustainable settlement and transportation strategies in urban and rural areas, including measures to reduce GHG emissions and address climate change adaptation. Guidance on how to address adaptation within the spatial planning system may be needed for regional and local level plan making.

The provision of accurate, timely and authoritative information will also be crucial to assisting planning authorities in developing evidence-based plans. The EPA's CCRP proposed Pilot Climate Information System[9] should begin to address this issue. The findings of this section are summarised in Table 3.11, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Education and skills

Improving awareness and understanding of climate change, and creating solutions to facilitate access to information on a changing climate are key to winning public support for climate-related policies. Article 6 of the UNFCCC and Article 10 (e) of the Kyoto Protocol call on governments to educate, empower and engage all stakeholders and major groups on policies relating to climate change.

The Department of Education and Science's (DES)[10] *Statement of Strategy 2008–2010* (DES, 2008) aims to support the development of education, research and enhance opportunities in further education. Several initiatives have climate change considerations – for example, there is an increased emphasis on the sustainability of new school buildings and also a focus on developing the curriculum in terms of educating for sustainable development (developed jointly with the DEHLG).

9 The project aims to develop a 'one-stop shop' for climate information in Ireland.

10 Now known as the Department of Education and Skills.

Table 3.11. Entry points for integrating adaptation into spatial planning and the built environment decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DECLG	Formation planning	Planning and development legislation includes provisions for climate change adaptation ☑☑
			Guidelines and tools on how to integrate adaptation and broader climate change considerations into the statutory planning system and the built environment ☑
Local	Local authorities	Implementation	Local-level planning ☑☑
			Pilot climate information system ☑☑
Sectoral research	DECLG/EPA and sectoral actors	Implementation	Include climate change adaptation into materials, design, guidelines for new builds and retrofitting existing building stock ☑

Table 3.12. Entry points for integrating adaptation into education and skills decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
International-UNFCCC	DECLG	All stages	UNFCCC documents ☑
National	DES	Implementation	Assess climate change impacts when deciding on new school infrastructure ☑
National	DES	Planning	Curriculum development at all educational levels to include climate change adaptation ☑
Sectoral	Schools Professional bodies	Implementation	Include climate change adaptation information and activities in Green Schools programme ☑☑ Develop training courses for professionals (e.g. planners) on climate change impacts and planning for adaptation ☑

A Climate Change Education Initiative[11] targeted to the primary school curriculum has been developed as a support for teachers on teaching on issues of climate change. The 'Green Schools' and 'Green Campus' initiatives also encourage awareness of environmental issues, including climate change at primary, secondary and third level. The EPA contributed teaching materials to the 2007 and 2008 editions of the EPA's *Science and Technology in Action* education pack, both related to the topic of climate change. The EPA *Leaving Certificate Geography* education pack also refers specifically to the topic of climate change.

Ensuring that both new and existing professionals (e.g. planners, architects, engineers) have developed the skills necessary to respond to climate change and keep pace with policy and technology advancements will be an important policy response. The findings of this section are summarised in Table 3.12, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

11 The Climate Change Education Initiative has been developed as part of the national climate change awareness campaign in partnership between the DEHLG and St Patrick's Teacher Training College. The main aim of this initiative, which is targeted at the primary school curriculum, is to develop a long-term resource for teachers on climate change so that they feel equipped to teach the subject and integrate it into their curriculum.

Research and development

The Framework Programme for research and technological development (FP) is one of the EU's main instruments for funding research in Europe. The current programme, FP7, runs from 2007–2013 and will be replaced in 2014 by a new research programme, entitled *Horizon 2020 – the Framework Programme for Research and Innovation*.[12] FP7 themes of interest in the context of climate change adaptation, include Environment (including climate change), Infrastructures, Transport, Energy, Food, Agriculture and Fisheries, and Biotechnology. It is expected that climate change adaptation will continue to be supported under the next FP. The EPA is the national contact point for the environmental pillar under the FP.

Funding for environmental research nationally is the responsibility of a number of government departments. The EPA CCRP (2007–2013) was set up to improve coordination structures and processes for climate change research in Ireland. Research on adaptation is mainly supported by the CCRP. Nevertheless, it is necessary that other sectors engage fully with this

12 Horizon 2020 – the Framework Programme for Research and Innovation is an integrated funding system that will cover all research and innovation funding currently provided through the Framework Programme for Research and Technical Development, the Competitiveness and Innovation Framework Programme (CIP) and the European Institute of Innovation and Technology (EIT).

Table 3.13. Entry points for integrating adaptation into research and development decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Research and Development	EPA	Formation	Reflection of climate change adaptation research needs under the FP ☑☑
National	Various government agencies	Implementation	Engage with those with responsibility for funding and implementing research to enhance awareness of the need for adaptation related research ☑☑
Sectoral research	DECLG/EPA	Implementation	Ongoing and future research into the impacts and consequences of climate change at the sectoral level and the development of tools and guidelines to increase resilience ☑☑

topic, with the aim of developing tools and guidelines to increase resilience within their own functional areas of responsibility. The findings of this section are summarised in Table 3.13, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Defence

The Department of Defence (DD) *Statement of Strategy 2008–2010* (DD, 2008) and the *White Paper on Defence* (DD, 2000), aim to provide for the military defence of the state, contribute to international peace and security and fulfil all roles assigned by government. The defence forces[13] are responsible for protecting the national territory and national security, which may be affected directly or indirectly by climate change. The defence forces may also have a role to play in emergency responses to extreme weather events. The Irish Naval Service has identified a changing climate as one of the factors affecting operational conditions for its vessels. The findings of this section are summarised in Table 3.14, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

13 Army, Air Corps and Naval Services.

Foreign Affairs

The Department of Foreign Affairs (DFA) *Statement of Strategy 2008–2010* (DFA, 2008) refers to climate change in the context of Ireland's engagement with the United Nations (UN), interdepartmental collaboration and EU policy. The *White Paper on Irish Aid* (DFA, 2006) includes a section on climate change and supporting the most vulnerable to adapt to climate change.

