PUBLIC BODIES CLIMATE CHANGE DUTIES: PUTTING THEM INTO PRACTICE

GUIDANCE REQUIRED BY PART 4 OF THE CLIMATE CHANGE (SCOTLAND) ACT 2009

The Scottish Government

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The Scottish Government, Edinburgh 2011

Front Cover:

Inverclyde Academy opened in January 2009 with an Energy Performance Certificate 'A' rating – a significant achievement for a secondary school building. The Council was committed to producing a landmark campus that would also act as an exemplar to inform the design of subsequent schools.

The design of the Academy makes excellent use of natural daylight and ventilation to provide a high quality learning and teaching facility for the children and wider community. High efficiency condensing gas boilers and heating and water services systems are installed and insulation and air tightness are above current building standards regulations. Sustainably sourced materials, such as Forestry Stewardship (FSC) sourced timber, were specified where practical and affordable. A 50kW wind turbine will provide 15-20% of the power to the school as well as helping to reduce ongoing energy costs and CO2 emissions.

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EXECUTIVE SUMMARY

This guidance has been prepared to assist public bodies in complying with the duties placed upon them by Part 4 of the Climate Change (Scotland) Act 2009.

The Act sets clear and ambitious targets for emissions reduction, including a 42% reduction by 2020, and other climate change provisions, including adaptation. The public sector has a crucial leadership role in the delivery of Scotland's climate change ambitions in both these areas, and in acting sustainably. In recognition of this, Part 4 of the Act places duties on public bodies relating to climate change to enter into force on 1 January 2011.

These duties require that a public body must, in exercising its functions, act in the way best calculated to contribute to the delivery of emissions reduction targets (known as 'mitigation'), in the way best calculated to help deliver any statutory climate change adaptation programme, and in a way that it considers is most sustainable.

Part 4 of the Act also requires that Scottish Ministers must give guidance to public bodies in relation to their climate change duties, and those bodies must have regard to such guidance.

In recognition of the important ongoing role that planning for, and delivery of, climate change action will play in public bodies' everyday business processes and service delivery, this guidance has been developed to assist public bodies in addressing climate change action as a key strategic issue and in mainstreaming it alongside other corporate priorities.

The guidance begins by setting the public bodies climate change duties in context: what the duties are as set out in the Act, which bodies are covered by them, how this guidance has been developed and how it should be used. It then moves on in **Chapter 2** to set out the strategic framework for climate change action in Scotland and introduces key elements of the Climate Change (Scotland) Act 2009 which are of relevance to the public bodies duties or help to set wider action in context.

Chapter 3 explores the scope of the duties in more detail and outlines the key principles which underpin the guidance. It introduces the concepts of mitigation, adaptation and sustainability in more detail, along with the principle of 'proportionality' and the concept of some bodies as 'Major Players' on climate change action. The guidance considers these Major Players to be bodies with large estates and/or staff numbers, high impact and influence, large expenditure, or an auditing or regulatory function, and suggests that these bodies should be ambitious in their action on climate change and seek to do more than others.

The core chapter of the guidance – **Chapter 4** - contains a 'step-by-step' approach to assist public bodies in integrating climate change into their business practices. This process is broken down into sub-sections taking public bodies through a series of four steps from understanding their duties and assessing their impact and influence on climate change, to taking action using a variety of tools and techniques, and finally to reporting as a means of demonstrating compliance.

Each step within the process contains a set of desired outcomes which it will deliver and suggested actions to take to assist in meeting these. Additional suggested actions for those bodies considered to be Major Players are also included, along with diagrams and definitions of important concepts or policy frameworks.

Chapter 5 brings together sources of information and practical support and tools which will assist bodies in working through the step-by-step approach to climate change action. These have been grouped into broad categories: delivery bodies and other support (details of organisations providing support on climate change action which bodies may find helpful), area-based methodologies and footprinting, Strategic Environmental Assessment, and recording, monitoring and assessing greenhouse gas emissions.

The tools and support in **Chapter 5** are also supplemented by short guides to greenhouse gas emissions and climate change adaptation which are included as annexes.

The final chapter on next steps sets out the plans for keeping the guidance under review to ensure it remains an effective source of support to public bodies in their action on climate change.

1. CONTEXT

This section outlines the legal context, the purpose of this guidance, who should have regard to it and how it should be used.

1.1 THE CLIMATE CHANGE DUTIES - LEGAL BASIS

This guidance is issued by the Scottish Ministers to Scottish public bodies under powers contained in the Climate Change (Scotland) Act 2009. Its purpose is to give public bodies in Scotland guidance to assist in the implementation of the duties imposed on them as set out below.

Part 4 of the Climate Change (Scotland) Act 2009[1] (hereafter referred to as 'the Act') places duties on public bodies relating to climate change. In accordance with the Climate Change (Scotland) Act 2009 (Commencement No. 1) Order 2009[2], these duties came into force on 1 January 2011.

The duties on the face of the Act require that **a public body must, in exercising its functions, act:**

> **(a) in the way best calculated to contribute to the delivery of the targets set in or under Part 1 of this Act;**
>
> **(b) in the way best calculated to help deliver any programme laid before the Scottish Parliament under section 53;**
>
> **(c) in a way that it considers is most sustainable.**

In doing so, public bodies must have regard to this guidance.

The duties require public bodies to contribute to climate change mitigation and to climate change adaptation, and to act sustainably. **Mitigation** can be defined as the implementation of policies and actions to reduce greenhouse gas emissions or, where possible, enhance carbon storage. **Adaptation** can be defined as the adjustment in economic, social or natural systems in response to actual or expected climatic change, to limit harmful consequences and exploit beneficial opportunities. **Sustainable development** can be defined as development that aims to allow everyone to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations.

1.2 WHO ARE THE ‘PUBLIC BODIES’?

The duties apply to 'public bodies' defined as a Scottish public authority within the meaning of Section 3(1)(a) of the Freedom of Information (Scotland) Act 2002 (as amended). This definition does not cover all public authorities in Scotland, for example it excludes cross-border public authorities. However, the guidance is intended to be generic enough to be useful to all public bodies, and those outwith the formal definition of the climate change duties are in no way prevented from considering it as a potential source of information, tools and support.

All public bodies within the definition of the climate change duties are required, by the Act, to comply with the duties. Public bodies should check whether they fall within the definition and act accordingly.

Other public bodies in Scotland which are outwith the definition of the climate change duties may wish to consider this guidance as a source of information, tools and support in whatever climate change action they choose to take.

1.3 DEVELOPMENT OF THE GUIDANCE

Draft guidance was prepared in discussion with the Public Bodies Duties Advisory Group[3] and through a series of pre-consultation stakeholder workshops held to inform the Advisory Group and the preparation of the guidance. A summary of the conclusions of these workshops is available on the Sustainable Development Commission website[4].

The draft guidance was issued in public consultation in September 2010 seeking views to inform development of the final guidance. A copy of this consultation document and associated documentation can be accessed via the consultation pages[5] of the Scottish Government website and, where respondents supplied the appropriate permissions, their responses are available on the Scottish Government website[6], along with the consultation analysis report[7].

1.4 HOW THE GUIDANCE SHOULD BE USED

This guidance should be used by public bodies to **assist** them in fulfilling their duties under section 44 of the Climate Change (Scotland) Act 2009. Public bodies are reminded it is an advisory document only, not a definitive statement of the law, and that responsibility for compliance with the climate change duties rests with public bodies themselves. Following this guidance will assist public bodies in thinking about how they mainstream climate change action into their strategic and corporate processes, but it does not constitute legal advice to public bodies on compliance, nor absolve them of the duties placed upon them in the legislation. In all matters of interpretation of their climate change duties as set out in the Climate Change (Scotland) Act 2009, public bodies must seek their own legal advice if required, and must satisfy themselves that they are compliant.

Where following the guidance in application of their public bodies duties results in new or substantial change of policy, public bodies should be aware of their statutory obligation to carry out a Strategic Environmental Assessment (SEA)[8], Equality Impact Assessment (EQIA)[9] and other assessments where required.

The guidance will be kept under review as understanding of climate change and associated methodologies develops to ensure it remains an effective tool for assisting public bodies in their action on climate change. Further material which supports the guidance will also be made available through the Scottish Government from time to time.

2. STRATEGIC FRAMEWORK

2.1 WHY IS ACTION ON CLIMATE CHANGE IMPORTANT?

The Earth's climate is changing. The evidence has never been stronger and climate change poses significant threats to life on Earth. Science shows our climate has already changed as follows[10]:

- The year to September 2009 is the fifth warmest year in the 160 year global temperature record.
- The Earth's temperature has risen by 0.75 degrees centigrade over the last century and the period 2000-09 was warmer than the 1990s.
- Observations are consistent with ongoing warming of 0.15 degrees centigrade per decade since the mid-1970s.
- Man-made greenhouse gas emissions have been the main driver of climate change over the past 40 years. These emissions will continue to affect our climate for many decades to come. If emissions continue to rise, temperatures could rise by 4 degrees centigrade[11].

Climate change will affect all aspects of life increasing risks to food security, water availability, infrastructure and human health.

Crucially, if emissions are reduced early and rapidly, the extent of climate change will be mitigated. On the other hand, if greenhouse gas emissions continue unabated, the implications of climate change grow more severe, posing even greater risk to life on Earth.

In view of the threat and risks of inaction, it is essential that public bodies put mitigation and adaptation strategies in place and act sustainably to address climate change in Scotland.

2.2 SCOTLAND'S STRATEGIC FRAMEWORK

The Scottish Government’s strategic framework for action on climate change puts it at the heart of government, embedding action through the Purpose, governance, plans and policies. This framework is made up of plans, policies, legislation, practical support and tools. Delivery of the climate change duties by public bodies will be an important aspect of this framework in the future. The Scottish Government is itself a leading public body in Scotland, and is already addressing climate change and delivering its own climate change duties through a variety of aspects in the framework.

Public bodies should ensure they understand the strategic framework and are mindful of relevant policy documents and legislation in taking forward their duties. Their relevance will vary depending on the nature of a public body's functions and the sectors they are involved with. Key elements are described in sections 2.3 – 2.7 below.

2.3 THE CLIMATE CHANGE (SCOTLAND) ACT 2009

The Climate Change (Scotland) Act 2009 is the centrepiece of the climate change framework and supports the transition to a sustainable low-carbon economy. It requires that actions are taken in relation to both climate change mitigation and adaptation, as well as the development of a public engagement strategy.

2.3.1 MITIGATION

A key objective of the Climate Change (Scotland) Act 2009 is to reduce Scotland's greenhouse gas emissions by at least 80% by 2050, covering carbon dioxide and five other key greenhouse gases. These gases are: methane, nitrous oxide, hydrofluorocarbons, perfluorcarbons and sulphur hexafluoride. The baseline year for carbon dioxide, nitrous oxide and methane is 1990 and for the three fluorinated gases it is 1995. The Act also sets an important interim target to cut greenhouse gas emissions by at least 42% by 2020. The use of the term 'carbon' in assessments is often used to describe the emissions of all six greenhouse gases in terms of the amount of carbon dioxide they are equivalent to.

The long-term targets will be complemented by annual targets, to be set in secondary legislation. Targets for 2010-22 were agreed by the Scottish Parliament on 7 October 2010 and came into force on the 13 October 2010[12]. The next batch of targets, covering 2023-27, must be set by 31 October 2011, with successive five-year batches then being set at five-year intervals thereafter.

NB. These are economy-wide targets and **do not** constitute specific targets for the public sector. However, section 44 of the Climate Change (Scotland) Act 2009 requires that public bodies must act in the way best calculated to **contribute to the delivery of the targets** set in or under Part 1 of the Act.

Climate Change Delivery Plan And Report On Proposals And Policies

In June 2009, the Scottish Government published a policy document, the Climate Change Delivery Plan[13], which sets out the broad measures required in each sector to meet Scotland's statutory climate change targets, to 2020 and in the long term. The Delivery Plan is built around four transformational outcomes that must be delivered to reduce emissions by 80% by 2050:

- a largely decarbonised electricity generation sector by 2030, using renewables complemented by fossil fuels with Carbon Capture and Storage;
- largely decarbonised heating for buildings by 2050, through reduced demand, energy efficiency, and renewable and low-carbon heating;
- almost complete decarbonisation (the reduction in the emission of carbon dioxide and other greenhouse gases) of road transport by 2050, through wholesale adoption of electric cars and vans; and
- a comprehensive approach to carbon in rural land use, incorporating: protection for Scotland's carbon rich soils; minimised emissions from agriculture; use of natural resources to generate renewable energy; and increased sequestration of carbon, for example, through woodland planting.

Scottish Ministers are required by the Act to lay a statutory **Report on Proposals and Policies (RPP)** before Parliament as soon as reasonably practicable after setting annual targets. A draft RPP for the period 2010 - 2022 was laid in Parliament on 17 November 2010, and was then subject to a 60-day scrutiny period. A final RPP will be laid in 2011. The RPP builds on the Climate Change Delivery Plan by setting out proposals and policies to meet statutory emissions reduction targets. The draft RPP is available on the Scottish Government website[14].

2.3.2 ADAPTATION

Section 53 of the Climate Change (Scotland) Act 2009 establishes the legislative framework to pursue the Scottish Government's ambitions for climate change adaptation. Scottish Ministers must lay a programme before the Scottish Parliament, setting out proposals and policies to meet Scotland's climate change adaptation objectives. This must address risks identified for Scotland in progressive UK Climate Change Risk Assessments, as required by the UK Climate Change Act. The first UK Climate Change Risk Assessment is required to be published by January 2012 and the adaptation programme will follow as soon as is reasonably practicable thereafter. The public bodies' climate change duties require that a public body, must, in exercising its functions, act in the way best calculated to help deliver any programme laid before the Scottish Parliament under section 53.

Scottish Ministers are required to report annually on progress towards their programme to adapt to the changing climate. They must also seek independent scrutiny of their progress from the UK Committee on Climate Change's Adaptation Sub-Committee.

In advance of a statutory adaptation programme, Scotland's first Climate Change Adaptation Framework was published in December 2009. The core aim of the Framework is to make Scotland more resilient to climate change. Resilience in the context of climate change is defined as ‘the ability of the subject (e.g. a organisation, community or nation) to absorb impacts of the changing climate without serious disruption to critical functions and adapt to future potential impacts’.[15]

The Adaptation Framework has also established 12 key sectors where adaptation action will be focused over the next few years. Summaries for each of the key sectors were published alongside the Framework. These summaries outline the climate change issues and big challenges for each sector and provide an indication of the range of work already planned to strengthen resilience to climate change.

Using the published sector summaries as a basis, 'Sector Action Plans' with more comprehensive and prioritised actions are being developed by appointed sector leads. The Sector Action Plans will be living documents which are regularly reviewed and updated. Each sector will be outward-looking, engaging fully with stakeholders. Through this approach, the Scottish Government is taking a coordinated, strategic lead and is challenging all sectors to take action to capitalise on the opportunities and adapt to the negative consequences from the changing climate.

2.3.3 PUBLIC ENGAGEMENT STRATEGY

Section 91 of the Climate Change (Scotland) Act 2009 required the Scottish Government to publish a public engagement strategy by 31 December 2010. The strategy informs people about the emissions reduction targets set by the Act, encourages them to contribute to achieving those targets and identifies actions which they can take to contribute. It also aims to raise awareness of adapting to the impacts of the changing climate. Development of the strategy has been taken forward in parallel with broader communications and engagement on climate change issues, along with research into behaviour change. The Public Engagement Strategy was published on 30 December 2010 and is available on the Scottish Government website[16].

2.4 CRC ENERGY EFFICIENCY SCHEME

The Carbon Reduction Commitment, now referred to as the CRC Energy Efficiency Scheme, is a domestic, UK-wide emissions trading scheme which will reduce carbon emissions from large commercial and public sector organisations, such as supermarkets, hotel chains, banks, government departments and local authorities. The Scottish Government is working with its UK counterparts to implement the scheme. Public bodies in Scotland should know if they are within the CRC Energy Efficiency Scheme. The Environment Agency[17] is the central administrator for the scheme. The Scottish Environment Protection Agency[18] will be the regulator for organisations with their headquarters in Scotland. The revised CRC Energy Efficiency Scheme user guide[19] gives an overview of the scheme.

2.5 EU EMISSIONS TRADING SYSTEM

Formerly referred to as the EU Emissions Trading *Scheme*, the EU Emissions Trading System (EU ETS) is a Europe-wide cap and trade scheme that started in 2005. The EU ETS has been implemented through UK-wide legislation and covers electricity generation and the main energy-intensive industries. Some Scottish hospital and university sites are currently included in coverage. Operators of sites covered by the EU ETS should be aware of their inclusion.

Installations covered by the System receive allowances (1 allowance equals 1 tonne of CO2) distributed by EU member states. At the end of each year, installations are required to surrender allowances to account for their actual emissions. They may use all or part of their allocation. Installations can emit more than their allocation by buying allowances from the market. Similarly, an installation that emits less than its allocation can sell its surplus allowances. The environmental outcome is not affected because the amount of allowances allocated is fixed.

Emissions from activities covered by the EU ETS are excluded from the CRC Energy Efficiency Scheme. Further information is available on the Scottish Government website[20]. The Scottish Environmental Protection Agency (SEPA) is the scheme regulator for Scotland, and the first point of contact for Scottish participants/applicants.

2.6 SECTORAL AND WIDER POLICY DEVELOPMENTS

Climate change action is already being taken across many policy areas in the Scottish Government including energy, transport, waste, housing, business, agriculture, forestry, land use, planning and environment. Policies and regulations that support the Government's climate change ambitions will continue to develop over time and many of these will impact on the public sector to varying degrees. The Scottish Government will communicate developments through its website[21] and other channels and stakeholders will be involved in development of these policies and regulations in the usual manner, including through consultation as appropriate. More details of specific sectoral and wider policy developments on climate change can be found in **Annex C**.

