



Consultation on Climate Change Reporting by Specified Public Bodies - Developing New Regulations

Supporting Document:
What is Climate Change and what is Climate
Change Reporting?

March 2023



Northern Ireland
Executive
www.northernireland.gov.uk



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This document is one of three supporting documents to be read in conjunction with the consultation document. The supporting documents are provided for anyone who wants general additional background information to help inform their views and responses to the consultation. This document provides supplementary background information on 'what is climate change, and what is climate change reporting?'

1. What is climate change?

The United Nations (UN) defines climate change as the long-term shifts in temperature and average weather patterns across the world. These shifts can be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases called greenhouse gases (GHGs). As a result of GHG emissions our global temperatures are continuing to rise, resulting in long-term changes to our global and local climate. These changes in weather patterns include extreme weather events occurring more often and more intensely, such as strong winds and storms, heatwaves, heavy rainfall, floods and rising sea levels. The UN's Intergovernmental Panel on Climate Change (IPCC) advise that the consequences of climate change now include, among other things, intense heatwaves, droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms and declining biodiversity.

In their 2018 report, the IPCC projected that climate change-related "risks to health, livelihoods, food security, water supply, human security, and economic growth are to increase with global warming scenario of 1.5°C and increase further with 2°C scenario". The report provided a stark warning that even if vigorous efforts to limit the emissions of GHG from human activities are undertaken, the world is locked into further climatic changes due to both historical and current GHG emissions. A number of climate change impacts however may be avoided if global warming is limited to 1.5°C compared to 2°C. The IPCC have highlighted, in their latest (sixth) assessment report published in 2023, that the unprecedented scale of the challenge required to keep warming to 1.5°C has become even greater due to a continued increase in global greenhouse gas emissions since 2018.

As such, and alongside other countries, Northern Ireland must take rapid action now to reduce the causes of climate change ('mitigation') and to adapt to the effects of climate change ('adaptation'). Further explanation of these terms is set out below. These actions are needed because, even if it was possible to completely stop our GHG emissions today, our climate is still changing and will continue to change, due to the emissions made in the past which are already in the atmosphere.

2. What are the main greenhouse gases which contribute to climate change?

The 7 main greenhouse gases which cause global warming and climate change are:

- 1) carbon dioxide (CO₂)
- 2) methane (CH₄)
- 3) nitrous oxide (N₂O)
- 4) hydrofluorocarbons (HFCs)
- 5) perfluorocarbons (PFCs)
- 6) sulphur hexafluoride (SF₆)
- 7) nitrogen trifluoride (NF₃)

3. What is meant by 'climate change mitigation and adaptation'?

Climate change can be tackled via two approaches, through 'climate change mitigation' and through 'climate change adaptation'.

'Climate change mitigation' means preventing the causes of climate change. This is done by reducing the amount of GHG emissions going into the atmosphere, as well as removing GHG emissions from the atmosphere (planting trees for example).

'Climate change adaptation' refers to actions which deal with the effects (impacts and risk) of climate change. Adaptation actions are aimed at helping us to better cope with the risks, changes and impacts that a changing climate can bring.

Figure 1 below shows some examples of the many actions that can be taken to reduce emissions which cause climate change (mitigation) and some of the many actions that can be taken to reduce the impacts/risks of climate change (adaptation). The actions in the centre (dark background) are some examples of actions that can bring benefits for both climate change adaptation and mitigation.