Cognizant of the growing impact of climate change on developing countries, Irish Aid[14] engages with relevant international processes and institutions, informing – and being informed by them – in their climate change efforts. The Irish Aid Environment Policy for Sustainable Development addresses the impacts of climate change in developing countries directly. Developing countries are supported in planning and implementing adaptation actions via bilateral and multilateral channels and through funding for development NGOs. Irish Aid continues to improve its consideration of, and its response to, the added and growing development challenge that climate change presents to the poorest people in its partner countries.

14 Irish Aid is the Government of Ireland's programme of assistance to developing countries. The Programme is administered by a division of the DFA.

Table 3.14. Entry points for integrating adaptation into defence decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DD	Formation Implementation	Investigate synergies that may exist between the emergency planning function of the DD and adaptation planning ☑ Assess the impacts of climate change on national security and prepare appropriate coping strategies ☑ Explore role of defence forces in operating in extreme weather and responding to emergencies/extreme weather events (e.g. include role of defence forces in local and regional emergency plans) ☑

The DFA also has responsibility for North–South cooperation on the island of Ireland. This offers opportunities to develop a cross-border approach to assessing climate impacts and planning adaptation actions. In Northern Ireland, the Department of Environment takes the lead on climate change and works closely with the Department for Energy and Climate Change (DECC) and Department for Environment Food and Rural Affairs (DEFRA) in London and with colleagues in the devolved administrations of Scotland and Wales.

The aim of the Northern Ireland Climate Change Impacts Partnership (NICCIP)[15] is to widen the understanding and knowledge of the impacts of climate change within Northern Ireland and the adaptation actions necessary to deal with it. There is potential for agencies south of the border to work closely with this partnership in developing effective adaptation strategies. It may also be possible to use existing cross-border work in the development of RBMPs and marine and coastal management to progress adaptation to climate change. The findings of this section are summarised in Table 3.15, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

15 http://www.doeni.gov.uk/index/protect_the_environment/climate_change/ni_climate_change_impacts_partnership-3.htm

Finance

Resources will be needed for climate change adaptation assessment, information provision, planning, and for the implementation of adaptation measures and actions. Analysis of the costs and benefits of adaptation at a national level or for prioritised actions are important steps in the development of policy and planning measures, and these have yet to be undertaken.

The *Statement of Strategy 2008–2010* of the Department of Finance (DF, 2008) states it will 'formulate and promote sustainable public expenditure policies which support the government's economic, social and environmental objectives'. While measures are in place by the DF to collect environment- and climate-related revenue, the only part of this revenue used to address adaptation is the Environment Fund (dedicated to environment-related activities, including funding research on climate change adaptation). Carbon tax feeds directly into the Exchequer, while revenue generated from the EU Emissions Trading Scheme is not ring-fenced for climate change related activities. However, Article 18 of the Emissions Allowance Trading Scheme Directive (EC, 2009d, 65) argues that 'it is appropriate that at least 50% of the proceeds from the auctioning of allowances should be used to reduce greenhouse gas emissions, to adapt to the impacts of climate change, to fund research and development for reducing emissions and adaptation'.

Table 3.15. Entry points for integrating adaptation into foreign affairs decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
International	DFA	Formation Implementation Resource allocation	Integrate climate change into the design and review of country strategy papers with Ireland's partner countries ☑☑
			Deliver financial and technical climate related support to Ireland's partner countries and to international climate financing mechanisms ☑☑
EU	DFA	Formation Implementation	Continue to engage with EU and internationally to ensure coherence between climate change and development policy and to provide support to developing countries to pursue low carbon/climate resilient pathways ☑☑
National	DFA	Formation Implementation Resource allocation	Support relevant departments (e.g. Finance) in the design and deliver of Ireland's climate change finance commitments ☑☑
National	DFA	Formation Implementation	Work more closely with Department of the Environment (Northern Ireland) and the Northern Ireland Climate Information Platform to enhance synergies and develop common approaches to climate change adaptation ☑

In the absence of dedicated financial resources for adapting to climate change, individual departments and agencies will be responsible for meeting the costs of climate-risk assessments and adaptation measures in their sector within their existing expenditure allocation.

As part of the EU's collective commitment to provide €2.4 billion as part of the commitment made by Heads of State in the Copenhagen Accord,[16] Ireland has committed to contributing €100 million to Fast Start Financing[17] to support developing countries in the three years from 2010 to 2012. Ireland and the EU will also be part of an international effort to scale this up to US$100 billion per year by 2020. A high-level Advisory Group on Climate Financing convened by the UN secretary general is currently looking into ways to mobilise this finance. The DF has a lead role to play in mobilising international climate finance for both the fast start period and the longer term. The findings of this section are summarised in Table 3.16, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

16 http://register.consilium.europa.eu/pdf/en/10/st09/st09437.en10.pdf

17 The Copenhagen Accord outlines a pledge by many developed countries 'to provide new and additional resources, including forestry and investments through international institutions, approaching $30 billion for the period 2010 to 2012 with balanced allocation between adaptation and mitigation.' The objective of the funds, referred to as 'fast start finance', is to help developing countries adapt to the impact of climate change and to pursue actions that put them on a low-carbon development pathway.

Human health (and social protection)

The Department of Health and Children (DHC) *Statement of Strategy 2008–2010* (DHC, 2008) makes reference to the need to cooperate at EU level to address environmental risks. The department has appointed an official to the inter-departmental senior officials group that supports the cabinet committee on climate change and energy. This representative will be responsible for raising health issues related to climate change. Awareness is being raised by groups such as the Institute of Public Health[18] (IPH, 2010).