Annex D contains tables for key sectors identified from the Scottish Government's Climate Change Delivery Plan and Scotland's Climate Change Adaptation Framework which highlight how the sectors link to climate change and the actions that can be taken to reduce greenhouse gas emissions and prepare Scotland for a changing climate.

2.7 BEST VALUE

Over the past decade or so, a number of public bodies covered by the climate change duties (although not all) have already been subject to a duty of continuous improvement. This existing duty, called “Best Value”, covers a diverse range of organisations of varying size, functions and responsibilities and with different accountability and governance requirements. It has required all local authorities[22] and all Scottish Government public bodies[23] to demonstrate (amongst other characteristics) how the individual organisation is making a contribution to sustainable development.

3. SCOPE OF THE DUTIES AND KEY PRINCIPLES OF THE GUIDANCE

3.1 SCOPE OF THE DUTIES

Mitigation - Reducing Greenhouse Gas Emissions

The first element of the duties is that, in exercising their functions, public bodies must act in the way best calculated to contribute to delivery of the Act's greenhouse gas emissions reduction targets (referred to as **mitigation**).

The Act has set an interim target of a 42% reduction in greenhouse gas emissions by 2020 and an 80% reduction in greenhouse gas emissions by 2050. The long-term targets will be complemented by annual targets, to be set in secondary legislation. Targets for 2010-22 were agreed by the Scottish Parliament on 7 October 2010. The next batch of targets, covering 2023-27, must be set by 31 October 2011, with successive five-year batches then being set at five-year intervals thereafter. To support Scotland's mitigation targets, public bodies must take action to reduce greenhouse gas emissions.

Whilst the interpretation of the duties is for public bodies themselves and ultimately for the courts to decide, should a challenge that a public body is not compliant be brought before them, it is suggested that when it comes to considering what "exercising functions" covers, public bodies take a broad approach and do not restrict this to simply their direct impact. Public bodies both contribute directly to greenhouse gas emissions and may also play a key role in relation to greenhouse gas emissions in the wider environment through the way they exercise their functions in relation to policy, service delivery, etc. **Public bodies are advised to approach the duties broadly and include direct and indirect emissions.** These terms are explored in more detail later in the guidance and defined in **Box 2**.

Adaptation - Adapting To The Changing Climate

The second element of the duties is that public bodies must, in exercising their functions, act in the way best calculated to deliver any statutory adaptation programme. Although the first statutory adaptation programme is not expected until 2013, public bodies are advised to consider their approach to adaptation now.

Organisations will have varying degrees of influence in relation to adaptation in Scotland depending on their particular role, functions and responsibilities, but **all public bodies need to be resilient to the future climate and to plan for business continuity in relation to delivery of their functions and the services they deliver to the wider community**.

Acting Sustainably - Sustainable Development As A Core Value

The third element of the duties places a requirement on public bodies to act in a way considered most sustainable. It is suggested that this element of the duties is about ensuring that in reaching properly balanced decisions, the full range of social, economic and environmental aspects are fully taken into account alongside the impact on greenhouse gas emissions, and that these aspects are viewed over the

short and long term. **It is recommended that public bodies equip themselves to be able to demonstrate how sustainability has been integrated into their decision-making processes, for example by devising procedures for sustainability proofing or assessing the sustainability of policy decisions and strategies**.

3.2 PROPORTIONALITY

What is required in compliance with the duties may vary from one public body to the next, depending upon various factors. It is therefore suggested that a degree of proportionality should be borne in mind. What is required of a public body with limited influence on emissions, and small estate and/or staff numbers should reflect their resources and the nature of what they do. Equally, there are a number of public bodies that the Scottish Ministers consider to be 'Major Players', as they have a larger influence or impact on climate change than others.

For the purposes of this guidance, Major Players are considered to be:

- ***Public bodies with large estates and large numbers of staff***
- ***Public bodies with a high impact and influence, e.g. Scottish Government, local authorities, SEPA, SNH***
- ***Public bodies with large expenditure***
- ***Public bodies that provide an auditing or regulatory function***

A list of those bodies considered to be Major Players is available on the public bodies climate change duties web page[24] and will be kept up to date, however this list is not exhaustive, nor is it a cast-iron classification.

In some aspects of the guidance, it is suggested that Major Players could consider doing more in comparison with other public bodies. Where this is the case, it is clearly specified throughout the guidance in the sections containing ‘suggested actions’, which set out those suggested actions for Major Players in **bold** text. However, it is up to public bodies to decide what action is appropriate for them.

3.3 KEY PRINCIPLES OF THE GUIDANCE

The following key principles underpin this guidance:

Focus on outcomes - The Scottish Government wishes to see Scotland's public sector playing a key role and setting an international example through:

- Leading and contributing to the achievement of Scotland's ambitious climate emissions reduction targets. Scottish public bodies have a key role to play in championing climate change action and ensuring their own emissions are reduced as far as possible.
- Building a resilient Scotland prepared for the challenges of the changing climate.
- Ensuring that we meet the needs of the present without compromising the ability of future generations to meet their own needs, in line with the Government's Purpose in relation to sustainable economic growth.

Public bodies should focus on climate change outcomes which are appropriate to their own functions, circumstances and ways of working.

Use of evidence - Keeping abreast of evidence is essential if public bodies are going to understand climate change issues and methodologies for tackling these. Public bodies should use evidence-based policy and decision making to identify priorities and in due course demonstrate compliance with the duties. It is also important that public bodies have information about the communities they serve, and the people they employ, in order to champion climate change in the broader sense.

Consultation and involvement - Public bodies should think about the consultation they carry out in relation to their climate change duties plans and policies, and how they disseminate information about these and progress against them.

Transparency - Public bodies should be open and transparent to enable the Scottish Government, the Scottish Parliament, and the wider community to understand their plans in relation to climate change action and to determine progress.

Building capacity - Knowledge and research about the causes of climate change and methodologies for tackling this is growing all the time. While meeting the challenges of climate change is stretching, it also brings many opportunities. In taking forward their responsibilities, public bodies should consider how best to build capacity within their organisation. This may mean looking at embedding new approaches and cultures across the organisation or creating or improving capacity in relation to specific tools or projects.

Cultural change - Cultural and behavioural change among organisations and employees will be a key part of successful climate change action and the commencement of the duties offer public bodies an opportunity for engagement with their staff. Cultural and behavioural change have been shown to be most successful when seen as a joint endeavour where individuals are equal partners in collective action towards the same goal, with mutual benefits for both employer and employee. One example is encouraging employees to consider alternative methods of travelling to work, such as walking or cycling, which will not only help them to live longer healthier lives but also assist the organisation in reducing its carbon footprint. Public bodies are encouraged to consider how they will work with their staff as joint partners in promoting cultural change, in order to achieve buy-in to action throughout the organisation, and identify those areas of activity which would both help meet their climate change duties and have positive effects on employees' everyday lives. Programmes such as Healthy Working Lives[25] and Active Nation[26] (which is part of 'A Games Legacy for Scotland') can help in this.

Simplicity - Public bodies may wish to make use of existing mechanisms in relation to corporate planning processes and existing reporting arrangements where possible, in order that planning and reporting on progress is done in an effective and efficient way, and so that public bodies are not required to duplicate work. The guidance also has regard to proportionality: what is expected of public bodies should

be a reflection of their impact and influence, as well as the nature of what they do, in order to balance proportionality and flexibility with effectiveness and delivery.

Cost - This approach to implementing the climate change duties seeks to mainstream climate change action across organisations and make it a natural part of decision-making processes, with the aim of keeping associated potential costs as low as possible. Reducing emissions through, for example, improved energy efficiency may also contribute towards greater efficiencies which could assist in addressing current public expenditure constraints.

Leadership - The public sector as a whole accounts for an estimated 3% of Scotland's total greenhouse gas emissions. This estimate includes emissions from direct fuel use - likely to be predominantly from operating boilers for heating, and the use of electricity for heating, lighting and operating equipment. However, through exercise of wider functions and community engagement, the public sector will influence a much higher proportion of Scotland's emissions. As well as reducing their own emissions, public bodies have a key role to play in leading by example and promoting climate change action more widely. Strong leadership at all levels will be crucial if Scotland is to meet its ambitious climate change targets. Public bodies who are further ahead in addressing climate change have an opportunity to play a leading role in supporting the implementation of the duties across the public sector by sharing best practice and providing advice.

Empowerment - Detailed planning and priorities for climate change must be for public bodies themselves and this guidance does not seek to be prescriptive or attempt to set targets for individual public bodies. The guidance aims to offer suggested actions which empower public bodies themselves to deliver the duties in a way which best meets their own circumstances and those that they deliver services to.

Partnership working - Public bodies are encouraged to **work together** through existing mechanisms - for example, Community Planning Partnerships and Single Outcome Agreements - or through devising new partnerships, and to explore opportunities for building capacity and sharing best practice.

Summary

All public bodies within the definition in the Act are required to comply with the climate change duties. Public bodies should check whether they fall within the definition and act accordingly.

Other public bodies in Scotland which are outwith the definition of the duties may wish to consider this guidance as a source of information, tools and support in whatever climate change action they choose to take.

Public bodies are encouraged to take a broad approach when complying with the duties and include all direct, indirect and influenced emissions. Climate change action should address mitigation, adaptation and acting sustainably and **be embedded** across all public bodies via corporate planning.

Understanding of how to most effectively address climate change is developing quickly. Public bodies should use **evidence-based policy-making techniques and learn from the good practice** of others. Public bodies should ensure they understand the principles of climate change action, keep up to date with emerging thinking, and seek to engage their staff at all levels in promoting cultural change.

Public bodies should know the **national targets and trajectory** and think about how they can assist in meeting these. They should also know whether they are within the CRC Energy Efficiency Scheme or the EU Emissions Trading System.

Major Players should keep abreast of the high-level strategic framework and relevant policy documents. It is envisaged that Major Players would be expected to do more than public bodies with less influence on climate change.

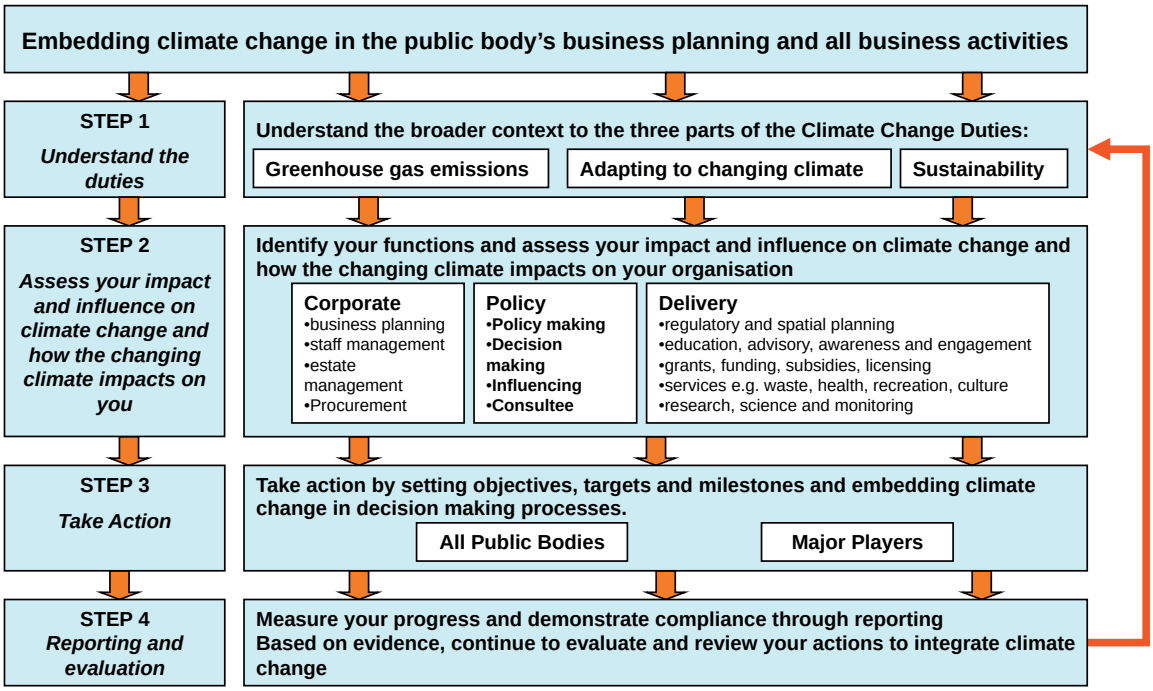
4. PUTTING THE DUTIES INTO PRACTICE - A STEP-BY-STEP APPROACH

It is crucial that climate change action is mainstreamed in all public bodies' business processes and functions. To do this effectively, public bodies will need to set targets and milestones and integrate climate change into business practice, through their existing processes and procedures. The Scottish Government has developed this step by step approach to assist public bodies to achieve this.

The outcomes of the step-by-step process will be:

- **Climate change action is mainstreamed into the corporate governance of every public body in Scotland to which the duties apply; and**
- **The public sector provides a leadership function to the rest of Scotland (private sector, voluntary sector, individuals and households) in its approach to climate change.**

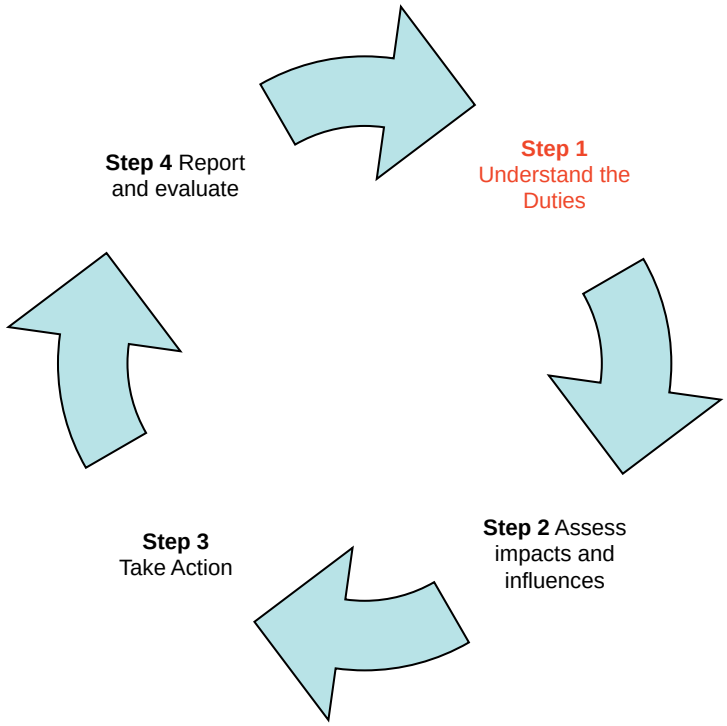
Diagram 1: **A step-by-step approach for public bodies to climate change action**



Mainstreaming climate change into their strategic and corporate processes and actions is the overarching goal for public bodies to work towards. However, it is acknowledged that public bodies will be at different stages of development and understanding of climate change action, and that effective mainstreaming could require more time and effort for some bodies than for others.

Addressing climate change is an ongoing process. To reflect this, the above step-by-step process has been developed into a cyclical diagram (with Step 1 following Step 4 in a new cycle), representing public bodies' continual evaluation of and building upon their climate change action. However, the steps can also be undertaken concurrently as developing knowledge and individual areas of action inform new or revised approaches to embedding climate change action.

4.1 STEP 1 - UNDERSTANDING THE THREE PARTS OF THE DUTIES



In order to deliver the climate change duties effectively, public bodies need a good understanding of the legislative and policy context influencing action on climate change in Scotland.

Public bodies should be mindful of key drivers to reduce greenhouse gas emissions, adapt to the changing climate and act sustainably, which are summarised below. The climate change context is continually evolving.

For the latest position please see www.scotland.gov.uk/climatechange

A useful glossary of climate change terminology can be found on the United Nations Framework Convention on Climate Change website at: http://unfccc.int/essential_background/glossary/items/3666.php

The outcome of Step 1 will be:

- **public bodies understand the three parts of the public bodies climate change duties: mitigation, adaptation and acting sustainably.**

4.1.1 REDUCING GREENHOUSE GAS EMISSIONS: MITIGATION

In order to limit future climate change caused by human activity, we need to first stabilise and then reduce levels of greenhouse gases in the atmosphere. The effect of emissions already released to the atmosphere will be felt for some time to come, so reducing emissions now will help to mitigate climate change impacts in the longer term. Activities that help reduce our emissions are referred to as **climate change mitigation**.

Scotland's framework for reducing greenhouse gas emissions is set out in section 2.3. More information on greenhouse gas emissions can be found at **Annex A**.

4.1.2 ADAPTING TO THE CHANGING CLIMATE

Scotland is already feeling the effects of climate change, with rising temperatures and more frequent extreme weather events impacting on our lives, the environment and the economy. Much of the change to the climate over the next 30 - 40 years is already determined by our past and present emissions. UK Climate Projections (UKCP09) show the changes that can be expected and, broadly, Scotland will get warmer, wetter winters and hotter, drier summers. These changes will have a variety of impacts, including increased flood risk, longer growing seasons and new pests and diseases. While urgent action to reduce emissions is vital, so is action to reduce Scotland's vulnerability to the impact of our already changing climate.

By planning and preparing for change now, Scotland will be better placed to adapt to the threats and take advantage of the opportunities as we look to build the low-carbon economy of the future.

Assessing the consequences of the changing climate and altering our plans or designs to account for these changes, is referred to as **climate change adaptation**. In order to adapt we need to understand how the climate is changing. Information on changes in Scotland's climate can be found at **Annex B**.