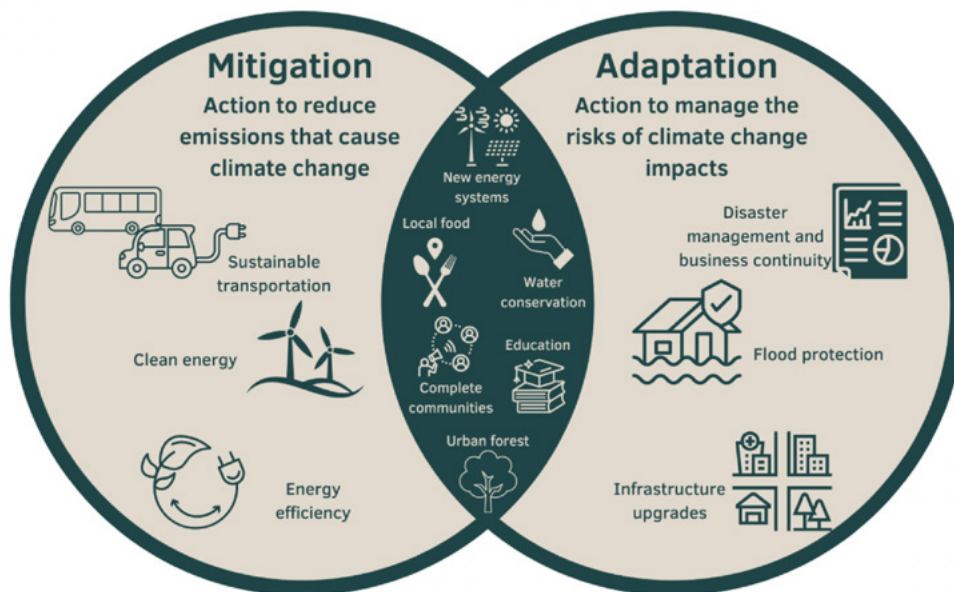


Figure 1. Climate change mitigation and adaptation

4. What is ‘climate change reporting’?

Please note that the Department of Agriculture, Environment and Rural Affairs are currently considering the development of supporting guidance, for specified public bodies, on how to comply with their reporting duties under the future regulations. This guidance would include technical detail on how and what information must be reported. It is typical for guidance of this nature to be developed and published after the regulations, on which it is based, have been finalised and come into operation.

• What is Adaptation Reporting?

Public body functions, supply chains and assets are already at risk, both in Northern Ireland and internationally. It is therefore critical that public bodies address their risks and impacts from climate change as well as reducing their emissions. Reporting on adaptation can help them to recognise and understand their vulnerabilities from climate change, which can enable them to implement and demonstrate sufficiently well-informed and timely actions and plans.

Adaptation reporting can often ask organisations to:

- a) Identify which climate risks and impacts they may currently experience and/or they may be predicted to face in the future, from the effects of climate change;
- b) Create an ‘adaptation plan’ - which states what actions and policies an organisation will take, to reduce and/or cope with, those risks and negative impacts, and how they will optimise any opportunities presented.

- c) Provide progress updates on implementing actions, commitments and plans set out in previous adaptation plans.

• **What is mitigation reporting?**

When organisations identify the levels and sources of their GHG emissions, this enables them to:

- consider what actions they can take to reduce those emissions;
- establish effective emissions reduction plans;
- monitor how effective those actions and plans are in reducing emissions.

Mitigation reporting can often ask organisations to:

- a) Create an 'emissions statement' - which identifies/states their sources and levels of GHG emissions;
- b) Create an 'emissions reduction plan' - which states what actions they will take to reduce their emissions; and
- c) Provide progress updates on implementing actions, commitments and plans set out in previous emissions reduction plans.

• **GHG Protocol standards**

The [GHG Protocol standards](#) are recognised as the international standard for GHG emissions reporting. The standard metric used to report GHG emissions is carbon dioxide equivalent ('CO₂e') in tonnes. Use of this metric allows for the capture of information related to the seven greenhouse gases covered by the Kyoto Protocol, to be converted into CO₂e figures based on their global warming potential.

Grouping sources of emissions into 'scopes'

Using Scope 1, 2, and 3 emissions are a way of categorising an organisation's emissions for reporting, which covers both direct and indirect emitted GHGs:

- Scope 1 emissions are direct emissions, from owned or controlled sources.
- Scope 2 emissions are indirect emissions, from the generation of purchased energy.
- Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organisation, but that the organisation indirectly impacts in its supply chain. Scope 3 emissions include all sources which are not within an organisation's scope 1 and 2 boundary.

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