The Department of Social Protection's (DSP) *Statement of Strategy of the Department of Social Protection*[19] *2008–2010* (DSP, 2008) aims to promote social inclusion and support families: climate change is not referenced as a factor contributing to poverty in Ireland. Likewise, the Combat Poverty Agency does not make links between climate change and social vulnerability. However, groups such as Pobal[20] are raising awareness of these connections. The findings of this section are summarised in Table 3.17, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

18 The Institute of Public Health in Ireland (IPH) promotes cooperation for public health on the island of Ireland. .

19 Name changed to the Department of Social Protection in March 2010.

20 Pobal is an intermediary that works on behalf of government to support communities and local agencies toward achieving social inclusion, reconciliation and equality.

Table 3.16. Entry points for integrating adaptation into financial decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DF	Resource allocation	Reform of tax incentives, policies and measures to reduce GHG emissions could raise revenue for adaptation measures ☑
National	DF	Resource allocation	Consider how auctioning revenue from emissions trading could be used to fund adaptation activities in Ireland and meet international obligations under UNFCCC ☑
National	DF	Planning Resource allocation Implementation	Empower sectoral ministries to plan and budget for adaptation to climate change ☑
Local level	DECLG/Local authorities	Implementation	Empower local authorities to plan and budget for adaptation to climate change ☑

Table 3.17. Entry points for integrating adaptation in human health and social protection decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DHC DSP	Formation Resource allocation Implementation	Coordinate approach of health sector in assessing and preparing for the climate change impacts (e.g. link to emergency planning, water supply, food safety and social protection) ☑
National	DHC NGOs	Implementation	Raise awareness of climate change impacts and social vulnerability ☑☑
Sectoral research	DHC/Health Research Board (HRB)	Implementation	Research on climate change impacts (e.g. extreme events) on health and well-being ☑

3.2.3.3 Tourism and Heritage

Tourism

The *Statement of Strategy 2008–2010* from the Department of Arts, Sport and Tourism (DAST, 2008) recognises the value of the environment in attracting tourists to Ireland. Fáilte Ireland's carbon strategy (Fáilte Ireland, 2008), outlines the actions to be undertaken in tackling the issue of climate change and the potential impacts on tourism. As part of this strategy, Fáilte Ireland published a joint report with the Heritage Council (HC, 2009) outlining the natural and built heritage assets which are most at risk from climate change, and the implications this may have for the tourism activities dependent upon these assets. The findings of this section are summarised in Table 3.18, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Heritage

The Department of the Arts, Heritage and the Gaeltacht[21] is the primary arm of government responsible for the protection of natural, architectural and archaeological heritage. Through the NPWS, the National Monuments Service and the Architectural Heritage Advisory Unit, the DAHG formulates and implements national policy and legislation for heritage protection. The *Government Policy on Architecture 2009–2015* (DEHLG, 2009a) places emphasis on sustainable development of the environment and urban design, encourages and supports high-quality modern architecture, and incorporates architectural heritage in a holistic, integrated manner. The document recognises that climate change will bring new challenges to the sector in terms of new building design and the adaptation of existing building stock.

As noted above, the Heritage Council and Fáilte Ireland's collaboration resulted in the report, *Climate Change, Heritage and Tourism: Implications for Ireland's Coast and Inland Waterways* (HC, 2009). Subsequent to this document a number of actions were taken, such as: reorientation of the Heritage Council's strategic direction to address the links between climate change and heritage and a restructuring of the Council's grant schemes. Three schemes form the central plank of the council's funding mechanisms, and climate change is identified as a priority area for all three.

The Local Authority Heritage Officer network, set up by the Heritage Council, offers a useful model for successful policy advocacy, integration and implementation. The Heritage Forum, set up by each

21 Heritage functions were transferred from the DEHLG to the Department of Arts, Heritage and the Gaeltacht with effect from 1 May 2011.

Table 3.18. Entry points for integrating adaptation into tourism decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DAST	Formation Planning	Review of *Statement of Strategy* ☑
National	Fáilte Ireland	Formation	Raise awareness of the impacts of climate in the tourism industry ☑☑
		Planning Implementation	Build capacity to plan and implement adaptation actions ☑

Table 3.19. Entry points for integrating adaptation into heritage decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DECLG/NPWS, National Monuments Service, Architectural Heritage Advisory Unit	Policy formation, implementation	Engage with the Ireland Climate Change sub-committee of the ICOMOS to raise awareness of climate change ☑☑
National	Heritage Council	Policy Implementation	Engage with the Heritage Forum to raise awareness of climate change adaptation ☑
National	DECLG/Heritage Council	Policy implementation	Consider if the Heritage Officer model could be used as way of addressing climate change at the local level ☑
Local	Local Authority	Policy implementation	Raise awareness of climate change amongst members of the Heritage Officers Network ☑

Heritage Officer, creates a stakeholder which promotes the heritage ethic, through policies and projects. There may be potential to use this network to promote climate change adaptation.

Research into the impacts of climate change on cultural heritage is at the development stage internationally. The Built Heritage and Architectural Policy Section of DEHLG has sponsored the Irish committee of the International Committee on Monuments and Sites (ICOMOS) to undertake a pilot study to monitor the impact of climate change on major monument sites, including Brú na Bóinne World Heritage site and Clonmacnoise. The findings of this section are summarised in Table 3.19, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.2.4 Transport, Communications, Energy, Industry and Insurance

Transport

EU transport policy is largely set out in the White Paper, *European Transport Policy for 2010: Time to Decide* (EC, 2001a). The Review *Keep Europe Moving – Sustainable Mobility for our Continent* (EC, 2006) stated that international environmental commitments, including those under the KP, must be integrated into transport policy and transport policy must continue to attain the objectives of European energy policy.[22] DG Transport and Mobility Adaptation argues that EU-funded transport infrastructure should take climate change challenges (climate resilience of the overall infrastructure, refuelling/recharging stations for clean vehicles, choice of construction materials) into account (EC, 2011b).