While the Act does not require an adaptation programme until after January 2012, the Scottish Government recognises that action is needed now to ensure we are adapting effectively to the unavoidable changes in our climate and, in 2009, published Scotland's Climate Change Adaptation Framework[27]. This Framework is a non-statutory forerunner to the adaptation programme required in 2012/13. Section 44 of the Climate Change (Scotland) Act 2009 requires that public bodies must act in the way best calculated to help deliver any such statutory adaptation programme.

Scotland's Climate Change Adaptation Framework sets out how Scotland should adapt to its changing climate. The framework will help improve understanding of the consequences of these changes, equip stakeholders with the skills and tools they need to adapt as well as help decision takers make the right choices for the future.

Public bodies should familiarise themselves with the Adaptation Framework and the steps it proposes for preparing for climate change.

Box 1 sets out the six principles established by the Adaptation Framework to help ensure that adaptation action is sustainable and coherent.

***Box 1*: The Six Principles of Scotland's Climate Change Adaptation Framework**

Adaptation must be addressed alongside actions to reduce emissions. Actions to adapt for a changing climate must also meet ongoing requirements to reduce emissions. Without mitigation, the scale of adaptation challenges will increase significantly.

Adaptation should build broader resilience, such as through an ecosystem approach. Changes in Scotland's climate will bring both short and long-term challenges. In addressing immediate impacts of climate change, opportunities for developing broader benefits of strong communities, sustainable economic growth and a healthy environment should be considered, as this will make Scotland more resilient to future change.

Climate change gives a new impetus to taking an ecosystem approach that considers the interdependence between species, habitats, and associated natural processes, and the ecosystems services that derive from them.

Adaptation should be informed by a cycle of review and action. Actions to adapt must account for inherent uncertainty of climate projections and related factors through monitoring and reviewing systematically. This improves the knowledge base by identifying those responses which have been successful and allows for the incorporation of new information on risk.

Adaptation should be integrated into existing development and implementation practices. Preparing for a changing climate should be integrated into existing risk management and planning processes and decisions, as an extension of good development practice.

Adaptation should be integrated at an appropriate scale. Adaptation to the impacts of climate change is often most effectively implemented at a local level, as the impacts and consequences may vary considerably by area or community. A local approach will be enhanced through broader support for capacity building, sharing of best practice and supporting policy.

Adaptation should seek to be developed in partnership with interested parties and avoid restricting others from adapting. Climate change will impact on many resources, such as water, that are vital to a number of individuals and organisations from across sectors. In developing adaptation actions, the interests of others and other sectors should be considered. Seeking a more joined-up approach may enhance the effectiveness and sustainability of the planned adaptation.

Public bodies are not formally required, through the climate change duties, to help deliver the Scottish Government's Climate Change Adaptation Framework. However, the Scottish Ministers would strongly advise public bodies to consider the risks and opportunities climate change presents to their business continuity now and how, in delivering their functions, they may build broader resilience to change in Scotland. Many decisions and investments made by public bodies today will have an impact on decades to come.

4.1.3 ACTING SUSTAINABLY

Sustainable development is development that aims to allow everyone to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life for future generations.

Acting sustainably therefore requires public bodies to routinely balance their decisions and consider the wide range of impacts of their actions.

The widely-used definition which derives from the 1987 report, Our Common Future, by the World Commission on Environment and Development (known as the Brundtland Commission) defines sustainable development as:

> *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs".*

Sustainable development is integral to the Scottish Government's overall Purpose - 'to focus government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth.' – and underpins the Greener strategic objective.

In developing policy and taking properly-balanced decisions consistent with the goals of sustainable development, five broad principles of sustainability can be followed:

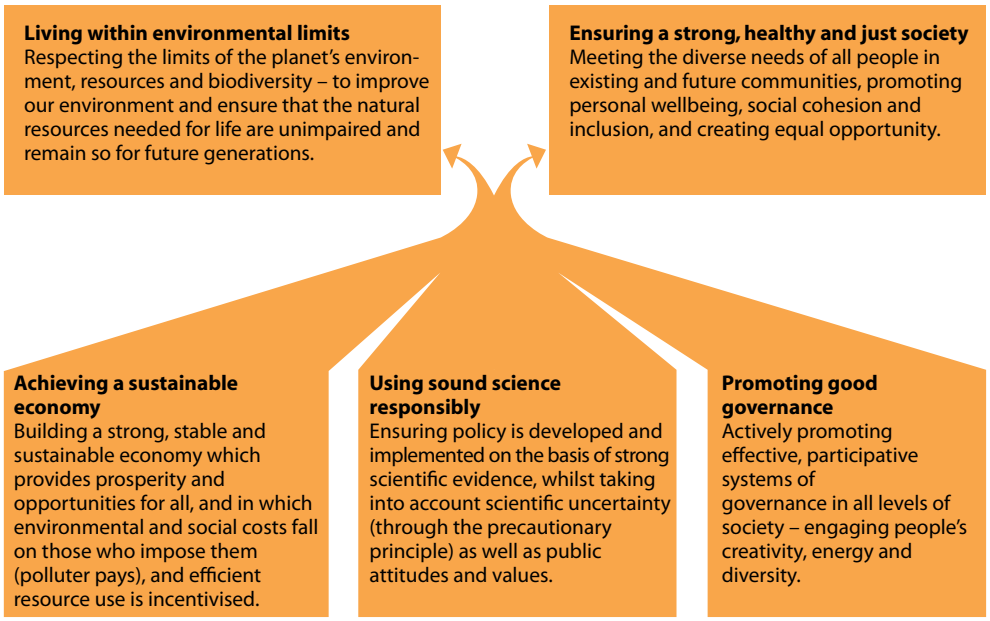
These are to:

live within environmental limits; and
ensure a strong, healthy and just society

and to do so by means of:

a sustainable economy;
promotion of good governance; and
responsible use of sound science.

***Diagram 2:* UK shared framework principles for sustainable development**

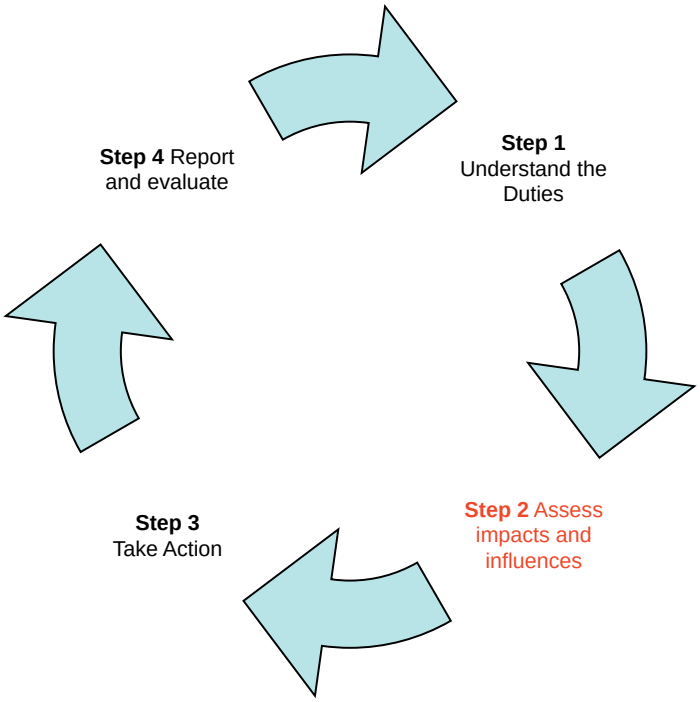


Source: Sustainable Development Commission

Acting sustainably is already central to the day to day activities of many public bodies and some bodies already have sustainable development duties, either through the overarching Duty of Best Value, or more specifically; for example, under the Environment Act 1995, SEPA is required to act in line with sustainable development when carrying out its role and have regard to the wider social and economic issues when protecting the environment and human health.

Organisations' influence on sustainability extends beyond their immediate environment through the actions they take forward and how the actions are taken forward.

4.2 STEP 2 - ASSESS YOUR IMPACT AND INFLUENCE ON CLIMATE CHANGE AND HOW THE CHANGING CLIMATE IMPACTS ON YOU



Public bodies are required by the Act, to consider the climate change duties in '*exercising their functions'*. Step 2 explores how to assess a public body's impact and influence on greenhouse gas emissions, how to understand the impact of the changing climate upon a public body as an organisation, and a public body's influence in preparing Scotland for a changing climate.

The outcome of Step 2 will be that public bodies can identify:

- **how they impact on and influence greenhouse gas emissions;**
- **how they can help prepare Scotland for a future climate and how climate change could affect their organisation; and**
- **how they can incorporate the principles of sustainability into their decisions and actions.**

4.2.1. IMPACTS ON CLIMATE CHANGE

Public bodies impact on or influence climate change by having a:

a) Direct impact on greenhouse gas emissions

Public bodies have a direct impact on emissions through management of their staff and estate. Public bodies need to understand this direct impact and what actions they could take to reduce it.

Box 2: **Direct and Indirect emissions – definition**

The Greenhouse Gas (GHG) Protocol[28] defines direct and indirect emissions as follows:

- Direct GHG emissions are emissions from sources that are owned or controlled by the reporting entity.
- Indirect GHG emissions are emissions that are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity.

Section 5.2 on recording, monitoring and assessing greenhouse gas emissions provides further detail on the definition of direct and indirect emissions in **Box 7**.

b) Indirect/wider influence on greenhouse gas emissions

The way public bodies carry out their functions, the decisions they make and their general engagement with stakeholders means that they have a much wider sphere of influence on greenhouse gas emissions than just their direct impact on emissions, including how efficiently they use, recycle and dispose of resources of all kinds. It is important that public bodies understand this indirect impact and wider sphere of influence and how they can address greenhouse gas emissions through this influence.

4.2.2. IMPACTS OF THE CHANGING CLIMATE

Public bodies are impacted upon by a changing climate and will need to:

a) Be resilient in a changing climate

Impacts of the changing climate will be felt by organisations irrespective of their size, location, activities and services. Public bodies depend on secure supply chains, resource supplies (energy, water, materials) and infrastructure and these could be at risk from the changes in the climate - for example, increased flood risk. It is important that to operate effectively, public bodies are resilient in the face of climate change. Understanding the changes and how these changes could impact on the day to day running of the organisation is a useful starting place. For example, public bodies could put in place Sustainable Drainage Systems (SUDS) on their own estates.

b) Help Scotland prepare for a changing climate

Through carrying out their functions, some public bodies will play a central role in preparing Scotland for a changing climate. For example, a planning authority taking

account of flood risk in decisions on the location of developments. Public bodies can also influence Scotland's resilience by, for example, protecting ecosystem services such as natural flood management.

Another key role for public bodies will be in influencing and supporting the resilience of individuals and communities to the impacts of climate change, for example, by building adaptive capacity through raising awareness of impacts and community consultation as part of the adaptation planning process.

Public bodies' functions vary significantly, and include undertaking statutory roles and providing essential services to people living and working in Scotland. These activities need to be maintained and remain affordable in the face of a move towards a low-carbon future and a changing climate.

4.2.3 FUNCTIONS OF PUBLIC BODIES

All functions of a public body need to be examined in relation to their impact on and influence on greenhouse gas emissions and how a changing climate will influence the functions. For the purpose of this guidance, the wide range of public sector functions have been grouped below into three high-level generic areas: corporate, policy and delivery. Public bodies should also consider how a changing climate might impact on the measures they have in place under each of these areas, and on action to reduce emissions.

a) CORPORATE -*Includes business planning, staff management, estate management and procurement.*

All public bodies have a **direct** impact on emissions through the way they carry out their functions, including how they manage their estates and staff. Public bodies can reduce emissions through the way they manage their estate; this includes energy use, water use, waste management and staff travel. Business travel policies can lead to a reduction in emissions.

Procurement

Procurement (of goods, services, works and utilities) is a key lever through which public bodies can influence a more sustainable economy, greenhouse gas emissions and ensure resilience to a changing climate. The following sections provide more detail on sustainable procurement.

Climate Change (Scotland) Act 2009

The Climate Change (Scotland) Act makes provision for Ministers to call for any public sector organisation covered by the Act to report on its compliance with the Public Bodies Duties contained in the Act. The Act also provides that, by Order, Ministers can require any public body found to be failing to comply with its climate change duties, to prepare a report on the actions it has taken, is taking or intends to take to secure future compliance with those duties. The Act goes on to say that any report must, in particular, contain information relating to how:

(a) procurement policies; and
(b) procurement activity

have contributed to compliance with climate change duties.

Scottish Sustainable Procurement Action Plan

In October 2009 the Scottish Government published the Scottish Sustainable Procurement Action Plan. The Action Plan[29] provides generic guidance for public bodies in Scotland on sustainable procurement. Sustainable procurement is defined in the Plan as " *A process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis and generates benefits not only to the organisation, but also to society, the economy and the environment"*.

Effectively implementing the Sustainable Procurement Action Plan may well assist individual organisations in demonstrating their compliance with the Public Bodies Duties in the Climate Change (Scotland) Act 2009.

The Action Plan makes clear that the greatest benefits are to be gained by considering sustainability at the outset of the procurement process - when requirements are being identified, specified and advertised. It provides advice on how to specify requirements in a way that will maximise social, economic and environmental benefits.

Building in sustainable outcomes to procurement activity at the beginning of the process ensures that all tenderers are bidding to a set minimum standard. This helps to ensure that tender evaluations and contracts awards meet the obligations of equal treatment and transparency that European legislation requires as part of public sector procurement.

Government Buying Standards

The Sustainable Procurement Action Plan includes a series of specifications (the “Buy Sustainable – Quick Wins”, now known as the “Government Buying Standards”) for commonly bought goods. The specifications set minimum and enhanced levels of sustainability factors such as energy efficiency and emissions and they can be easily adopted into public sector contract requirements.

Adopting the Government Buying Standards where they are consistent with national and local policies will help to minimise harmful greenhouse gas emissions.

The Action Plan promotes sustainability in public sector contracts in many other ways, including a “Sustainability Test” and the “Flexible Framework”.

Sustainability Test

The Sustainable Procurement Action Plan recommends that public sector organisations apply a “Sustainability Test” to their contract requirements. Requirements should be scrutinised before the formal procurement process begins to ensure, for example, that they:

- Are still required
- Cannot be delivered by other, more efficient, means
- Maximise beneficial outcomes
- Minimise or avoid negative outcomes such as harmful emissions and unnecessary waste.

Flexible Framework

The Action Plan also includes a self-assessment tool, the "Flexible Framework", that enables public (and private) sector organisations to measure - and identify steps to improve - the sustainability of their procurement. It looks at sustainable procurement through various aspects of the organisation's operation and provides a straightforward means of assessing where the strengths and weaknesses lie and what should be done to improve performance.

Emissions arising from transportation

European legislation, including the European Treaty and European Procurement Directives, is designed to promote open trade across Europe. It does not permit discrimination on the basis of where within Europe suppliers are located. It would therefore be illegal to give favourable treatment to any suppliers according to how "local" they are to the public sector organisation concerned. Taking into account during the procurement process the emissions arising from transportation of goods is likely to be seen as indirect discrimination and therefore also illegal.

Many public bodies also deliver services through contractors and/or various other arrangements such as arms length companies. Through the duties, there is an expectation that where public bodies procure or deliver services through others, these services will be designed to support climate change emissions reduction targets.

Food Procurement

The public sector has a significant influence through the goods and services that it procures and one significant example of this is in food supply: over the next few decades, the global food system will come under renewed pressure from the combined effects of climate change and other factors such as population growth and migration. Purchasing food sustainably can not only contribute to emissions reduction targets, but also deliver additional socio-environmental benefits including health improvement, economic development, food security and supporting the agricultural industry in its own response to climate change.

The Scottish Government has published new guidance, *Catering for Change,* on the sustainable procurement of food and drink in the public sector, which includes information on: developing a sustainable food procurement policy, sustainable development principles in relation to sustainable food procurement and building sustainability into the procurement process. The guidance can be accessed via the Scottish Government website[30].

Property

The public bodies duties should similarly be considered in relation to disposal of public assets, and public bodies may wish to consider the implementation of a 'climate change burden' in relation to property, as detailed in Section 68 of the Climate Change (Scotland) Act 2009. Section 68 inserts a new section (46A) into the Title Conditions (Scotland) Act 2003 to create a new kind of real burden - a 'climate change burden' - that can be added to a property's title deeds to specify the mitigation or adaptation standards that must be met when the burdened property is developed.

Staff engagement

Public bodies can also influence emissions through engaging with their workforce, working to achieve buy-in to action on climate change at all levels of the organisation, and ensuring that staff feel empowered to play their part in cultural change. This could include raising awareness of the imperative to reduce emissions, addressing this in future workforce skills requirements and training, and creating a sense of shared ownership by asking staff to identify contributions they can make such as switching off office equipment at night. The public sector employs a large number of people in Scotland and the workplace is a key environment in which people can not only learn the skills they need to address climate change but also, through making informed choices in their everyday work environment, promote significant cultural change both there and beyond at home and in their communities.

b) POLICY -*Includes policy making, decision making, influencing and consultation functions of public bodies.*

Policy making functions influence greenhouse gas emissions and adaptation through the decisions that are made and policies that are put in place. These decisions impact on how services are delivered. For example, spatial planning policies may impact on greenhouse gas emissions associated with waste, transport and energy in a particular local area. Spatial planning policies may also affect the resilience of natural systems to the changing climate and the vital resources they provide, such as food and water. Education policies will influence how climate change is addressed in the education sector. Energy policy can also influence greenhouse gas emissions and the resilience of energy infrastructure to the impacts of the changing climate.

c) DELIVERY -*Includes regulatory, spatial planning, education, advice, awareness, engagement, grants, funding, subsidies, licensing, research, monitoring, science and other service delivery such as waste collection, healthcare and recreation.*

Public bodies influence greenhouse gas emissions through the decisions they make in the process of delivering services. For example, a planning authority giving permission to a particular development may be able to influence the greenhouse gas emissions associated with that development.