The transport sector is one of the main emitters of GHGs in Ireland and its climate change policy focus is on mitigation. However, transport may also be exposed and vulnerable to the impacts of climate change and adaptation measures will be required to protect infrastructure and maintain services. The knock-on effects of transport disruptions to business supply chains, health, education and human safety may be considerable and climate change is likely to

22 http://europa.eu/legislation_summaries/transport/bodies_objectives/l24461_en.htm

Table 3.20. Entry points for integrating adaptation into transport decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Mobility and Transport	DTTS	All stages	Review of EU Transport Policy ☑☑
National	National Roads Authority (NRA)	Implementation	Design of transport infrastructure (roads, rails, sea [including ports] and air) to take account of the projected impacts of climate change ☑
Sectoral research	DTTS	Implementation	Research into the impacts and consequences of climate change on the sector and the development of tools and guidelines to increase resilience ☑

exacerbate disruptions in the future. The Department of the Transport, Tourism and Sport is the primary arm of government responsible transport in Ireland. The findings of this section are summarised in Table 3.20, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Communications

The Department of Communications, Energy and Natural Resources (DCENR) is responsible for setting communications policy and objectives in Ireland. A key role is the development of effective policies for the regulation of the electronic communications sector and management of the radio frequency spectrum.

The fixed assets managed by the telecommunications sector may be vulnerable to climate change. All other business and domestic sectors are reliant on the telecommunications services and infrastructure. Any negative impacts in this sector increase the risks in every other industry and could present significant cost and competitiveness implications, for example, impacts on supply chains (Forfás, 2010). The findings of this section are summarised in Table 3.21, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Energy

European energy policy is focused on delivering core energy objectives of sustainability, competitiveness and security of supply. The main drivers for European energy policy are the Energy End-Use Efficiency and Energy Services Directive and Renewable Energy Directive.

The White Paper, *Delivering a Sustainable Energy Future for Ireland (2007–2020)* (DCMNR,[23] 2007) is designed to steer Ireland to a new and sustainable energy future. The twin goals of renewable energy and energy efficiency contribute to addressing the problem of climate change, increasing security of supply and improving economic competitiveness (DCENR, 2009).

The DCENR is responsible for setting energy policy and objectives in Ireland. Research in this area is mainly funded by the Sustainable Energy Authority of Ireland (SEAI).

The energy infrastructure (e.g. power stations, sub-stations, gas and oil terminals) may be vulnerable to the impacts of climate change impacts. The report, *Ireland at Risk: Critical Infrastructure* (IAE, 2009), suggests that a high-quality energy infrastructure must be capable of adapting to the challenges of climate change.

23 Now the DCENR.

Table 3.21. Entry points for integrating adaptation into communications decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DCENR	Formation, Planning	Consideration of climate change risks when planning the communications infrastructure ☑
National	DCENR	Implementation	Integrating climate change risk into the design of the next generation Broadband Scheme, the Metropolitan Area Networks Scheme and Spectrum Policy ☑
Sectoral research	DCENR	Implementation	Research into the impacts and consequences of climate change on the sector and the development of tools and guidelines to increase resilience ☑

Table 3.22. Entry points for integrating adaptation into energy decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Energy	DCENR	All	Review of Energy Policy ☑
National	DCENR	Implementation	Engagement with the Commission on Energy Regulation (CER) with a view to integrating climate change adaptation into guidelines and regulations for the energy sector ☑
National	DCENR	Formation	Climate change impacts and adaptation could be integration into future National Renewable Energy Action Plans ☑
National	DCENR/Infrastructure owners	Implementation	Review of codes and standards for the design and safety of structures, power plants, electricity and gas network substations, oil storage and dams based on climate change projections ☑
National	DCENR/Infrastructure owners	Implementation	Review of coastal protection measures where energy infrastructure is located, e.g. reserve oil storage, pipelines, power generation, network substation and subsea cables ☑
Local level	Infrastructure owners	Implementation	Energy plant output could be reviewed in the context of climate change, e.g. outputs from wind, wave and hydro-power ☑
Sectoral research	DCENR	Implementation	Review of wind and wave atlases could take climate change impacts and projections into account ☑

Climate change may also impact on renewable energy generation. The redesign of wind and wave atlases for future scenarios would be useful in this context. The findings of this section are summarised in Table 3.22, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Industry (Trade and Enterprise)

The Department of Enterprise, Trade, and Innovation's (DETI) *Statement of Strategy 2008–2010* (DETI, 2008) addresses the environmental challenges presented by a carbon constrained environment and the impacts of mitigation commitments on enterprise. Other government policies of relevance to this sector include the government strategy, *Building Ireland's Smart Economy: a Framework for Sustainable Economic Renewal* (Department of the Taoiseach, 2008).

Climate change will have an impact on Irish business and enterprise, through changing markets, impacts on premises and processes, increased vulnerability of supply chains, which may have implications for investments, insurance costs and stakeholder reputation. The Forfás (2010) report, *Adaptation to Climate Change: Issues for Business*, highlights the impacts of climate change on business (e.g. water quality and availability) and proposes measures to reduce risk and maximise any opportunities arising from climate change. The findings of this section are summarised in Table 3.23, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Table 3.23. Entry points for integrating adaptation into principle industry decision-making

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Enterprise and Industry	DETI	All	Integration of climate change adaptation into a wide range of policy areas related to enterprise and trade ☑
National	Forfás	Formation	Raise awareness of climate change impacts and adaptation through EPA green Business website, Forfás website and publication, etc. ☑☑
Local	DETI/Local authorities	Implementation	Raise awareness of the impacts of climate change on business, e.g. via county enterprise boards, and integration of climate change risks into business planning ☑

Insurance

Insurance mechanisms can contribute to adapting to climate change by covering the residual risks and providing incentives for risk reduction. Through their underwriting policy, (re)insurance companies can increase risk awareness and provide incentives for risk reduction. Insurance companies have inherent interests in minimising the impacts of climate change in order to maintain residual insurable risks.

The main role of insurance in adaptation to climate change would be to: (i) reflect costs of the climate change risks; (ii) provide incentives for adaptation; and (iii) cover remaining risks that cannot be prevented. In providing incentives for adaptation, it is very important that the insurance industry inform insurance takers of available adaptation (risk reduction) options and adequately adjust the premium price when such measures are implemented.

Climate-risk management should also be seen from a broader perspective and linked to other EU initiatives, such as the EU disaster-prevention framework and the implementation of the Floods Directive. The findings of this section are summarised in Table 3.24, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.3 Tools and Approaches

3.3.1 Tools

Environmental planning tools such as SEA, EIA, RIA and AA have potentially important roles to play in assessing climate risk and for integrating climate change into policy, planning, programme and project level decision-making.

The Strategic Environmental Assessment (SEA) Directive (EC, 2001), which was transposed into Irish law in 2004, applies to plans and programmes in a number of sectors.[24] Climatic factors are an information requirement for the SEA Environmental Report. Currently, the consideration of climatic factors in SEAs tends to focus on mitigation aspects. The European Commission (EC, 2009e) has acknowledged the need to extend the scope of the directive to address issues such as climate change, and has called for the development of specific guidelines in this context.

The DECLG provides a guidance document for regional authorities and planning authorities in relation to SEA land-use planning (DEHLG, 2004). In addition, the EPA has provided guidance in its document, *Synthesis Report on Developing a Strategic Environmental Assessment (SEA) Methodology for Plans and Programmes in Ireland* (Scott and Marsden, 2003). Nationally, scope exists to provide new guidance on climate change adaptation within SEA.

The Environmental Impact Assessment Directive (as amended by Dir. 97/11/EC, Dir. 2003/35/EC and Dir. 2009/31/EC) (EEC, 1985) requires EU member states to carry out assessments of the environmental impact of certain public and private projects. The directive is implemented in Ireland by the Planning and Development Acts, the Planning and Development Regulations, 2001–2002 and the European Communities (Environmental Impact Assessment) Regulations, 1989–2000. Climate change is *not* part of the EIA process. However, the directive is currently under review by the EC. As part of the review process, DG Environment will seek to develop synergies with

24 Under the regulations the types of plans and programmes subject to SEA include: Agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications and tourism (and those which set the framework for future development consent of projects listed in Annexes I and II of the Environmental Impact Assessment Directive)

Table 3.24. Entry points for integrating adaptation into insurance decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
National	DECLG	Implementation	Engage with the insurance industry to promote the integration of climate change impacts into any revisions of risk-assessment approaches and methodologies ☑

other EU environmental legislation and policies, such as climate change.

Regulatory impact assessment (RIA), which was introduced across all Irish government departments and offices in 2005, is used to assess the likely effects (including environmental) of a proposed new regulation or regulatory change. Hence, it applies to legal instruments only (i.e. Acts and Statutory instruments). The Department of the Taoiseach produced a revised guidance document for all government departments and offices, *RIA Guidelines: How to Conduct a Regulatory Impact Analysis* (DOT, 2009), which advises that environmental impacts should be examined under climate change (both mitigation and adaptation). There may be scope to strengthen the climate change aspects in future revisions of the guidance documents.

Appropriate assessment (AA) is a requirement under the EU Habitats Directive. This assesses the potential adverse or negative effects of a plan or project, in combination with other plans or projects, on a European Natura 2000 site. The duty to undertake AA rests with the national, regional or local authority charged with decision-making. The *Guidelines for Planning Authorities on AA of Plans and Projects* (DEHLG, 2009) makes no reference to climate change adaptation. There may be scope to strengthen the climate change aspects in future revisions of the guidance documents. The findings of this section are summarised in Table 3.25, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.3.2 Approaches

3.3.2.1 Disaster risk reduction

In the context of climate change adaptation one way to increase adaptive capacity is to integrate climate change impacts into disaster risk-reduction strategies with a view to reducing vulnerability. The UN International Strategy for Disaster Reduction, the Hyogo Framework 2005–2015, outlines strategic goals and objectives to increase the resilience of communities to disasters and key actions to be undertaken by all states to prepare for and reduce the risks posed by disasters. The EC Communication (EC, 2009f) on disaster risk prevention aims to integrate policies and instruments related to disaster (e.g. floods, droughts, wind storms) risk assessment, forecasting, prevention, preparedness and recovery.

National policy in the area of emergency management is set out in the *Framework for Major Emergency Management* (MEM) (DEHLG, 2002); the development of the framework was led by the DEHLG (now the DECLG) in collaboration with the DHC and the Department of Justice and Law Reform. The MEM works at three levels – (i) local authority, (ii) regional and (iii) national – with planning and coordination taking place at all levels.

Nationally, there are opportunities to improve the provision of information on climate impacts to inform preparedness, planning, response and recovery activities for emergency management. Early warning systems are essential to mitigate disasters. Accordingly, early warning systems need to be devised and put in place that will integrate extreme events (flooding, cold

Table 3.25. Entry points for integrating adaptation into tools for environmental decision-making.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Environment	DECLG	Formation Planning Implementation	Review of SEA Directive ☑ Review of EIA Directive ☑☑
National	DECLG/various government departments	Formation Planning Implementation	SEA guidance could be reviewed to include climate change adaptation with particular emphasis on flooding, offshore and renewable energy sector, critical infrastructure, land use and marine policy and planning ☑ EIA guidance could be reviewed on foot of revision to the EIA Directive, to enable the better use of EIA as a tool for integrating climate change adaptation into large scale projects ☑ Revisions of guidelines for planning authorities on AA of plans and project to include climate change adaptation ☑ Climate change adaptation could be highlighted as a key environmental consideration when legislation is subject to RIA ☑