Public bodies that administer grants, funding, subsidies and licences can also impact on or influence greenhouse gas emissions from those that are receiving the grant,

funding, licence or subsidy and may opt to address this through imposing relevant conditions on the contract.

A significant number of public bodies have education, advisory, informing and awareness raising roles and it is important that these bodies understand the impact and links of their actions to climate change. The public sector engages and informs various stakeholders, including the public, everyday and has a responsibility to address climate change through this role. Awareness campaigns run by the public sector should seek to address climate change where appropriate.

Universities and colleges have a key role to play in addressing climate change. They have much to contribute to understanding of climate change and sustainable development through their primary role as educators, skills trainers and researchers. This extends to their role as the focus of many local communities, positioning them to influence and lead on wider community and social initiatives.

Public bodies also need to ensure that their services, and decisions they make to deliver these, are resilient to changes in the climate and help Scotland prepare for the future.

Public bodies with research, science and monitoring roles have much to contribute to our understanding of climate change. As a cross cutting issue, climate change touches on a wide range of issues and it is important that these links are understood across the public sector.

4.2.4 GETTING STARTED: ASSESSING IMPACT AND INFLUENCE

The questions in **Box 3** are suggested as a good starting point to identify potential impacts and influences of a public body on climate change and climate change impact on a public body, which can then be used as a starting point to explore action to be taken in response. For example, answering 'Yes' to any of the questions should prompt further inquiry into the nature of the impact (mitigation or adaptation) and the means by which this is best understood and managed.

Box 3: **Impact and influence of public bodies on climate change and the changing climate**

Greenhouse gas emissions (climate change mitigation)

- Does your public body use offices, buildings or other facilities that require energy use?
- Does your public body procure goods and services?
- Does your public body have employees who travel for business?
- Does your public body influence greenhouse gas emissions in the key sectors of: energy, transport, business and industry, land management, residential or waste management?
- Does your public body influence travel patterns including number and length of journeys made and the mode of travel?
- Does your public body have a role in protecting or impacting on use/disturbance of soils?
- Does your public body influence energy generation?
- Does your public body influence energy efficiency?

- Does your public body affect energy consumption in people's homes or in offices/workplaces?
- Does your public body influence opportunities for the development of low-carbon economy and low-carbon technologies?
- Does your public body influence waste arising or the amount of biodegradable waste going to landfill?
- Does your public body influence agricultural practices and production?
- Does your public body influence the construction/reconstruction of any infrastructure?
- Does your public body influence any changes to the way land is used or will it influence forest planting/forest management?
- Does your public body influence planning and/or land use strategies?
- Does your public body engage with the public and wider communities?

Adapting to the changing climate

- Does your public body use offices, buildings or other facilities that could be affected by the changing climate?
- Does your public body rely on energy and water supplies and/or telecommunication and transport networks which could be disrupted by the changing climate?
- Does your public body have employees who travel for business?
- Could the services your public body delivers be affected by changes in the climate, e.g. flooding?
- Does your public body influence the location or design of new developments, critical infrastructure and public services?
- Does your public body influence the protection of existing infrastructure, including essential services, from risks such as flooding, erosion and storm damage?
- Does your public body influence the use of water or water supply?
- Does your public body influence the management of water systems including drainage?
- Does your public body influence ecosystem services such as natural flood management and maintaining soil carbon?
- Does your public body influence habitat networks and corridors for movement of species?
- Does your public body engage with the public and wider communities?

4.2.5 ACTING SUSTAINABLY

Public bodies must also ensure they are acting sustainably through their actions and through the decisions they make.

Box 4 provides an example of a 'sustainability checklist' which may assist organisations to identify the extent to which they impact on a range of social, environmental and economic factors. All of these factors need to be appropriately balanced by bodies in making decisions in the exercise of their functions.

The checklist does not cover responsible use of sound science or promotion of good governance; however, if relevant, these should be considered alongside the three other principles.

Box 4: **An example of a sustainability checklist for considering social, environmental and economic impacts**

Social - **To what extent, in exercising its functions, does your public body:**

- impact on health and wellbeing?
- contribute to the protection and enhancement of Scotland's cultural and historic heritage?
- ensure that all areas have access to good quality public services?
- affect numbers of people gaining education and skills?
- ensure that all areas have access to good quality housing that is both affordable and safe?
- tackle poverty and reduce economic inactivity in our most deprived communities?

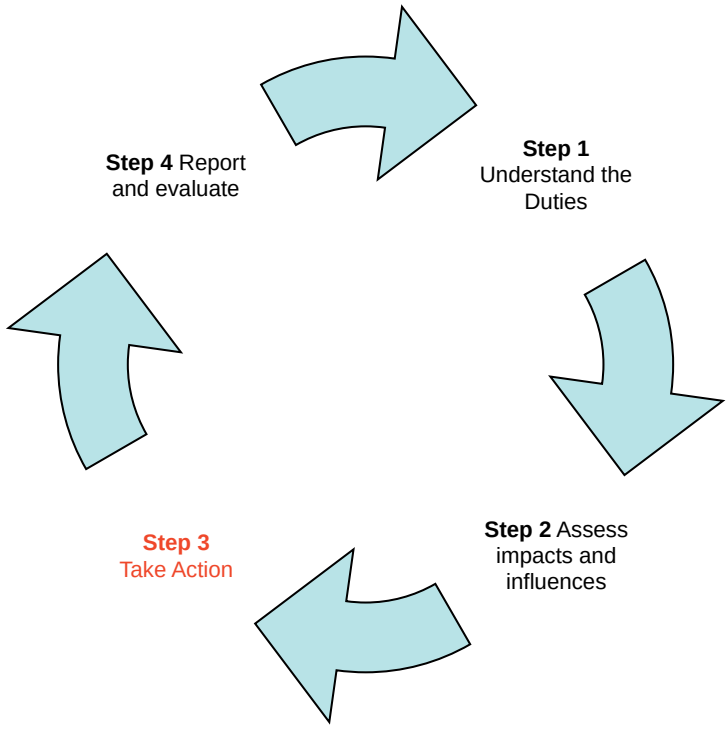
Environmental - **To what extent, in exercising its functions, does your public body:**

- lead to change in the emission of greenhouse gases?
- get impacted upon by changes in our climate?
- have an impact on air quality?
- protect our inland and coastal waters?
- disturb or enhance habitat and wildlife?
- encourage resource efficiency and help minimise waste?
- take opportunities to enhance the environment?
- otherwise impact on the natural environment?

Economic - **To what extent, in exercising its functions, does your public body:**

- promote the spread of prosperity to all parts of Scotland?
- help bring long-term jobs and skills to communities?
- engage and work with small businesses?
- encourage the use of new and innovative technologies and/or provide 'green' advice to businesses?
- impact on costs and availability of goods and services?
- bring savings to government and wider public sector?
- have an influence on opportunities in the green economy and the low-carbon economy?

4.3 STEP 3 - TAKE ACTION including SETTING OUTCOMES, MILESTONES AND TARGETS



Mainstreaming means integrating climate change into the everyday work of a public body at all levels including senior management, policy makers, service delivery and external partners and requires:

- **Strong leadership and shared ownership of climate change action**: By ensuring that responsibility for leadership on climate change is clear within the organisation, both at management level and cascaded throughout, accountability for climate change action will be increased.

- **A declared commitment to action on climate change:** Making a public body's commitment to deliver against the climate change duties visible and transparent, both to those who work within the organisation and to stakeholders, suppliers and service users, will increase the level of scrutiny of climate change actions, and public bodies will begin to exert positive influence over the behaviours of their stakeholders, supplier and service users.

- **Integration of climate change within business planning, e.g. through policy appraisal, impact assessment, SEA**: Building a process whereby the 'climate change question' and 'sustainability question' is routinely asked as part of the decision making process around new and existing policies, plans and proposals, will ensure the impact of that decision on climate change is considered and public bodies are seeking to act sustainably.

- **Partnership working with external bodies and interests**: Working cooperatively with other public bodies, e.g. bodies in the same geographic area, or bodies working in the same sector, will maximise efficiency and increase the impact of climate change action.

The outcomes of Step 3 will be:

- **Public bodies start to take action to help them implement the climate change duties;**
- **Public bodies' governance supports climate change action;**
- **Public bodies have strategies/action plans to address climate change as appropriate;**
- **Public bodies set outcomes and targets for emissions (direct/indirect);**
- **Public bodies integrate greenhouse gases into decision making through carbon impact assessments;**
- **Public bodies are prepared for a changing climate;**
- **Public bodies supporting climate change awareness and engagement work; and**
- **Public bodies in Scotland are acting sustainably.**

4.3.1. GOVERNANCE, LEADERSHIP AND COMMITMENT

Taking action to strengthen a public body's governance, leadership and commitment in regard to climate change will significantly contribute to the successful implementation of the climate change duties. The public sector has a central role in helping Scotland to reduce greenhouse gas emissions, move towards a low-carbon economy and prepare for the future climate. Strong governance, leadership and commitment within the public sector is vital.

Suggested actions: Governance, leadership and commitment

Actions in **bold** are considered to have particular reference to Major Players, other actions can apply to all public bodies.

- Develop commitment to climate change within the senior management of the organisation to ensure that climate change is visible in management processes and decisions and to promote increased awareness of climate change and appropriate action at all levels of the organisation.
- Promote this climate change commitment to staff, service users, stakeholders, delivery partners and suppliers, e.g. by referring to it in other published material (such as a medical practice handbook), website, displaying within the public body's premises etc.
- **Be able to demonstrate commitment and leadership in addressing climate change and consider where appropriate a formal governance system for addressing climate change within the organisation with a nominated lead or champion from senior management.**
- **Consider demonstrating visible leadership by making a public commitment to address climate change through the actions of the organisation. This could be part of an organisation mission statement or stated priorities. Joint action in association with partners is also encouraged and there are already good examples of these (the local authorities' Climate Change Declaration and the Universities and Colleges Climate Change Commitment for Scotland).**

4.3.2. DEVELOPING A STRATEGY OR ACTION PLAN

As part of public bodies' planning processes, public bodies may wish to consider developing a strategy to embed mitigation and adaptation across the organisation which sets clear climate change outcomes, indicators and targets. These could be brought together through a detailed work programme based on how a public body impacts on and influences climate change. It is likely that Major Players, based on their impact and influence, would have more detailed strategies.

Suggested actions: Developing a strategy or action plan

Actions in **bold** are considered to have particular reference to Major Players, other actions can apply to all public bodies.

- Develop a set of climate change **objectives** and **commitments**.
- Build climate change into business planning processes by ensuring a **climate change test/check is applied** to all new and existing plans, policies and proposals. The appropriate form of this 'test' will depend upon the type of plan, policy or proposal - examples include conducting a Strategic Environmental Assessment (SEA) when required, using a sustainability/climate change checklist, and the application of a sustainability test to procurement specifications, as set out in the Scottish Sustainable Procurement Action Plan.
- **Develop a detailed strategy or action plan. The programme of work should include actions and commitments to contribute to the delivery of Scotland's targets and to help prepare for a changing climate. Strategies could be part of existing corporate plans or in a separate document depending on the nature of the organisation. It is likely that Major Players will have more detailed strategies.**

4.3.3 SETTING TARGETS FOR DIRECT AND INDIRECT EMISSIONS

Setting clear and publicly-available targets drives improved performance, hence the ambitious national targets that have been set for Scotland (at least 42% reduction in GHG emissions by 2020, 80% by 2050), as well as annual targets for the period 2010-2022. As stated earlier, these are economy-wide, rather than sector-specific targets. It is not for this guidance or for the Scottish Government to set specific targets for individual public bodies, however the trajectory set out in the Climate Change (Annual Targets) (Scotland) Order 2010 provides an indication of the reductions required on an annual basis to meet the longer terms targets of the Act.

What may constitute an 'appropriate' target will depend on the nature of the public body itself. The extent of activities and influence an organisation may have on emissions varies widely across the public sector. In addition, the progress that an organisation has already made in reducing emissions will affect how much further they can progress in the near future. In view of this, public bodies are expected to identify their own ambitious targets. Whilst the guidance is non-prescriptive in terms of targets, there is a presumption, in the case of bodies which may have a major

influence on their own or others emissions, and the Scottish Government, that targets should echo the ambition of the national targets. Where this is not the case, the reasons for this should be explained.

In setting targets in respect of direct emissions reductions, account should be taken of the intended trajectory of emissions reductions. Indirect emissions reductions should also be considered in supporting delivery of the targets.

There is greater potential for complexity when accounting for indirect emissions, and it may also be difficult to estimate how effective efforts have been to reduce them.

There are best practice principles which can be applied to carbon accounting for indirect emissions and the Scottish Government in conjunction with partners in Scottish Enterprise and SEPA are developing this understanding going forward, with the aim of creating a best practice user community. Achieving a greater degree of consistency in the reporting of indirect emissions is desirable and will form part of the work programme going forward.

Public bodies need to collectively identify methods which work best for them. Public bodies should therefore actively seek to engage with each other for the purposes of improving their understanding of their influence over emissions, and how best to capture that information.

Recording associated direct and indirect greenhouse gas emissions will allow public bodies to set targets and monitor progress in achieving these targets. In order to reduce emissions and work towards a target, bodies need to understand how their emissions arise, through a combination of environmental/carbon management processes and environmental reporting. Based on an understanding of the pattern of associated emissions, public bodies can begin to set out the actions they will take to manage and reduce emissions.

In general, it is anticipated that the information on indirect emissions would be used only by the public body in question to develop an understanding of its influence over the direct emissions of other entities – that is, to inform decisions. There is inevitably the potential for “double counting” of emissions in such instances, and to avoid that possibility, reported indirect emissions data will not be totalled at a national level.

Estimates and assumptions may be compared when learning about which methodologies are most successful but, in general, it is expected that the information be used only by the public body in question to aid in understanding the ways in which they might influence the direct emissions of other entities – that is, to inform decisions.

Major Players with significant influence on emissions are encouraged to set annual targets for direct emissions and, where possible, indirect emissions and to show these at least for the five years ahead (and preferably through to 2022). This dovetails with the requirements of the Act that Scottish targets are set for each year. They are also encouraged to strive to meet or exceed annual targets, wherever possible, without rollover.

Major Players with less influence on emissions and other public bodies could set targets more flexibly to fit with their planning processes, perhaps over a three- or five-year period. It is recognised that these bodies may also require more flexibility around rollover and smoothing between year ends.

Public bodies with limited influence on emissions and small estates and/or staff numbers are encouraged to consider how they plan to deliver emissions reductions in the medium term, in recognition of the fact that, with much less of an impact on emissions, they may have less scope and it might be appropriate that they simply seek to ensure they reduce emissions as they go forward, rather than setting specific targets.

Actions and commitments to reduce emissions will help public bodies work towards their targets and support Scotland in moving towards a low-carbon economy.

Chapter 5 on practical support and tools provides more information on how to approach measuring and monitoring greenhouse gas emissions and actions that can be taken to reduce these emissions. Within this chapter, **Box 7** provides an explanation of direct and indirect emissions.

Suggested actions: Setting targets for direct and indirect emissions

Actions in **bold** are considered to have particular reference to Major Players, other actions can apply to all public bodies.

- **Major Players with a significant influence on emissions are encouraged to set baselines and annual targets for emissions and to show these at least for the five years ahead (and preferably through to 2022). They are also encouraged to strive to meet or exceed annual targets, wherever possible, without rollover.**

- Major Players with less influence on emissions and other public bodies could set baselines and targets more flexibly to fit with their planning processes, perhaps over a three- or five-year period. It is recognised that these bodies may also require more flexibility around rollover and smoothing between year ends.

- Where possible, baselines and targets should include both direct and indirect emissions (see **Box 2**). The boundaries of emissions included in baselines and targets should be clearly defined. Where baselines and targets do not already exist, appropriate baselines and targets based on the most recent information available should be established, by 2012 where possible.

- Public bodies with limited influence on emissions and small estates and/or staff numbers are encouraged to consider how they plan to deliver emissions reductions in the medium term, in recognition of the fact that it may be appropriate they simply seek to ensure they reduce emissions as they go forward, rather than setting specific targets.

- Actions to reduce emissions should be identified. Public bodies should understand principles of good carbon management and put these into practice in the way they run their operations in order to achieve high standards and continuous improvement in their operational environmental performance.

- Any targets set for direct and indirect emissions and the actions to reduce these emissions should be published in a plan or delivery statement. This plan could be part of an existing corporate plan, or a separate document, depending on the nature of the organisation.

- Public bodies should work to improve energy efficiency: for example, switching off lights and office equipment at night and following the principles and programme set out in the Energy Efficiency Action Plan[31].

- Public bodies should seek to put in place a travel plan for business travel, travel by staff to and from work, and travel by visitors to and from the service provided and to reduce emissions associated with staff travel by using more sustainable modes of transport and travelling less frequently.

- Public bodies should work to promote sustainable workplaces through identifying areas for action within the office which would tackle emissions and identify opportunities to promote and influence sustainable thinking among staff.

4.3.4. INTEGRATING GREENHOUSE GASES INTO DECISION MAKING THROUGH CARBON IMPACT ASSESSMENTS

Assessing carbon can also be used to compare options and assist in the identification of ways of reducing/minimising the carbon impact of proposed activities/interventions. Carbon impact assessments are a useful tool to ensure that the decisions being made, and the way a public body is delivering its services and using resources, are contributing to Scotland's move towards a low-carbon economy. Decisions on the ground should take account of the carbon impact to help achieve the national targets.

NB. Emissions falling within the wider sphere of influence can be much more difficult to quantify and in some instances it might not be appropriate to quantify or measure these emissions.

Suggested actions: Carbon Impact Assessments

Actions in **bold** are considered to have particular reference to Major Players, other actions can apply to all public bodies.