Table 3.26. Entry points for integrating adaptation into disaster risk reduction approaches.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Humanitarian Aid and Civil Protection	DECLG/DFA		Review of Humanitarian Aid and Civil Protection policy ☑
National	DECLG/DD	All stages	Include climate change expertise on the Government Task Force on Emergency Planning and on the National Steering Group on MEM ☑
			Improve the provision of information on climate change impacts to inform planning, response and recover activities through the Major Emergencies Management Framework ☑
Sectoral research	DECLG/EPA/ OPW		Further develop early warning systems to inform emergency responses-building on current OPW study on flood risk warning ☑
			Further develop hazard mapping to identify areas at risk from climate change ☑

snaps, heat waves) into existing emergency planning and response mechanisms. The OPW has recently commissioned a Strategic Review of Options for Flood Forecasting and Flood Warning (FFW) in Ireland. The findings of this section are summarised in Table 3.26, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

3.3.2.2 Approaches to Equity and Participation

Adaptation is a localised issue and will require the participation of local actors in climate change decision-making processes. At the same time, policy-makers' responses can benefit significantly from effective engagement with stakeholders, which gives them an important role in the adaptation process.

In this regard it is valuable to have insights from processes such as: access to environmental information; stakeholder involvement and participation; and social partnership to understand how they might contribute to local-level climate change adaptation decision-making.

Information services such as the Citizens Information Service also play a valuable role by providing guidance on how members of the public can participate in environmental matters. In particular, Comhar SDC has an important role to play as the forum for national consultation and dialogue on all issues relating to sustainable development, including Climate Change. The Office of the Commissioner for Environmental Information may have a role in to play by including climate-related information in their remit. The findings of this section are summarised in Table 3.27, which sets out the policy level, key actors, stage in the policy cycle, and entry points for intervention.

Table 3.27. Entry points for integrating adaptation into equity and participation approaches.

Policy level	Key national actors	Policy cycle stage	Key entry points (existing ☑☑ and possible ☑)
EU-DG Environment	DECLG	Formation	Review and amendments to Access to Information on the Environment Directive to facilitate information on climate change☑
National	DECLG	Implementation	Include information on climate change in the work of the Commissioner for Environmental Information☑
National	Social partners	Implementation	The work of Comhar SDC offers opportunities to integrate climate change into emerging policy on economic and social issues☑☑

4 Recommendations

The key recommendations of the integration assessment focus on: information management, communications and awareness-raising; coordination; policy-integration tools; planning instruments; and implementation and review.

4.1 Information Management, Communications and Awareness-raising

The implementation of successful adaptation actions is dependent on the availability of accurate, reliable and authoritative data and information, which is then communicated effectively to stakeholders. A commitment is also needed to sustain resources for data-gathering and monitoring systems.

- Recommendation: Ongoing development of the knowledge base, which should be formalised through a lead organisation. Commitment to sustain resources for data gathering and monitoring systems.
- Recommendation: Effective dissemination of information to stakeholders through a suitably resourced national climate change information system.

4.2 Coordination

The responsibility for implementing and integrating climate change policy is spread across a number of sectors and levels. Mechanisms and tools are already in place to coordinate some of these activities, which could be set up or mandated to oversee all activities. To realise possible synergies and avoid conflicts, all sectoral policies and measures aimed at adaptation should be coordinated.

- Recommendation: Establish or mandate a national high level body to coordinate action on climate change adaptation and mitigation drawing on a pool of relevant expertise. Recommendation: Establish a multi-level stakeholder group to ensure vertical coordination.
- Recommendation: Coordinate sectoral policies and measures to ensure coherence.

4.3 Policy Integration Tools

The most effective strategy for adaptation planning is to integrate climate change adaptation into policies, plans, programmes and projects at all levels of government and across all sectors.

- Recommendation: Integrate climate change adaptation into all policies, plans, programmes and projects across all government departments/ sectors/all levels of government – local to national and inter-sectoral involving non-governmental actors, business, etc.
- Recommendation: Develop guidance and update existing assessment tools (e.g. SEA, EIA, RIA) to enable climate change adaptation to be incorporated adequately into policies, plans and programmes

4.4 Planning Instruments

Spatial planning is an important instrument for implementing and integrating many climate policy aims at the regional and local level.

- Recommendation: Use existing/forthcoming planning instruments to integrate adaptation into local level decision-making.

4.5 Implementation and Review

The implementation of a climate change adaptation policy has not yet begun, which means that little thought is being given to the review of policies once in place. This implies that work needs to be undertaken to analyse which tools and mechanisms could be used for this purpose. Adaptation actions will also need to be tracked over time to determine progress.

- Recommendation: Develop system to inventory adaptation actions.
- Develop mechanisms, criteria and indicators for regular evaluation of the effectiveness of adaptation policies and plans.

5 Conclusions

This report sets out the findings of a review of the policy context in which adaptation takes place in Ireland. The review identifies opportunities for integrating climate change adaptation into policies, processes and plans.

- It fills an important knowledge gap in developing Ireland's approach to climate change adaptation;
- It provides a baseline of the current status of Ireland's capacity to integrate climate change adaptation into national and sectoral policies; and
- It provides a useful benchmark for future assessments.

Climate change policy integration is a necessary process if society, the environment and the economy are to become resilient to the consequences of climate change. This will require the integration of adaptation strategies into general and sectoral policies. This can be supported by impact assessment tools and planning mechanisms. A large cross-section of sectors and regions have to be brought together to take action, which they may not be inclined to do on their own due to lack of awareness, information or capacity.

As with other many other member states, Ireland is at the early stages of integrating adaptation to climate change into mainstream decision-making processes. The international policy context is already driving some sectors to engage with climate change adaptation. In the absence of a national policy position on climate change adaptation, scope still exists for other sectors to engage with the process constructively. Effective policy integration will require accurate reliable and authoritative data and information, which is communicated effectively to stakeholders. Policy integration will need to be driven by high-level cross-sectoral coordination of efforts to ensure effective adaptation across all sectors and levels of climate change governance. There is good potential to use existing environmental management tools and planning instruments in support of the integration process. Ideally progress towards effective policy integration should be monitored and reported on regularly.