- **Consider using carbon impact assessments to ensure that carbon is factored into all decision making. Internal procedures and processes should be put in place using qualitative or quantitative assessments.**

4.3.5. PREPARE YOUR ORGANISATION FOR THE CHANGING CLIMATE

It is both important and good business practice to ensure that the services being delivered to the public are resilient to the changing climate. In the face of a changing climate, a public body must ensure that the services it delivers are resilient.

Suggested actions: Prepare your organisation for the changing climate

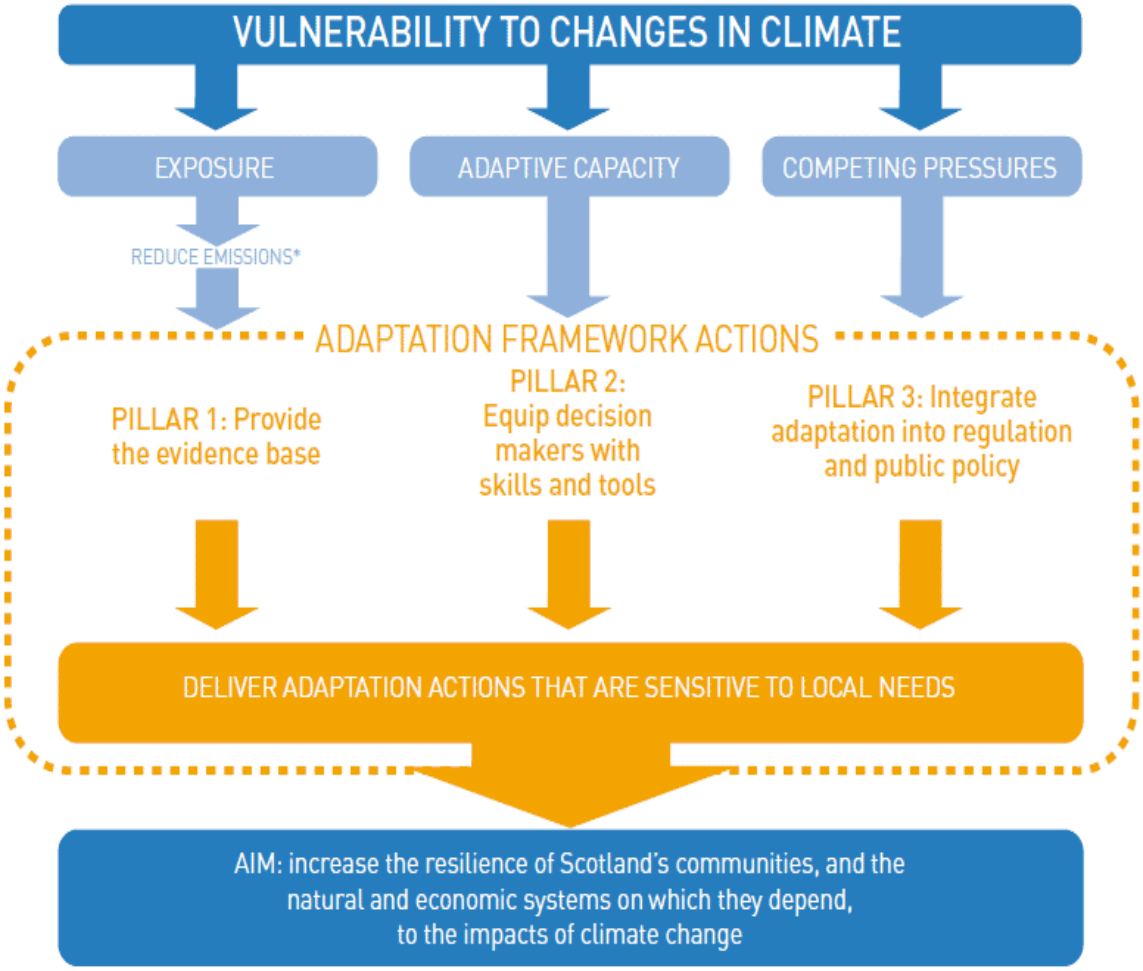
- Public bodies should ensure that their operations and service delivery have planned for changes in the climate, for example through resilience planning, risk assessment and delivery of locally-appropriate adaptation measures.

4.3.6. HELPING SCOTLAND ADAPT TO THE CHANGING CLIMATE

Public bodies influence and make decisions which affect Scotland's society, economy and environment and which will help Scotland adapt to the changing climate. When bodies make decisions, these decisions need to consider the risks and opportunities associated with a changing climate and ensure that projected changes in the climate are taken into account.

Where an SEA is applied to a particular plan, programme or strategy, it will serve as a useful tool to help take adaptation into account.

Diagram 3: **Model for adapting to the changing climate in Scotland**



Suggested actions: Helping Scotland adapt to the changing climate

- Public bodies which are responsible for local and national plans and policies should analyse whether the plans and policies are resilient to the impacts of the changing climate.
- Public bodies should identify how these local and national plans and policies can help Scotland adapt to a changing climate.
- Public bodies should take into account how their plans and policies can help Scotland's natural environment adapt to climate change.
- Public bodies should consider and support Scotland's Climate Change Adaptation Framework.

4.3.7. ACTING SUSTAINABLY

In making decisions about priorities, public bodies should be mindful of the third duty and act in a way which is most sustainable.

Acting sustainably will mean building in sustainability principles across a public body's functions and decision-making processes and considering the principles of sustainable development in setting out plans and priorities.

Best Value

Over the past decade or so, under the existing duty of Best Value, a number of organisations[32],[33] have already been required to demonstrate (amongst other characteristics) how the individual organisation is making a contribution to sustainable development through their actions, processes and the outcomes they deliver (individually and, increasingly, across multiple partnerships or through contracts).

Sustainable development is a core part of Best Value and an organisation subject to the Best Value duty is already required to demonstrate an organisational culture which recognises the value of working with wider stakeholders and partners to achieve more effective and sustainable policy development, better services and customer-focused outcomes.

The Audit Scotland Sustainability Toolkit[34] is a tool to support local authorities in delivering this duty on sustainable development and more information can be found in Chapter 5.

Suggested actions: Acting sustainably

- Public bodies should work to understand the impact of their corporate operations, policies and service delivery on the environment, society and the economy and explore ways to reduce this, in accordance with the principles of sustainable development.

- Public bodies should, where necessary, assess the sustainability of their business activities and decisions to ensure they are acting sustainably by taking into account their impact on society, economy and the environment, in line with the principles and requirements of SEA (see section 5.3)

4.3.8. PARTNERSHIP WORKING

The Scottish Government encourages public bodies to **work together** through existing mechanisms - for example, through Community Planning Partnerships (CPPs), and Single Outcome Agreements - or through devising new partnerships. Although CPPs as a single entity are not covered by the climate change duties (as 'Community Planning Partnership' does not appear as an entity on Schedule 1 of FOISA), some of their constituent organisations such as councils, health boards and other public bodies will be covered in their own right.

Co-ordinated action on climate change could deliver real benefits for those across the public sector and in conjunction with the third sector and private sector, as well as building capacity and providing opportunities to share best practice. Public bodies are therefore encouraged to think about the potential for joined-up action both within or between Community Planning Partnerships, and through other mechanisms or existing networks.

Suggested actions: Partnership working

- Public bodies should seek opportunities to work in partnership to help address climate change and should consider how this commitment could be demonstrated through examples which provided positive outcomes.

4.3.9. RAISING AWARENESS AND ENGAGEMENT

Public bodies should raise awareness internally and externally on climate change and work towards buy-in from staff at all levels of the organisation, supporting and enabling them in understanding the contribution they can make in addressing climate change. Public bodies in Scotland employ large numbers of staff and each employee has the potential to carry the message regarding taking action on climate change beyond the immediate workplace, to their wider sphere of influence (home, community groups, etc). Workplace engagement strategies should assist in ensuring that all employees in the organisation have an understanding of the impacts of climate change, in order to generate a sense that they collectively 'own' a public body's response to this and feel empowered to contribute to its actions. Public bodies are encouraged, where possible, to also embrace wider action throughout the community.

In addition to identifying the actions we as individuals can all take to help meet Scotland’s targets, the Scottish Government's Public Engagement Strategy contains a delivery plan for the year ahead which gives examples of actions being taken by private, public and voluntary bodies to engage with the public on this agenda through a range of networks. Public bodies should consider the information provided in the strategy; support the Public Engagement Strategy and create their own plans for communicating with their partners, stakeholders and staff to take forward climate change action as appropriate. This recognises that public bodies have a wide range of stakeholders and constituents who are affected by and have an interest in climate change, and they have long experience in engaging with their local communities.

Suggested actions: Raising awareness and engagement

Actions in **bold** are considered to have particular reference to Major Players, other actions can apply to all public bodies.

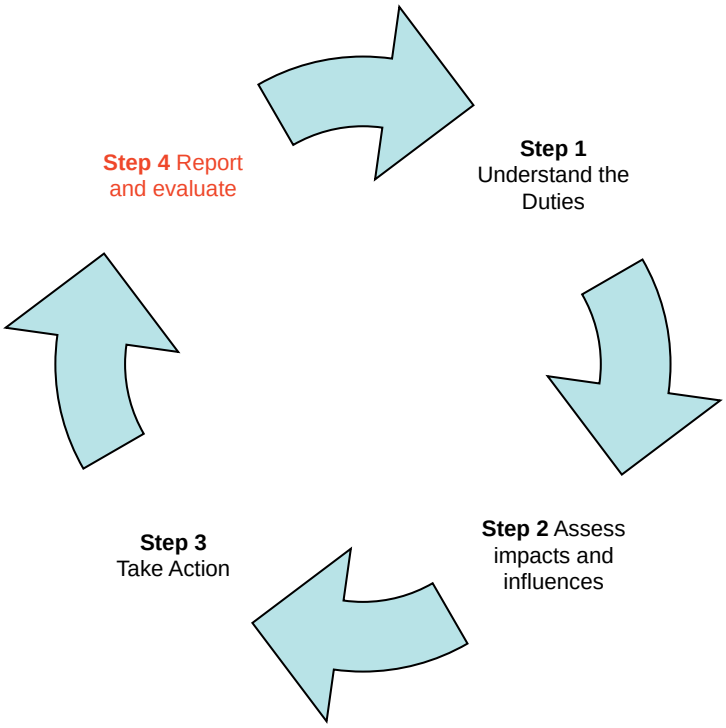
- Public bodies should work to raise awareness of and achieve buy-in to action on climate change at all levels of their organisation.

- Public bodies should support the climate change Public Engagement Strategy to involve the whole of Scottish society in helping to deliver climate change objectives.

- Public bodies should develop their leadership capacity in relation to the low-carbon economy through their work to reduce carbon.

- **Public bodies should put an internal sustainable development/climate change awareness training programme in place (e.g. through induction/continuing professional development) to help employees understand their role in addressing climate change.**

4.4 STEP 4 - REPORTING: DEMONSTRATING COMPLIANCE WITH THE DUTIES



It is important that public bodies monitor how they are doing in respect of their climate change duties in order to gauge progress and to make adjustments if necessary.

They also need to be accountable for this to stakeholders, the Scottish Ministers, the Scottish Parliament and their communities. Transparent and open reporting is a crucial element of maintaining public confidence in the performance of a public body. It will also assist a public body in demonstrating that it has complied with its climate change duties.

We know that reporting increases the level of scrutiny and drives improvement.

The outcome of Step 4 - 'Reporting' - will be:

- **Transparent and open reporting on the delivery of the public bodies climate change duties, which generates public confidence in the performance of public bodies, drives improvement and assists public bodies in demonstrating compliance with their climate change duties.**

4.4.1. PRINCIPLES AND METHODS OF REPORTING

Public bodies are used to reporting their performance across many aspects of their functions. Public bodies are expected to ensure that their reporting addresses the progress they are making in relation to climate change action. It is important that climate change reporting is linked to the outcomes, indicators and targets for climate change action set through the public body's business planning process (see **Step 3**: Take Action). This will enable public bodies to review when and where adjustments in policy and practice might be required over time.

This guidance is not prescriptive on how to report (in line with its advisory purpose). Public bodies can decide whether to use existing reporting mechanisms or whether a standalone report might be appropriate. Public bodies which either have a very small number of staff or do not have property are encouraged to consider possible alternative ways of communicating their action in respect of the public bodies duties, which could be through related/parent organisations or an alternative report.

When considering the issue of reporting, public bodies (particularly Major Players) may find it helpful to consider their climate change duties alongside other reporting activity; namely; the obligation under section 76 of the Climate Change (Scotland) Act for the Scottish Ministers to prepare a report on the efficiency and contribution to sustainability of the civil estate and the sustainability reporting requirements within the Government Financial Reporting Manual (FReM). A summary of activity in these and detail of other relevant areas of reporting has been included in **Box 5** below.

Box 5: **Other reporting requirements**

Climate Change (Scotland) Act 2009 - Section 76 reporting:

Public bodies will be aware of the requirement under section 76 of the Climate Change (Scotland) Act 2009 on Scottish Ministers to prepare a report on efficiency and contribution to sustainability of buildings which are part of the civil estate and used for the purposes of Scottish central government administration. The scope of the civil estate has been defined in relation to the provisions which apply to the UK Government as: ' *workspace, offices and other property (land and buildings) used to deliver departments' activities that is owned, leased, or occupied by a government body including non-ministerial departments, agencies, executive NDPBs and Special Health Authorities... It does not include the operational NHS Estate, the Prisons Operational Estate, the Foreign Office Overseas Estate, the DEFRA Rural Estate, the privatised rail entities, public corporations or the defence estate (except for certain civil elements)*[35]*.* An analogous definition will apply in Scotland and the scope of elements statutorily required, covering information on the size and cost of estate (incl. space efficiency), waste, water, and energy will be broadly similar. **The Scottish Government is currently considering whether, and how, the information to be reported under s76 could be enhanced to cover other elements of sustainability and environmental performance, and any inherent implications for our own annual environment reporting arrangements**. The Scottish Government wrote to Chief Executives of affected bodies in August 2009 about data handling issues related to the preparation of reports and will bring forward further advice as appropriate in due course, which may be of interest to public bodies.

Scottish Ministers Accounts Directions: Sustainability Reporting requirements in accordance with Government Financial Reporting Manual (FReM):

Spending bodies accountable to the Scottish Parliament funded from the Scottish Consolidated Fund will also wish to be aware of a requirement for the mandatory inclusion of sustainability reports within the Annual Reports and Accounts of affected bodies from the 2011/12 financial year. These reports are to cover performance against sustainability targets for greenhouse gas emissions, waste minimisation and management and the use of finite resources, and their related expenditure. **Guidance will be prepared in due course on the reporting methodology and model to be adopted in preparing the sustainability report, based upon targets to be outlined by the Scottish Government**.

Guidance prepared by HMT for central government bodies in England participating in a dry-run exercise in the (2010-11) financial year requires as a minimum all public bodies reporting in accordance with FReM to include a section in their Annual Report covering their performance on sustainability during the year including a simple commentary overview; a 'sustainability report' comprising a table of financial and non-financial information covering the organisation's emissions, waste and finite resource consumption and includes guidance on populating a suggested format for a table containing the data and associated narrative. The key principles of such reporting are that it should provide transparency, in terms of clarity and openness, consistency for comparative purposes, and that it links financial with non-financial information in each area reported on. In practice this approach allows for the preparation of a three or four-page report, concise in nature and which can signpost the reader to other sources of information and the arrangements which will apply to bodies in Scotland are expected to be broadly similar. For further information, the Sustainability and Environmental section of the FReM website offers more detail (www.financial-reporting.gov.uk).

The requirement in Scotland is expected to cover the core Scottish Government, Executive Agencies, Non-Departmental Public Bodies, Non-Ministerial Departments, Crown Office, Health Boards (including Special Health Boards), but not Public Corporations or local authorities. However, local authorities should be aware of related work by The Chartered Institute of Public Finance and Accountancy (CIPFA) which is currently undertaking a consultation on local authority annual reporting ('telling the whole story') including consideration of sustainability reporting and the approach adopted in the HMT draft guidance. CIPFA is also currently developing a publication on public sector sustainability reporting, drawing on the Accounting for Sustainability Connected Reporting Framework (a model that informed the HMT draft guidance).

Best Value

An organisation subject to the existing Best Value duty is already required to demonstrate, amongst other characteristics, that robust arrangements are in place to monitor the achievement of outcomes (possibly delivered across multiple partnerships or through contracts) as well as reporting on specific activities and projects. The measures used to manage and report on performance will also enable the organisation to provide assurances on quality and link this to continuous improvement and the delivery of efficient and effective outcomes.

Scotland's Climate Change Declaration

Scotland's Climate Change Declaration (SCCD) represents the commitment and leadership of Scottish local authorities to take action, in partnership with the Scottish Government, on climate change. All 32 Councils are signatories to the Declaration. It is an acknowledgement of the reality and importance of climate change to elected members and the key role of local authorities, and forms a public demonstration of commitment to this agenda. Signatories are committed to:

- mitigating their impact on climate change through reducing greenhouse gas emissions
- taking steps to adapt to the unavoidable impacts of a changing climate
- working in partnership with their communities to respond to climate change

The Sustainable Scotland Network produced a template and guidance note to assist with reporting, which COSLA encourages all councils to use.

Further information about SCCD is available via the Sustainable Scotland Network's Climate Change Declaration web pages[36].

4.4.2. ORDER-MAKING POWERS

Part 4 of the Act also gives the Scottish Ministers the power, by Order, to:

- impose additional climate change duties on individual or categories of public bodies;
- require reports on compliance with climate change duties; and
- designate one or more bodies or persons to monitor and to carry out investigations into public bodies' compliance with the duties.