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Acronyms

AA	Appropriate Assessment
CAP	Common Agricultural Policy
COP	Conference of the Parties
CCRP	Climate Change Research Programme
DAFF	Department of Agriculture, Fisheries and Food
DAST	Department of Arts, Sports and Tourism
DECLG	Department of Energy, Communication and Natural Resources
DECNR	Department of the Environment, Community and Local Government
DEHLG	Department of the Environment, Heritage and Local Government
DES	Department of Education and Skills
DETI	Department of Enterprise, Trade and Innovation
DF	Department of Finance
DFA	Department of Foreign Affairs
DG	Directorate General (Department of the European Commission)
DHC	Department of Health and Children
DSP	Department of Social Protection
DOT	Department of the Taoiseach
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
FP	Framework Programme
GHG	Greenhouse gas emissions
IASG	Impacts and Adaptation Steering Group
IPCC	Intergovernmental Panel on Climate Change
NAC	National Adaptive Capacity
NCCAF	National Climate change adaptation Framework
NCCS	National Climate Change Strategy
NDP	National Development Plan
NGO	Non-governmental organisation
NPWS	National Parks and Wildlife Services
NSDS	National Sustainable Development Strategy
NSS	National Spatial Strategy
OPW	Office of Public Works

RBD	River Basin District
RBMP	River Basin Management Plan
REPS	Rural Environmental Protection Scheme
RIA	Regulatory Impact Assessment
RPG	Regional Planning Guideline
SEA	Strategic Environmental Assessment
SEAI	Sustainable Energy Authority of Ireland
UNFCCC	United National Framework Convention on Climate Change
WFD	Water Framework Directive
WMO	World Meteorological Organisation
WRI	World Resources Institute

Appendix 1: List of People Consulted

Name	Organisation
Aidan Fitzpatrick	Irish Aid, Department of Foreign Affairs
Áine Ryall	University College Cork
Alan Quirke	Forfás
Anne Irwin	Community Workers Cooperative
Anne Marie O'Hagan	Hydraulics and Maritime Research Centre, University College Cork
Beatrice Kelly	Heritage Council
Cathal O'Mahony	Coastal and Marine Research Centre, University College Cork
Colm Murray	Heritage Council
Conor Murphy	National University of Ireland Maynooth
Department of Agriculture, Fisheries and Food	
Department of the Environment, Heritage and Local Government	
Department of Finance	
Department of Foreign Affairs	
Department of Health	
Department of Transport	
Elizabeth Cullen	Irish Doctor's Environmental Association
Eoin Mclaughlin	Comhar, National Sustainable Development Council
Erik O'Donovan	Irish Business and Employers Confederation
Eugene Hendrick	Coford, Department of Agriculture, Fisheries and Food
Frank McGovern	Environmental Protection Agency
Gavin Harte	Sustainable Development Consultant
Gemma O'Reilly	Environmental Protection Agency
Ger Mullally	University College Cork
Glenn Nolan	Marine Institute
Jackie McLaughlin	National University of Ireland Maynooth
Jeremy Gault	Coastal and Marine Research Centre, University College Cork
Jim Bowman	Environmental Protection Agency
Jim Casey	Office of Public Works
John Coll	National University of Ireland Maynooth
John Sweeney	National University of Ireland Maynooth
Jonathan Healy	Forfás
Kevin Black	Coford, Department of Agriculture, Fisheries and Food
Maria Falaleeva	Coastal and Marine Research Centre, University College Cork
Maria Rochford	Comhar, National Sustainable Development Council
Mark Adamson	Office of Public Works
Mark Mellet	Irish Naval Service
Mary Stack	Failte Ireland
Matthew Kennedy	Sustainable Energy Authority Ireland
Michael Ewing	Environment Pillar - Social Partnership
Mike Fitzpatrick	Coastal and Marine Research Centre, University College Cork

Name	Organisation
Ned Dwyer	Coastal and Marine Research Centre, University College Cork
Niamh Kirwan	Comhar, National Sustainable Development Council
Noel Casserley	Comhar, National Sustainable Development Council
Paddy Purcell	Irish Academy of Engineering
Pamela Carter	Department of Health
Pat Barry	Irish Green Building Council
Pat Finnegan	Grian
Pat O'Mahony	University College Cork
Philip O'Brien	Environmental Protection Agency
Ray McGrath	Met Eireann
Robert Devoy	Department of geography and Coastal and Marine Research Centre, University College Cork
Seamus Boland	Irish Rural Link
Sean Hogan	Department of the Environment, Heritage and Local Government
Stefan Gray	Coastal and Marine Research Centre, University College Cork
Valerie Cummins	Maritime Energy Research Campus and Commercial Cluster

An Ghníomhaireacht um Chaomhnú Comhshaoil

Is í an Gníomhaireacht um Chaomhnú Comhshaoil (EPA) comhlachta reachtúil a chosnaíonn an comhshaol do mhuintir na tíre go léir. Rialaímid agus déanaimid maoirsiú ar ghníomhaíochtaí a d'fhéadfadh truailliú a chruthú murach sin. Cinntímid go bhfuil eolas cruinn ann ar threochtaí comhshaoil ionas go nglactar aon chéim is gá. Is iad na príomh-nithe a bhfuilimid gníomhach leo ná comhshaol na hÉireann a chosaint agus cinntiú go bhfuil forbairt inbhuanaithe.

Is comhlacht poiblí neamhspleách í an Ghníomhaireacht um Chaomhnú Comhshaoil (EPA) a bunaíodh i mí Iúil 1993 faoin Acht fán nGníomhaireacht um Chaomhnú Comhshaoil 1992. Ó thaobh an Rialtais, is í an Roinn Comhshaoil, Pobal agus Rialtais Áitiúil.

ÁR bhFREAGRACHTAÍ

CEADÚNÚ

Bíonn ceadúnais á n-eisiúint againn i gcomhair na nithe seo a leanas chun a chinntiú nach mbíonn astuithe uathu ag cur sláinte an phobail ná an comhshaol i mbaol:

- áiseanna dramhaíola (m.sh., líonadh talún, loisceoirí, stáisiúin aistrithe dramhaíola);
- gníomhaíochtaí tionsclaíocha ar scála mór (m.sh., déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta);
- diantalmhaíocht;
- úsáid faoi shrian agus scaoileadh smachtaithe Orgánach Géinathraithe (GMO);
- mór-áiseanna stórais peitreail;
- scardadh dramhuisce.

FEIDHMIÚ COMHSHAOIL NÁISIÚNTA

- Stiúradh os cionn 2,000 iniúchadh agus cigireacht de áiseanna a fuair ceadúnas ón nGníomhaireacht gach bliain.
- Maoirsiú freagrachtaí cosanta comhshaoil údarás áitiúla thar sé earnáil - aer, fuaim, dramhaíl, dramhuisce agus caighdeán uisce.
- Obair le húdaráis áitiúla agus leis na Gardaí chun stop a chur le gníomhaíocht mhídhleathach dramhaíola trí comhordú a dhéanamh ar líonra forfheidhmithe náisiúnta, díriú isteach ar chiontóirí, stiúradh fiosrúcháin agus maoirsiú leigheas na bhfadhbanna.
- An dlí a chur orthu siúd a bhriseann dlí comhshaoil agus a dhéanann dochar don chomhshaol mar thoradh ar a ngníomhaíochtaí.

MONATÓIREACHT, ANAILÍS AGUS TUAIRISCIÚ AR AN GCOMHSHAOL

- Monatóireacht ar chaighdeán aeir agus caighdeáin aibhneacha, locha, uiscí taoide agus uiscí talaimh; leibhéil agus sruth aibhneacha a thomhas.
- Tuairisciú neamhspleách chun cabhrú le rialtais náisiúnta agus áitiúla cinntí a dhéanamh.

RIALÚ ASTUITHE GÁIS CEAPTHA TEASA NA HÉIREANN

- Cainníochtú astuithe gáis ceaptha teasa na hÉireann i gcomhthéacs ár dtiomantas Kyoto.
- Cur i bhfeidhm na Treorach um Thrádáil Astuithe, a bhfuil baint aige le hos cionn 100 cuideachta atá ina mór-ghineadóirí dé-ocsaíd charbóin in Éirinn.

TAIGHDE AGUS FORBAIRT COMHSHAOIL

- Taighde ar shaincheisteanna comhshaoil a chomhordú (cosúil le caighdéan aeir agus uisce, athrú aeráide, bithéagsúlacht, teicneolaíochtaí comhshaoil).

MEASÚNÚ STRAITÉISEACH COMHSHAOIL

- Ag déanamh measúnú ar thionchar phleananna agus chláracha ar chomhshaol na hÉireann (cosúil le pleananna bainistíochta dramhaíola agus forbartha).

PLEANÁIL, OIDEACHAS AGUS TREOIR CHOMHSHAOIL

- Treoir a thabhairt don phobal agus do thionscal ar cheisteanna comhshaoil éagsúla (m.sh., iarratais ar cheadúnais, seachaint dramhaíola agus rialacháin chomhshaoil).
- Eolas níos fearr ar an gcomhshaol a scaipeadh (trí cláracha teilifíse comhshaoil agus pacáistí acmhainne do bhunscoileanna agus do mheánscoileanna).

BAINISTÍOCHT DRAMHAÍOLA FHORGHNÍOMHACH

- Cur chun cinn seachaint agus laghdú dramhaíola trí chomhordú An Chláir Náisiúnta um Chosc Dramhaíola, lena n-áirítear cur i bhfeidhm na dTionscnamh Freagrachta Táirgeoirí.
- Cur i bhfeidhm Rialachán ar nós na treoracha maidir le Trealamh Leictreach agus Leictreonach Caite agus le Srianadh Substaintí Guaiseacha agus substaintí a dhéanann ídiú ar an gcrios ózóin.
- Plean Náisiúnta Bainistíochta um Dramhaíl Ghuaiseach a fhorbairt chun dramhaíl ghuaiseach a sheachaint agus a bhainistiú.

STRUCHTÚR NA GNÍOMHAIREACHTA

Bunaíodh an Ghníomhaireacht i 1993 chun comhshaol na hÉireann a chosaint. Tá an eagraíocht á bhainistiú ag Bord lánaimseartha, ar a bhfuil Príomhstiúrthóir agus ceithre Stiúrthóir.

Tá obair na Gníomhaireachta ar siúl trí ceithre Oifig:

- An Oifig Aeráide, Ceadúnaithe agus Úsáide Acmhainní
- An Oifig um Fhorfheidhmiúchán Comhshaoil
- An Oifig um Measúnacht Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáide

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag ball air agus tagann siad le chéile cúpla uair in aghaidh na bliana le plé a dhéanamh ar cheisteanna ar ábhar imní iad agus le comhairle a thabhairt don Bhord.

NDP
National Development Plan 2007 - 2013

Climate Change Research Programme (CCRP) 2007-2013

The EPA has taken a leading role in the development of the CCRP structure with the co-operation of key state agencies and government departments.

The programme is structured according to four linked thematic areas with a strong cross cutting emphasis.

Research being carried out ranges from fundamental process studies to the provision of high-level analysis of policy options.

For further information see
www.epa.ie/whatwedo/climate/climatechangeresearch

epa
Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

ENVIRONMENTAL PROTECTION AGENCY
PO Box 3000, Johnstown Castle Estate, Co. Wexford, Ireland
t 053 916 0600 f 053 916 0699
LoCall 1890 33 55 99
e info@epa.ie w http://www.epa.ie

SSTI
Strategy for Science, Technology and Innovation

Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government