As no decision has yet been taken on the potential use of these Order-making powers, reporting is at this stage undertaken on a voluntary basis. There is as yet no statutory obligation on public bodies to report their progress and, until such time as this may come into effect, it is a matter for each public body to decide what is appropriate to ensure they are able to demonstrate compliance with their duties.

However, the Scottish Ministers would encourage public bodies, particularly Major Players, to be mindful of their position of influence in tackling climate change, of the fact that their action will in turn contribute to the achievement of Scotland's national climate change programme and targets, and of the benefits which open and transparent reporting could bring in helping a public body demonstrate its compliance.

The principle of **proportionality** is important to reporting and it is therefore suggested that those bodies with a larger influence on climate change should report in more detail and possibly more frequently than other public bodies. Major Players should consider reporting **annually**, whilst for public bodies with less influence on climate change this could be less frequently (particularly if their climate change targets are set over a longer time period): perhaps on a three-year basis.

Major Players should, wherever possible, seek to use a consistent approach to reporting in terms of **what** they report. They are also encouraged to publicly state, for example through their website, **how they will report**, as soon as is reasonably possible. This will assist in articulating how public bodies are contributing to achievement of Scotland's climate change ambitions.

4.4.3. SUGGESTED AREAS OF ACTIVITY

Both **quantitative and qualitative** reporting are important. Public bodies should think about how their reporting would encompass action on fulfilling their three duties. The following suggestions may provide a steer:

- MITIGATION: Reductions in emissions over the period and against baselines could be accompanied by a narrative and link the information, where appropriate, to the outcomes, indicators and targets for climate change action as set out in corporate planning processes. Information in relation to direct and indirect emissions could include procurement policies, energy efficiency measures in relation to management of estates, policies in relation to staff (for example, travel policies) as well as action in relation to delivering policies, programmes and plans in conjunction with stakeholders in the wider community.

- ADAPTATION: Reporting in relation to adaptation could include information from public bodies' risk registers, if appropriate, and progress made in taking forward climate change resilience planning in line with the Climate Change Adaptation Framework. Information on any action to assess vulnerability to current and past climate impacts, and the impacts associated with future climate change predictions/scenarios could be included. Action to prepare for climate change impacts, to build adaptive capacity and climate change resilience, could be reported.

- SUSTAINABILITY: Sustainability reporting could include examples of how the public body is seeking to act sustainably through its actions and decision-making processes. The 'sustainability checklist' may help in articulating the social, environmental and economic issues which have been considered in sustainable decision-making and in identifying areas where progress has been made.

As a guide, Major Players' reports might summarise the various aspects of the relationship between public body corporate planning and climate change action, namely:

- Governance, leadership and management arrangements for climate change action and confirmation of the nominated senior management champion.

- Reductions in relation to public bodies' direct greenhouse gas emissions.

- Emissions arising from exercising public bodies' broader functions and the action being taken to address these.

- Action taken to assess risks of climate change impacts and work undertaken with others on adapting to the impacts of climate change.

- Examples of partnership working and climate change communications.

- Other activities and achievements: both highlights and areas for improvement.

This structure is broadly in line with current reporting carried out under Scotland's Climate Change Declaration.

Public bodies would also be expected to build in a process of evaluation and review both to determine the success of their climate change policy and as part of consideration of how the information generated by reporting processes is best used to promote staff engagement and drive continuous improvement. Assessment of the value and format of reporting will be part of the ongoing cycle and adjustments should be made if necessary to ensure the reporting process remains efficient and effective.

Suggested actions: Reporting

Actions in **bold** are considered to have particular reference to Major Players, other actions can apply to all public bodies.

- Public bodies undertake **regular reporting** of their climate change actions under the public bodies duties, either through dedicated reporting process or through an existing reporting mechanism.

- **In the case of Major Players, it is recommended that reporting should be on an annual basis;** for other public bodies reporting less frequently (for example, on a three year cycle) may be more appropriate.

- Public bodies' reporting should cover action taken against each of their three duties: mitigation, adaptation and sustainability.

4.4.4. ASSURANCE AND SCRUTINY

Audit Scotland performs independent financial and performance audits across the whole of the public sector on behalf of the Auditor General for Scotland and the Accounts Commission. Its work covers the Scottish Government, councils, NHS bodies, other public bodies and colleges. Audit Scotland have identified addressing climate change as a key theme for their future work.

The Scottish Government intends to keep this guidance under review to ensure it remains an effective tool for assisting public bodies in their action on climate change and to consider whether adjustments need to be made in future. These could include future use of the Order-making powers in Part 4 of the Act in relation to categories of public bodies for reporting and monitoring arrangements. However, the central role in monitoring must be taken forward by public bodies themselves in relation to

evaluating their performance, commissioning research when required and learning from the practices of others. Public bodies should embed this monitoring role as a continuing process within the normal policy and review cycle to evaluate and ensure their own climate change action remains in line with that required to deliver the longer-term national targets.

5. PRACTICAL SUPPORT AND TOOLS

Public bodies will need practical support and tools to help them understand, implement and comply with the climate change duties. Knowledge and research about the causes of climate change and methodologies for tackling it is growing all the time. While meeting the challenges of climate change is stretching, it also brings many opportunities. In taking forward their responsibilities, public bodies should consider how best to build capacity within their organisation and identify appropriate support where available.

This may mean looking at embedding new approaches and cultures across the organisation or it may mean creating or improving capacity in relation to specific tools or projects. Public bodies will be at different stages of skills development in relation to carbon management and other climate change action. Some public bodies are at the leading edge of the field with best practice to share. Others with fewer resources may find this a new area.

Public bodies are encouraged to share ideas on learning with other organisations and individuals for example through websites, networking and partnership working. There are also a range of organisations which facilitate networks and provide support. Sharing best practice as knowledge and experience grows will be important.

In summary, there is an increasing amount of information, tools, programmes and methodologies available that could help public bodies in complying with the climate change duties. Each of these will have particular strengths and limitations in meeting the varying needs and capacities of public bodies and it is likely that a 'basket' of tools will be needed.

This chapter provides public bodies with information and signposting to existing support, tools and guidance. These have been grouped as follows:

- Delivery bodies and other support for climate change mitigation and adaptation; and
- Recording, monitoring and assessing greenhouse gas emissions.

This chapter is in addition to the checklists and advice found throughout the guidance, and will make public bodies are aware of and feel confident in accessing sources of information, guidance and tools which are available to support them in undertaking their duties.

5.1 DELIVERY BODIES AND OTHER SUPPORT

A number of Scottish Government-funded delivery bodies and agencies offer different types of resource efficiency support to the public sector in Scotland. These programmes in Scotland include Carbon Trust[37], Energy Saving Trust[38], SEPA[39] and Zero Waste Scotland[40].

The Scottish Government funds the Sustainable Scotland Network (SSN)[41] to provide assistance to local authorities in achieving a sustainable Scotland. It also

funds the Scottish Climate Change Impacts Partnership[42], aimed at increasing the resilience of Scottish organisations and infrastructure to meet the challenges and opportunities presented by the impacts of climate change.

Box 6: **Support available to help public bodies adapt to the changing climate**

The Scottish Government supports a free information and resource hub in Scotland. The Scottish Climate Change Impacts Partnership (SCCIP) has been established to increase the resilience of Scottish organisations and infrastructure to meet the challenges and opportunities presented by the impacts of climate change.

SCCIP endeavours to increase the awareness and preparedness of organisations affected by climate change and, where appropriate, by facilitating their adaptation to the unavoidable consequences of our changing climate.

There are some excellent sources of information and tools which can help organisations adapt. Through its website, SCCIP provides access to the latest information and tools. Examples include:

- A handbook of climate trends across Scotland
- The UK Climate Projections
- Local Climate Change Impact Profile
- UKCIP's Adaptation Wizard

SCCIP has also developed a useful guide on adaptation for businesses, Adapting to Climate Change: a Guide for Businesses in Scotland[43] and is currently developing adaptation guidance for the public sector. SCCIP's guidance for the public sector will be supplemented by other support materials in the future, including a workbook for practitioners in public sector organisations.

HM Treasury and Defra have also produced guidance for the public sector on adapting to the changing climate: Accounting for the Effects of Climate Change[44].

With support from the Scottish Funding Council, the Environmental Association for Universities and Colleges (EAUC)[45] provides the further and higher education sector with dedicated advice, guidance and training in all aspects of sustainability, environmental management and social responsibility.

Guidance, direct help and assistance is provided by Health Facilities Scotland[46] on a broad range of measures and initiatives to assist NHS Boards to improve their energy efficiency, reduce their CO_2 emissions and contribute to the Scottish Government's sustainable development objectives.

5.2 RECORDING, MONITORING AND ASSESSING GREENHOUSE GAS EMISSIONS

Greenhouse gases are recorded, monitored or assessed for a number of reasons. This can be to monitor progress against a target - i.e. where the emissions have already occurred. Or emissions can be assessed as a means of informing a decision

- i.e. before they have been emitted. Both types of measuring play an important part in taking account of greenhouse gas emissions and it is therefore important to understand the aim of the analysis. For example, is it to record and monitor emissions? Or is it to inform a low-carbon decision? From the outset, the purpose of undertaking a carbon assessment must be understood.

Monitoring progress

There are a number of ways to record and monitor greenhouse gas emissions from the operation of a public body. It is important to set out clearly which emissions are included in the recording and why they have been included. Direct and indirect (electricity) are easier to measure and monitor than the wider indirect emissions. **Box 7** sets out what is classified as direct and indirect emissions.

Assessing and appraising carbon impact of options

Using carbon impact assessment as a policy or decision appraisal tool is an effective way to understand and account for the greenhouse gas emissions impacts of public sector activity.

While a single comprehensive carbon assessment tool may be desirable, this is not achievable given the fundamentally different assessment applications each public body may need to address. Simple and transparent assessments, chosen by, and appropriate to user needs, that help to foster a common understanding of the issues are likely to the most effective way forward in the short term. In time it may be possible and appropriate to build up the coverage, deepen the level of analysis and develop common methodologies for specified purposes. However, at this stage of development for this emerging analytical area, increasing the sophistication of the tools and their underlying methods should be secondary to widening engagement and use of available assessment techniques.

Decisions on the ground will need to demonstrate how they have taken account of their carbon impacts in line with the statutory duties. While this evidence may not necessarily be used in formal reporting on the annual emissions reduction targets set under the Act, considering the carbon impact of decisions is a central part of achieving wider organisational change to help Scotland achieve the annual targets and move Scotland towards a low-carbon economy.

Whereas commercial entities are primarily interested in own estate emissions (from production/service operations and corporate function) and those arising in their supply chains, public bodies' influence over emissions extends much further through their roles as regulator, planning authority, policy maker, service provider, tax setter, procurer, information provider and funder.

A high proportion of the emissions considered in public sector carbon assessment result from the use/consumption of both public and private sector assets of the economy - for example, private vehicles driven on publicly-maintained road networks. Some public bodies have the power to regulate how these private and public assets are used or to influence the choices faced by businesses and individuals. Additionally, different parts of the public sector perform different functions

and this has implications for the most appropriate way to categorise and assess emissions.

Useful tips for recording, monitoring and assessing greenhouse gas emissions

The challenges in recording, monitoring or assessing greenhouse gas emissions result from the multiple ways in which the issue can be approached and implications for how emissions can usefully be categorised. The following may provide a helpful steer:

1) *Function of organisation and its influence over emissions* - How can the organisation usefully define its impact on emissions? This will dictate the most suitable way in which monitoring or assessing can be undertaken.

2) *Set out your boundaries clearly* - One of the key choices to make when monitoring or assessing greenhouse gas emissions is deciding where the boundaries lie for what emissions to include. There are a number of terms used in setting boundaries. These include direct emissions, indirect emissions, operational emissions, embedded emissions (sometimes referred to as 'embodied' emissions) and life-cycle analysis.

3) *Reporting* - In order to set targets public bodies will need to establish their baseline direct emissions. Public bodies should select a baseline based on the most recent information available, which is appropriate to their own circumstance. As a guide, the baselines for the national targets are 1990 or 1995 (depending on the greenhouse gas). However, due to a lack of available data it may not be feasible for all bodies to use these years, and more recent baselines may be appropriate. The extent of indirect emission reporting will be informed by the boundaries established in this exercise.

4) *Set out which gases are included in your assessment* - The use of the term 'carbon' is often interpreted to mean carbon dioxide equivalent and refers to all six greenhouse gases. However, in some instances, it is only accounting for carbon dioxide or actual carbon. It is important to be clear about which gases have been included in the calculation of total emissions in any carbon assessment.

5) *Use consistent conversion factors* - It is also important to use consistent conversion factors and further information on these can be found at: http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm

6) *Understand your reason for the monitoring or assessment* - And finally, understand why you are carrying out the assessment. Is it to monitor progress towards a target? Or is it to make an informed decision?

Box 7: **Recording and monitoring greenhouse gas emissions**

In recording and monitoring greenhouse gas emissions impacts, it is helpful to classify the impacts according to where and why they arise. The Greenhouse Gas Protocol[47] provides accepted international standards to understand, quantify and report GHG emissions - for both government and business. It categorises GHG emissions into **direct** (Scope 1), **electricity indirect** (Scope 2) and **other indirect** (Scope 3) emissions. Scopes 1 and 2 should be most easily measurable while Scope 3 emissions can be significantly harder to gauge. Monitoring will also depend upon where the assessment boundaries are drawn.

Direct/Scope 1 emissions are defined as those arising from direct owned or controlled combustion in furnaces, boilers and vehicles, as well as direct chemical and other process emissions. These emissions are often associated with activities which involve the consumption of fossil fuels, such as in public sector transport fleets, or emissions from government-owned buildings. They are commonly identified as 'own estate' operational emissions.

Electricity Indirect/Scope 2 emissions are defined as those which arise in the generation of purchased electricity. Here the emission occurs with the company generating the electricity at their power station but can be attributed to the consumer. For the electricity company itself, however, these emissions would fall under Scope 1. Almost all public sector buildings rely on electricity drawn from the national grid and procured under national electricity procurement contracts. The decision to run IT equipment in public sector buildings entails the consumption of this electricity and this leads indirectly (via the power-station) to an emission.

Other indirect emissions/Scope 3 emissions are defined as any which arise as the *consequence* of the activities of the public sector but occur from sources not owned or controlled by it. For measurement and appraisal purposes, these can be grouped in downstream *use* emissions and upstream *procurement* emissions. Whereas *use* emissions almost exclusively arise in Scotland, emissions which arise through *procurement* policy may occur overseas.

Use emissions which the government can influence occur as infrastructure, such as housing, roads and the built environment utilised by citizens. The emissions impacts are often long-lived, in line with the term over which the assets exist. They are not 'own estate' emissions but they are influenced by government policy and by the way public services are designed and delivered.

Both planning and infrastructure spend/frameworks can lead to changes to travel patterns and to the way in which land is used - giving rise to changes in emissions in Scotland - which need to be taken into account in designing policy.

Legislation requires, amongst other things, that public procurement is conducted transparently and in such a way that all suppliers are treated equally. At the present time there is no single agreed method of calculating or evaluating embedded emissions that meets those obligations. As sustainable public sector procurement continues to mature, tools may become available that meet these requirements and the Scottish Government will continue to monitor the situation. Public sector

organisations should focus on effective implementation of the Scottish Sustainable Procurement Action Plan. The Action Plan emphasises the importance of building in sustainability at the beginning of each procurement process to ensure that all suppliers incorporate an agreed level of sustainability into their proposals.

Other indirect emissions may also occur where there are second-round effects of policy, such as an economic stimulus to certain industries. For example, policies directed at incentivising renewable heat technologies create a knock-on demand for the skills, materials and supply chains to support their rollout and delivery across the economy.

In addition, policies may be indirectly responsible for emissions from waste, agricultural processes or from changes to land management (e.g. fertiliser use), land use and forestry - which are not related to the saving of fuel.

Tools and methodologies for measuring, assessing and monitoring emissions

There are a number of useful sources of information, tools and methodologies to help organisations measure and monitor greenhouse gas emissions or assess their potential impact, qualitatively or quantitatively on greenhouse gas emissions.

- Carbon management support for both the private and public sector is available through the Carbon Trust www.carbontrust.co.uk
- Department for Energy and Climate Change (DECC) have produced guidance and tables on measuring and reporting greenhouse gas emissions in the public sector. This is available at the following link: http://www.decc.gov.uk/en/content/cms/statistics/analysts_group/analysts_group.aspx
- Defra has produced guidance for company reporting, accompanied by detailed tables of emissions factors which can supplement the tables provided by DECC. http://www.defra.gov.uk/environment/business/reporting/pdf/ghg-guidance.pdf
- Small Business User Guide: Guidance on how to measure and report your greenhouse gas emissions http://www.defra.gov.uk/environment/business/reporting/pdf/ghg-small-business-user-guide.pdf

5.3 STRATEGIC ENVIRONMENTAL ASSESSMENT

The Environmental Assessment (Scotland) Act 2005[48] requires that a Strategic Environmental Assessment (SEA)[49] be undertaken for those public plans, programmes and strategies that have the potential to generate significant (either positive or negative) environmental effects, if implemented. As SEA requires consideration of climatic factors *et al*, the requirement to undertake a SEA of a wide range of local authority plans, programmes and strategies can help to ensure positive climate change actions are integrated at the local level. The Scottish Government has published guidance on the consideration of climatic factors within strategic environmental assessment[50], which was prepared by SEPA. The advice contained in this guidance aims to support good practice when assessing climatic factors within the SEA process.

5.4 BEST VALUE SUSTAINABILITY TOOLKIT

Recently-refreshed guidance on Best Value[51] groups its characteristics into themes in a way which both emphasises the connections between the characteristics and assists partnership working.

Sustainability is one of two cross-cutting themes for an organisation subject to the existing Best Value duty. The Best Value Sustainability Toolkit[52] is a tool which has been developed to support public bodies who are covered by the Best Value Duty to take action on sustainability. Other bodies not subject to Best Value may still find this a helpful source of information.

5.5 AREA-BASED METHODOLOGIES

Scottish Neighbourhood Statistics

Carbon dioxide emissions estimates, on an end-user basis, for each local authority area in Scotland can be accessed through Scottish Neighbourhood Statistics[53]. This may not be appropriate to all bodies but will be relevant where public bodies are working in partnership or where their geographic span or influence or functions is broad enough.

Carbon and Ecological Footprinting

Footprinting can be helpful in assessing sustainability more generally on an area basis. Measuring our ecological footprint can help us understand the impact of our lifestyles. The ecological footprint gives us an overall measure of the global impact of our everyday choices and offers an estimate of the land and sea area needed to provide all the energy, water, transport, food and materials that we consume. An estimate of our ecological footprint at a national level and the methodology used to measure performance against the National Indicator on reducing it is available in Scotland Performs[54].

At a local level there are a number of footprinting tools available, focusing on ecological footprint, carbon footprint or elements of these (for example waste, energy, water). These vary in applicability to local authority area, community, business or individual level.

The Local Footprints website (http://www.localfootprints.org) provides advice on two footprint tools:

- the REAP tool which can aid local authorities, and others, to assess the impact of new policies on their local area footprint. A licence fee is charged to use the REAP tool; and

- a schools' footprint calculator, which is freely available.

5.6 TOOLS: REVIEW AND EVALUATION

Review of Climate Change Mitigation Tools for Local Authorities project

In 2007, the Scotland and Northern Ireland Forum for Environmental Research commissioned a project to look at tools available for climate change mitigation. The *Review of Climate Change Mitigation Tools for Local Authorities* project can be found on their website (see www.sniffer.org.uk) with a project code of CC06.

Environmental Tools directory[55]

Aether (an independent environmental consultancy) and ENDS (a provider of independent environmental information to professionals in business and public bodies) have developed an Environmental Tools directory[56] that currently holds over 350 available tools in an array of formats - documents, spreadsheets, websites and other software programmes - to assist environmental assessments and other related practices. The directory is a free impartial resource but does not provide validation, peer review or endorsement of specific tools, nor can it guarantee a complete comprehensive listing. If using the database, public bodies would wish to satisfy themselves that any chosen tools are fit for their purposes.

6. NEXT STEPS

As mentioned above, due to the anticipated focus of attention on climate change action across the public sector and to ensure everything possible is being done to assist bodies in exercising their climate change duties and helping to achieve Scotland's climate change targets, this guidance will be kept under review to ensure that it reflects new thinking and innovation on climate change and remains an effective tool for assisting public bodies in their action on climate change.

ANNEX A

QUICK GUIDE: GREENHOUSE GAS EMISSIONS

What are greenhouse gases?

'Carbon' is the broad term used to cover the six greenhouse gases (GHGs) which form the basis of the emissions reduction targets set in the Climate Change (Scotland) Act. These are: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); perfluorocarbons (PFCs); hydrofluorocarbons (HFCs); and sulphur hexafluoride (SF_6). Each of the gases has a different warming effect on the atmosphere when released and so to account for this we apply a scaling factor and refer to them in terms of their carbon dioxide equivalent impact, CO_2e.

Greenhouse gas emissions are reported as annual flows - in tonnes of CO_2e. The majority of Scottish GHG emissions are of CO_2. CH_4, N_2O and the three fluorinated gases are produced in smaller quantities, but are more powerful in their greenhouse effect per unit volume than carbon dioxide. Human activities can increase the concentrations of these gases in the atmosphere. **Table 1** outlines the six greenhouse gases and their main sources from human activity.

Greenhouse Gas	Sources from human activity
Carbon dioxide (CO_2)	burning fossil fuels, burning biomass, land use changes, some industrial processes, transport
Methane (CH_4)	landfill sites, livestock
Nitrous oxide (N_2O)	fertiliser, some industrial processes
Hydrofluorocarbons (HFCs)	refrigeration and air conditioning equipment (manufacture and end of life)
Perfluorocarbons (PFCs)	refrigeration sector, aluminium production, fire extinguishing systems
Sulphur hexafluoride (SF_6)	electrical substations, magnesium smelters, production of consumer goods such as tennis balls and training shoes

Table 1 - Greenhouse gas types and their main sources

Scotland's Greenhouse Gas emissions

In Scotland in 2008, net emissions of greenhouse gases were 56.1 million tonnes of carbon dioxide equivalent (Mt CO_2e). **Figure 1** (following) shows the sources of these emissions. It is important to note that some land uses and land use changes (particularly conversion of land to forestry) act to absorb some emissions.

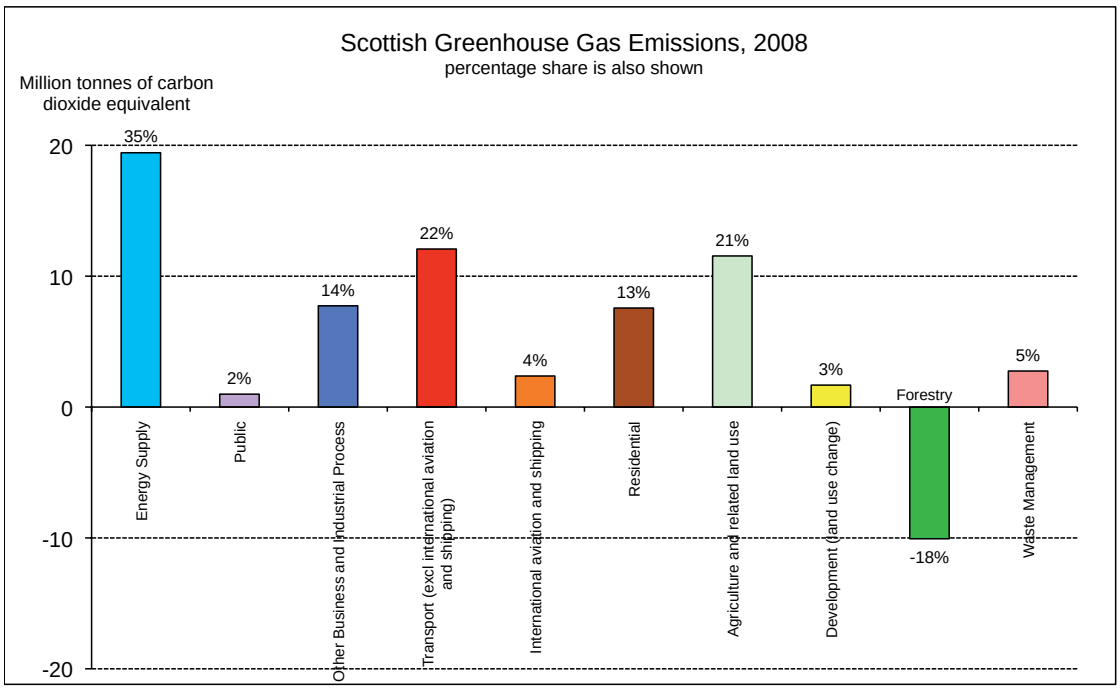


Figure 1 - Sources of Scottish Greenhouse Gases by sector, 2008[57]

Scotland accounts for approximately 0.15% of all global greenhouse gas emissions due to human activities. As Scotland only has around 0.08% of the world's population, it is clear we produce a far greater level of emissions per person than the average. In 2008, Scotland's net greenhouse gas emissions were made up of 79% carbon dioxide emissions and 21% of the other five greenhouse gases.

Scotland's bogs, wetland and upland systems act as a vital 'carbon bank'. Scotland's organic soils hold 10,028 Mt CO_2e[58], this compares with a total of 418 Mt CO_2e in UK surface vegetation[59]. To put this into context, Scotland's net 2008 greenhouse gas emissions equate to around 0.6% of Scotland's total soil carbon bank.

The emissions set out above are known as Scotland's territorial emissions, also called 'production' emissions. The national targets are based on these production emissions - plus emissions from international aviation and international shipping. There are two main types of emissions inventories: consumption-based inventories and those based on production. A consumption-based inventory includes all emissions arising from the consumption of goods and services, no matter where the emissions arise globally. A production-based inventory will include all emissions arising from the production process of goods and services within a specified geographical boundary - such as Scotland. The Climate Change (Scotland) Act requires reporting on consumption based emissions alongside progress against the national production-based targets.

ANNEX B

QUICK GUIDE: HOW OUR CLIMATE IS CHANGING

What are the changes already being observed in Scotland?

Figure 2 below sets out some observed trends of climate change in Scotland from 1961 to 2004[60]:

	Observed change in Scotland's climate between 1961 and 2004
Temperature	Temperatures have risen in every season in Scotland.
Rainfall	Scotland had become 20% wetter by 2004, with an increase of almost 70% in precipitation in northern Scotland. Heavy rainfall events have increased significantly in winter, particularly in northern and western regions.
Snow cover	The snow season has shortened across the country, with the season starting later and finishing earlier in the year. The greatest reductions have occurred in northern and western Scotland.
Growing season	The growing season has increased significantly, with the greatest change occurring at the beginning of the season.
Days of frost	There has been more than 25% reduction in the number of days of frost (both air and ground frost) across the country.
Sea level	Changes in sea levels around Scotland vary. All mainland gauges have recorded a rise over the last 100 years but in Shetland there has been a decrease since 1957.

Figure 2 - Observed trends in climate from 1961 to 2004

How is Scotland's climate expected to change?

The UK Climate Projections (UKCP09) are the latest generation of climate information for the United Kingdom. These provide probabilistic projections of change for a number of climate variables, with three future greenhouse gas emissions scenarios, averaged over seven overlapping 30-year time periods, at 25km grid resolution, as well as for 'administrative regions' and 'river basin districts'.

The key trends the projections identify are:

- Hotter, drier summers; and
- Milder, wetter winters.

We can also expect to see:

- Increase in summer heat waves, extreme temperatures and drought;
- Increased frequency and intensity of extreme precipitation events;
- Reduced occurrence of frost and snowfall; and
- Sea level rise (depending on emissions scenario - central estimates of sea level rise in Edinburgh are 10 - 18 cm by 2050 and 23 - 39 cm by 2095).

Climate information is provided in UKCP09 for three Scottish 'climate regions' (defined by the Met Office), as shown on the map below. The data provided shows projected change in mean temperature and precipitation for winter and summer in the 2050s (under medium emissions scenario).

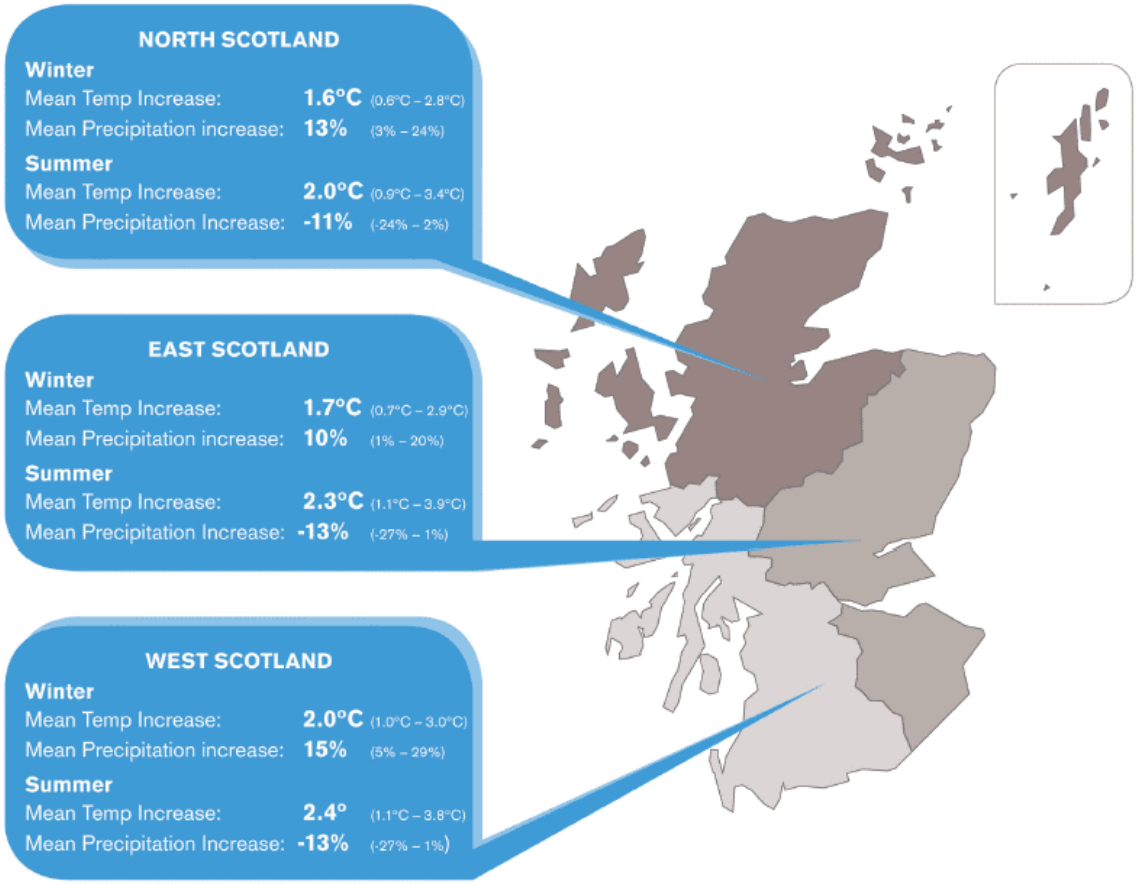


Figure 3: Mean temperature and precipitation increase in Scotland in 2050s under medium emissions scenario. Note: UKCP09 are probabilistic projections which assign a probability to different possible climate change outcomes. In Fig. 4 above, the main numbers represent the mid point of the probability range, known as the central estimate. Taking East Scotland as an example, there is a 50% chance the summer mean temperature will be more than 2.3°C hotter and a 50% chance it will not have increased quite that much. The figures in brackets show the range within which the actual change is likely to be. In this case, the projections suggest that it is very unlikely the increase in summer mean temperature will be less than 1.1°C or greater than 3.9°C.

What are the consequences of these changes?

The changing climate brings consequences that public bodies need to prepare for. In doing this, the public sector can contribute to developing broader resilience to change across Scotland.

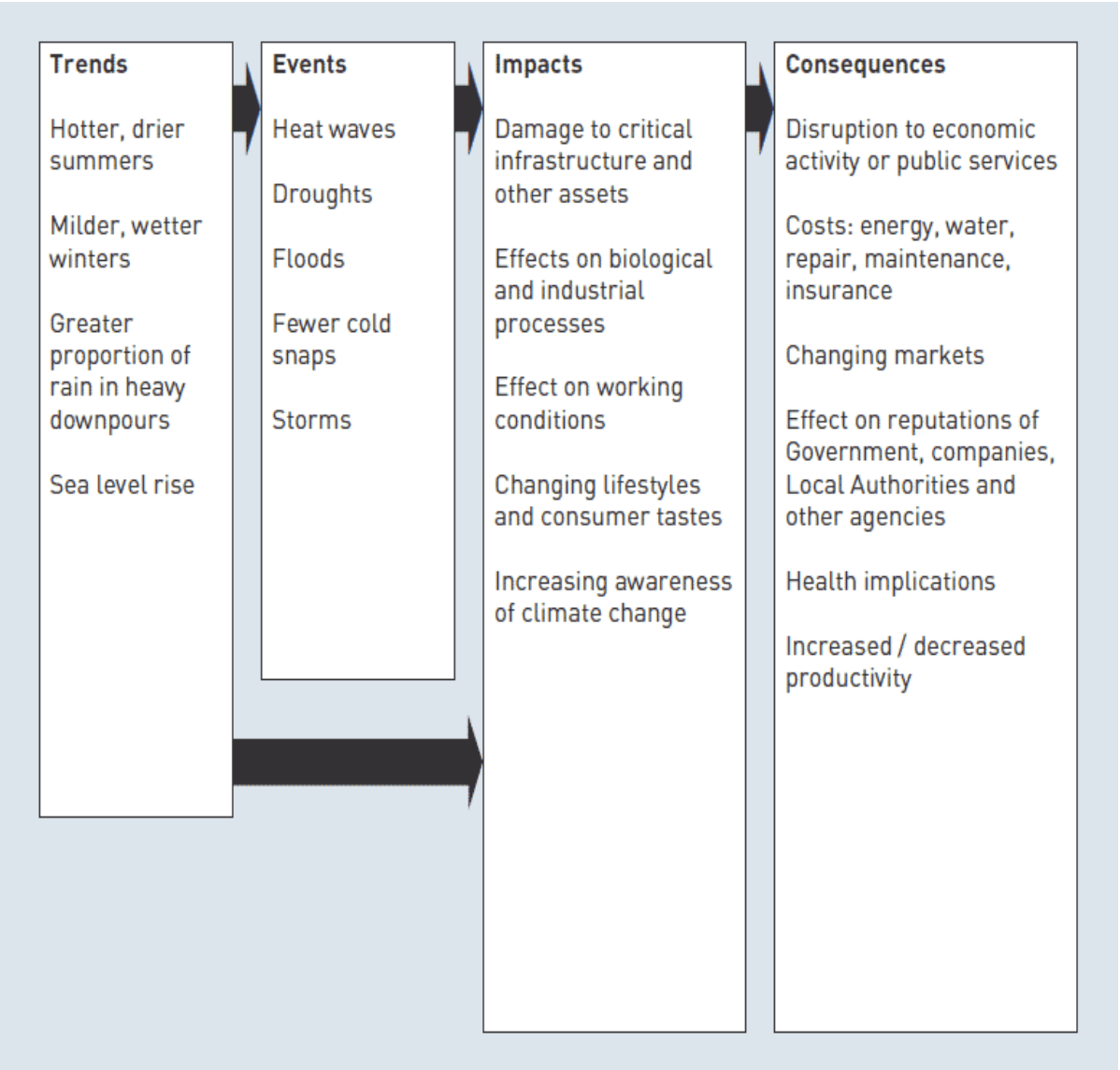


Figure 4 - Illustration of the climate trends and the potential social, economic and environmental impacts and consequences (adapted from UKCIP)

ANNEX C

SECTORAL AND WIDER POLICY DEVELOPMENTS AND INITIATIVES

Climate change action is already being taken across many individual policy areas within the Scottish Government, and across the wider public sector. Policies and regulations that support the Government's climate change ambitions will continue to develop over time and many of these will impact upon the public sector to varying degrees. The Scottish Government will communicate developments through its website and other channels, and stakeholders will be involved in development of these policies and regulations in the usual manner, including through consultation as appropriate.

The summaries below provide context on action in individual policy areas, along with links to further information and relevant documentation. In addition, **Annex D** contains a series of tables which have been developed for the key sectors identified in the Scottish Government's Climate Change Delivery Plan and Scotland's Adaptation Framework to highlight how the sector impacts on climate change and suggest actions that could be taken to reduce greenhouse gas emissions and prepare Scotland for a changing climate.

SCOTTISH GOVERNMENT

'Leading by Example'[61] is the Scottish Government's enabling programme to improve Scottish public sector environmental and sustainability performance across four main areas of the Scottish public sector - the core Scottish Government, public bodies, local authorities and NHSScotland. The Scottish Government has also developed a Carbon Management Plan in partnership with the Carbon Trust which sets targets for the reduction of the estate's emissions. Progress in achieving these, along with other sustainability targets are published annually in the Environmental Report. Options are currently being considered to facilitate more regular reporting of a range of sustainability and environmental information.

(i) Transport

Transport is an essential part of economic activity and a sector where greenhouse gas emissions are growing. We also need to ensure that our transport infrastructure is resilient and prepared for a changing climate. For details on national transport policy, please see the National Transport Strategy[62]

(ii) Energy

The public sector will need to play a key role if Scotland is to successfully reduce its energy consumption by the magnitude required to meet Scotland's climate change targets. As well as the direct environmental and financial benefits of improving energy efficiency, the public sector also has the scope to act as an exemplar to other sectors. If the Scottish Government and other public sector partners expect businesses and individuals to cut their energy use, then it is vital that the sector itself demonstrates highly energy efficient behaviour, both in the energy performance of its vast estate and through the many staff it employs. The Scottish Government

consulted on an Energy Efficiency Action Plan for Scotland and published an analysis of the consultation responses.

The Scottish Government then published its Energy Efficiency Action Plan[63] in October 2010 which introduces a headline target to reduce Scottish final energy consumption by 12% by 2020, with an indication of how this will be monitored. It also sets out a wide ranging programme of activity on behaviour change, household, business and public sector energy efficiency, infrastructure, skills and finance.

Please also see the Renewables Action Plan[64] and the Low Carbon Economy Strategy[65]

(iii) Waste

Waste management is a key area as all organisations produce waste and all bodies can, through their own waste treatment decisions, influence the way waste is managed in society and businesses. We can all play our part in avoiding unnecessary use of resources to reduce the amount of waste we produce, reuse valuable resources, and increase recycling levels to help Scotland become a Zero Waste society. The Scottish Government's Zero Waste Plan[66] sets out the direction and steps to make Scotland a zero waste society where resources are used efficiently; demand on primary resources is minimised; and reuse, recycling and recovery of resources becomes the norm. The Zero Waste Plan envisages most waste being sorted into separate streams for reuse or reprocessing, leaving only limited amounts of waste to go to residual waste treatment and landfill.

(iv) Biodiversity and ecosystems

Climate change is one of the biggest threats to biodiversity, but conserving biodiversity is also one of the best ways of mitigating some of the impacts of climate change, e.g. flood protection. Scotland's biodiversity strategy, Scotland's Biodiversity: It's in Your Hands[67], sets out how the government will conserve biodiversity for the health, enjoyment and wellbeing of the people of Scotland now and in the future.

(v) Land use (including spatial planning, agriculture and forestry)

Scotland's first Land Use Strategy is currently under preparation and will be laid in Parliament by March 2011, following a public consultation on a draft Strategy between September and December 2010. The Strategy will take a strategic look at our land resources in Scotland, and set out how we can begin to balance the competing demands we make upon land and make real progress in optimising our use of land so as to contribute to the climate change agenda.

(vi) Built environment

The designs of our buildings and the materials we use to construct them impacts upon greenhouse gas emissions. Changes in the climate will also threaten our building infrastructure. The Planning etc. (Scotland) Act requires that the National Planning Framework[68] be developed with the objective of contributing to sustainable

development. 'Scottish Planning Policy'[69] highlights the five principles of sustainable development and the targets of the Climate Change (Scotland) Act 2009. Scottish Planning Policy also sets out a strategic approach to the location of new development that contributes to sustainable development and the reduction of greenhouse gas emissions. The National Planning Framework and Scottish Planning Policy should be taken into account in the preparation of Development Plans and are relevant (material) considerations in the determination of planning applications.

(viii) Water resource management

The observed and projected trend of wetter winters and drier summers will impact on water quality and water availability. Flood risk will increase due to climate change putting additional pressures on society, the environment and the economy. Water usage and efficiency directly relates to greenhouse gas emissions.

(ix) Health and wellbeing

Changes in the climate will impact upon our health and well being. There are also synergies between improving our health and wellbeing and reducing greenhouse gas emissions. Programmes such as Healthy Working Lives[70] and Active Nation[71] can assist in identifying those areas of activity which would both help meet climate change duties and have positive effects on our everyday lives.

(x) Business and industry

The public sector can work with business and industry to help Scotland move towards a low-carbon economy. Impacts of the changing climate will be felt by every business irrespective of their size, location, markets, products and services. The Low Carbon Economic Strategy (LCES) is an integral part of the Government's Economic Strategy to secure sustainable economic growth, and a key component of the broader approach to meet Scotland's climate change targets and secure the transition to a low-carbon economy in Scotland.

NATIONAL DEVOLVED PUBLIC BODIES

Guidance has been issued to Scotland's National Devolved Public Bodies[72] to support them to adopt an outcomes-based approach and align their activity to the National Performance Framework. All national devolved public bodies are expected to contribute to the national outcomes on reducing the local and global environmental impact of Scotland's consumption and production.

In addition, several public bodies have published their own climate change action plans. The Scottish Environment Protection Agency (SEPA)[73], Scottish Natural Heritage (SNH)[74], Forestry Commission Scotland (FCS)[75] and Historic Scotland[76] are public bodies with responsibilities for different aspects of Scotland's environment and heritage. In addition, they have published a joint 'Action on Climate Change' statement[77], outlining their respective roles in taking forward action on climate change.

Many public bodies, working through mechanisms such as the Carbon Trust[78] Carbon Management Programme, are cutting their energy use and emissions.

LOCAL GOVERNMENT AND COMMUNITY PLANNING PARTNERSHIPS

In summer 2009, the Scottish Government and Community Planning Partnerships agreed 2nd Phase Single Outcome Agreements (SOAs)[79]. These SOAs set out key priorities identified by each of the 32 Community Planning Partnerships for a local area, expressed in the form of local outcomes which contribute to the Scottish Government's Purpose and National Outcomes and which local partners undertake to pursue. Local outcomes and/or associated measures on tackling climate change at the local level feature in SOAs. In addition, a number of provisions that will impact on local government were introduced by the Climate Change (Scotland) Act 2009, including new powers to enable councils to give council tax and non-domestic rates rebates for energy efficiency and renewable energy improvements made to homes and other buildings.

Securing Best Value applies across the public sector as a statutory duty for councils and an auditable requirement for accountable officers in the health and central government sectors. Sustainable development is a core part of Best Value. The Best Value Sustainability Toolkit[80] is a tool to support local authorities in delivering the Duty for Sustainable Development set out in the Local Government in Scotland Act 2003.

Through Scotland's Climate Change Declaration[81], all of Scotland's local authorities have committed themselves to take action, in partnership with the Scottish Government, on climate change.

As part of supporting local authorities to integrate climate change into their core corporate planning processes, the Scottish Government and COSLA will jointly issue supplementary guidance for Local Housing Strategies on climate change. This will help local authorities integrate their approach to energy efficiency and climate change with fuel poverty and mainstream housing policies. Given that approximately one quarter of all carbon emissions are currently attributable to housing, this sector will be an important focus of efforts to reach the overall reduction target.

NHSSCOTLAND

NHSScotland has strict energy targets[82] for new and existing buildings and has been reducing energy consumption since 1985 based upon a 1.5% - 2% climatically adjusted target which was increased to 2% in 2001. A 2010/11 target has been agreed which commits NHSScotland to reduce energy-based carbon emissions and to continue a reduction in energy consumption over the five-year period to 2014/15 at which time the target will be reviewed based upon performance. This target is designed to ensure NHSScotland contributes to the greenhouse gas emissions reduction targets set in the Climate Change (Scotland) Act 2009.

The Scottish Government Health Directorates commissioned Health Facilities Scotland[83] to produce a carbon footprint report for NHSScotland which was published in October 2009. This report provides a baseline for future actions and will

inform the review and development of the Sustainable Development Strategy for NHSScotland and related policy revisions. The report will also assist NHSScotland in meeting the key challenge to build on its achievements so far in reducing emissions - by continuing to do so whilst also continuing to deliver an expanding range of healthcare services.

FURTHER AND HIGHER EDUCATION

The majority of Scotland's universities and colleges have signed the Universities & Colleges Climate Change Commitment for Scotland[84], which is facilitated by the Environmental Association for Universities and Colleges. This commitment requires the preparation and publication of a five-year Climate Change Action Plan.

ANNEX D

KEY SECTOR TABLES

The following tables have been developed for each of the key sectors identified in the Scottish Government's Climate Change Delivery Plan and Scotland's Adaptation Framework to highlight how the sector impacts on climate change and suggest actions that could be taken to reduce greenhouse gas emissions and prepare Scotland for a changing climate.

Tables are available for the following sectors:

- transport
- energy
- waste
- biodiversity and ecosystems
- land use
- built environment
- water
- health and wellbeing
- business and industry

Whilst the tables are a guide only, they may be helpful in providing a starting point for public bodies who wish to carry out a similar analysis in respect of their own functions and in suggesting a menu of possible actions the public bodies could consider, taking account of their own circumstances.

Sector: Transport			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions (does not apply to all public bodies)**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
Business mileage policies for number of journeys and mode of transport (including cost and emission reduction targets to work towards. Staff travel plans for reducing car use for travel to/from work including management of parking to favour car-sharing and fuel-efficient vehicles). Promotion and use of a car sharing facilities (e.g. City Car Club) as substitute for use of staff's own cars on works' business.	Implement best practice design systems that minimise the carbon generated by new transport schemes. Effectively implement the Scottish Sustainable Procurement Action Plan. Influence suppliers and others by placing sustainability at the heart of procurement activity as part of the achievement of value for money. Investigate the environmental impacts of construction and maintenance operations with a view to reducing carbon energy and materials used. Influence choice of mode of transport, e.g. public transport	Services provided resilient to increase in heavy rainfall, flood risk, extreme weather and warmer weather. Ensure transport emergency planning and consequence management measures are in place.	Influence location decisions of transport infrastructure e.g. avoid coastal erosion areas, flood risk. Influence design of transport infrastructure to withstand flooding, high winds, warmer temperatures. Ensure provision of habitat corridors for movement of species. Ensure appropriate drainage around transport infrastructure. Develop effective tools for communicating any problems on the transport network to the public, employees and businesses.

Videoconferencing and teleconferencing facilities availability. Policy to facilitate home working and/or working from satellite work centres ('community hubs'). Procurement - type/technology of fleet vehicles and company cars. Maintenance of fleet vehicles to maximize fuel efficiency. Eco-driving training for staff.	policies, improved pedestrian environment, traffic management to favour public transport, walking and cycling. Influence development of low - carbon technologies for transport. Partnerships to put together green travel plans in area. Parking policies, e.g. availability at new developments, low-carbon pricing, wider areas with controlled/paid parking zones. Low emissions charging schemes, congestion charging. Land use planning to reduce need to travel. Encouraging development of community hubs. Travel awareness campaigns and personalised travel planning programme to encourage change in travel behaviour.		

Sector: Energy			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
Energy use in buildings and wider estate (including setting targets). Promote/improve energy efficiency in building and wider estate. Onsite micro-generation, e.g. turbine, solar panels to supply own energy.	Energy use in buildings and wider estate (including setting targets). Protect peat soils to maintain carbon stores Procurement of low energy goods and services, including adoption of the “Buy Sustainable – Quick Wins”/Government Buying Standards included in the Scottish Sustainable Procurement Action Plan. Promote and increase use of surplus heat. Encourage use of Combined Heat and Power. Support renewable energy generation. Influence development of low-carbon technologies. Support retrofitting of existing houses with measures to improve energy efficiency.	Ensure energy supply to carry out functions is resilient.	Ensure energy generation and supply is protected from landslides, floods, warmer weather, increased heavy rainfall, droughts. Protect peat soils and carbon content to help absorb water and build resilience to flooding from increased heavy rainfall events.

Sector: Waste			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
Reduce biodegradable waste to landfill through on site composting. On-site waste segregation and recycling. Consider reduction of waste through re-design.	Influence / implement waste management practices in the area to increase reuse and recycling. Reduce biodegradable waste to landfill. Encourage waste prevention. Energy from waste. Use the waste hierarchy. Consider reduction of waste through service re-design.	On site storage of waste to consider changes in the climate, e.g. heavy rainfall events and increased run off.	Waste management across Scotland needs to consider changes in the climate, e.g. heavy rainfall events and increased run off to avoid pollution incidents.

Sector: Biodiversity and Ecosystem services			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
On-site habitat enhancement initiatives.	Protect Scotland's soils. Increasing forestry and vegetation. Using natural features in urban environments, for example, shade from trees and shrubs to reduce demand for cooling.	Provide habitat corridors for movement of biodiversity through estate. Onsite habitat enhancement initiatives.	Promotion of natural flood management in catchment planning, e.g. protecting bogs and marshes to act as a buffer in intense rainfall. Protect soil quality to help reduce the risk of flooding. Adaptive coastal management including coastal realignment. Using natural features in urban environments, e.g. living roofs to improve habitat connectivity, reduce heat gain and slow the movement of rainwater into drainage systems. Reduce pressures on habitats vulnerable to climate change.

Sector: Land Use (including spatial planning, agriculture and forestry)			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
Woodland on estates. Location of offices and buildings near to public transport.	Protect areas contributing to carbon sinks and stores. Increase development of carbon sinks. Encourage sustainable forestry and agriculture practices to reduce greenhouse gas emissions. Protect peatland from forestry and agriculture uses.	Disruption of goods and services supply by increased heavy rainfall events, storms and flood risk. Sustainable Urban Drainage Systems for own estates. Use green roofs, green spaces, habitat corridors within public body's estates.	Protect land from erosion of soils, landslips and loss of organic matter. Influence the creation of floodplain woodlands and wetland habitats. Take flood risk and coastal erosion into account for location of developments. Increase the development of habitat corridors and green networks.

Sector: Built Environment			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
Design for environmental performance, e.g. reduce need for cooling.	Influence the design for environmental performance in buildings. Influence the use of sustainably sourced materials in construction.	Design for environmental performance, e.g. minimise disruption to servers in warmer weather.	Influence design to cope with changing climate, e.g. drainage capacity, green roofs.

Sector: Water			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
Water usage and water efficiency measures in public body's buildings.	Decrease water usage through water efficiency measures.	Install rain water storage for irrigation on own estate. Increase resilience to floods through use of Sustainable Urban Drainage Systems.	Protecting against pollution incidents from run off from an increase in intense rainfall events. Help plan for water shortages during seasons of high demand and low availability, e.g. irrigation pond and sizes fit for the future. Monitor and address water quality issues. Ensure that new infrastructure is not at risk of coastal, drainage and river flooding. Increase resilience to floods through use of Sustainable Urban Drainage Systems.

Sector: Health and Wellbeing			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
Reduce need for cooling in the work place due to higher temperatures.	Promote cycling and walking as modes of transport to and from work.	Prepare for impacts on air quality (e.g. increased likelihood of smog or increased algal or fungal growth in buildings) may affect respiratory conditions. Prepare for warmer temperatures in the workplace. Prepare for new diseases.	Prepare for warmer temperatures encouraging more outdoor recreation. Prepare for impacts on air quality (e.g. increased likelihood of smog or increased algal or fungal growth in buildings) may affect respiratory conditions. Prepare for new diseases.

Sector: Business and Industry			
Reducing Greenhouse Gas emissions		**Preparing for a changing climate**	
Direct impact on emissions	**Indirect/Wider influence on emissions**	**Resilient in a changing climate (preparing your organisation)**	**Helping to prepare Scotland for a changing climate**
	Procurement – low-carbon goods demand from public sector. Effective implementation of the Scottish Sustainable Procurement Action Plan. Look for opportunities to promote low-carbon opportunities when designing support services to businesses, and for businesses themselves to promote opportunities. Provide advice or work with businesses in partnership/collaboration to reduce emissions.	Provision of public services as consequences, such as flooding, may lead to an increased demand for services in times of emergency.	Protect natural environmental assets, such as soil and water quality, that underpin vital ecosystem services essential to many sectors. Understand threats and potential impacts on assets and critical infrastructure including increased risk of inland and coastal flooding in many towns and cities. Provide advice to businesses on resilience to a changing climate.

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