

Adaptation Scorecard

Adaptation Scorecard Report 2022

Final Report

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Climate Change Advisory Council

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Purpose

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Executive summary

Tackling climate change within Ireland is dependent on a coordinated response from all sectors and levels of government which incorporates both adaptation and mitigation. The Climate Change Advisory Council has previously highlighted the need for a greater emphasis on adaptation within Irish policy to enable a move towards climate resilient development. The National Adaptation Framework (NAF) was developed to facilitate this approach. An Adaptation Scorecard process was adopted in the 2021 Annual Review to measure progress of sectoral and local adaptation plans and the implementation of the NAF. This process was reviewed for 2022.

This report outlines how the 2022 Scorecard was designed, delivered, and analysed as part of the assessment of progress. A questionnaire was developed through a review of Irish and International best practice and the previous year's questionnaire and responses.

The final assessment was based on the degree to which progress is being made in the implementation of adaptation policy and increasing resilience under three key adaptation topics:

1. **Risk, prioritisation and adaptive capacity** - identified risks are being addressed, adaptive capacity is increasing, knowledge gaps are being addressed and risks are being monitored.
2. **Resourcing and mainstreaming** - appropriate resourcing is being applied, long term decisions are taking account of future climate and adaptation is being mainstreamed.
3. **Governance, coordination and cross cutting issues** - systemic coordination is in place and there is good coherence with other policies

The developed questionnaire was then distributed to sectors and an optional opportunity to discuss adaptation progress with the scorecard assessors was provided. Out of the 11 sectors contacted, 9 provided responses with 2 attending a discussion with the assessors. The responses were evaluated using an assessment framework and criteria following on from the previous year. A detailed assessment of the progress of each sector was provided.

Across all sectors, the most advanced progress was seen within risk, prioritisation and adaptive capacity. However, there was an overall lack of detail with regards to risk monitoring progress. Resourcing remains a consistent constraint across many sectors but there is some evidence of planned policy changes to facilitate mainstreaming. Governance, coordination, and cross-cutting was generally the weakest area across all sectors. High-level evidence of improved systematic coordination and governance structure was provided by most sectors. Overall, no sector received a score of advanced progress in this year's scorecard.

Analysis of progress has facilitated the identification of key areas to focus future progress. It also provides an opportunity to improve knowledge on adaptation and promote cross sector collaboration. Recommendations for future Adaptation Scorecard assessments include improving the robustness of the scoring methodology and increasing support provision to encourage greater participation across sectors.

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Abbreviations

CAP	Climate Action Plan
CARO	Climate Action Regional Office
CASA	Climate Adaptation and Strategic Assessment
DECC	Department of the Environment, Climate and Communications
EAAD	Energy, Air and Adaptation Division
EED	Energy Efficient Design
HSE	Health Service Executive
NAF	National Adaptation Framework
NAP	National Adaptation Plan
NDCA	National Dialogue on Climate Action
NOU	Network Operations Unit
OPW	Office of Public Works
SAP	Sectoral Adaptation Plan
TPRD	Telecommunications Policy and Regulation Division
5-YAR	5-Year Assessment Report

1 Introduction

1.1 Background and context

Ireland's climate is already changing with increased precipitation, temperatures and sea levels (EPA, Marine Institute, Met Éireann, 2021). The impacts of these changes on the economy, society and environment are currently being observed and are expected to persist and augment even under ambitious emissions policies; demonstrating an urgent need for improved adaptation and climate resilience (Climate Change Advisory Council, 2021). Tackling climate change is dependent on a coordinated response from all sectors and levels of government which incorporates both adaptation and mitigation (Dekker and Torney, 2020). Although some progress at sectoral and local level has been made, efforts are primarily focused on mitigation. The Climate Change Advisory Council has previously highlighted the need for a greater emphasis on adaptation within Irish policy development to enable effective adaptation and long-term decision-making which accounts for the future climate (Climate Change Advisory Council, 2019).

To move towards climate resilient development, we need to identify actions on adaptation, measure progress on the implementation of adaptation policy and inform the development of future policies. Under the 2015 Climate Act, Ireland's first statutory National Adaptation Framework (NAF) was prepared and published in 2018 (Climate Change Advisory Council, 2021). This framework allows 12 priority sectors and local authorities to assess climate change risks, implement resilience actions and mainstream adaptation considerations into policy (Climate Change Advisory Council, 2021). An Adaptation Scorecard was adopted in the 2021 Annual Review to measure the progress of sectoral and local adaptation plans against the NAF and monitor implementation of the NAF itself (Climate Change Advisory Council, 2021).

For 2022, this Adaptation Scorecard has been reviewed and revised, taking into consideration the most relevant metrics for Ireland, allowing progress in implementing adaptation policy and increasing resilience to be measured in 2022 and for subsequent years.

1.2 2022 Adaptation Scorecard

1.2.1 Design and delivery

JBA were commissioned to support the Climate Change Advisory Council and its Adaptation Committee in the design, delivery, analysis, and finalisation of the 2022 Adaptation Scorecard. The 2022 revision of the 2021 Adaptation Scorecard process aims to build upon the progress monitoring currently undertaken to develop a thorough understanding of Ireland's key sectors current climate change adaptation progress. Engagement from the sectors that did not contribute to the 2021 assessment and addressing any gaps was a key focus for the 2022 revision.

The design process began with a review of the 2021 Adaptation Scorecard methodology and questionnaire alongside a review of Irish and International best practice in measuring progress in adaptation. A review of the 2021 Adaptation Scorecard questionnaire responses was also undertaken. This identified response content which was not directed towards a specific question and therefore indicated that there may be gaps in the types of questions that were asked. This facilitated the development of a methodology that included the most appropriate metrics relevant to the context of Ireland, which was used as a foundation for the iterative design process.

The completion of the exercises outlined above fed into a review of best practice literature which acted as a foundation for the selection of questions for inclusion within the 2022 Scorecard questionnaire. Questions were designed to draw out key adaptation

topics and themes noted within Irish and International best practice. This included ensuring questions targeted measures on the process of adaptation, measures on outcomes and measures on vulnerability. This enabled a holistic overview of how sectors are building effective and adequate adaptation.

To measure outcomes, it was determined questions would be framed around actions and progress to allow for more consistent examination of steps taken in each sector, as suggested by Vincent and O'fwna (2018). Knowledge to inform action was also highlighted as a crucial element of adaptation strategy as outlined in the EU Adaptation Strategy (Climate ADAPT, 2021). Examples of types of adaptation indicators were taken from Klostermann *et al.* (2018) and a definition for success in adaptation, data sources, and different approaches for adaptation tracking was taken from Ford *et al.*, (2013) and embedded within the questionnaire. Furthermore, considering transformational adaptation over near-term climate risk reduction was an essential theme noted from the IPCC (2022) which was used to underpin the questionnaire. The questionnaire was ultimately designed to build understanding of how climate risk is perceived and is being prioritised and transposed into climate resilient development and adaptive capacity by the various sectors based on the coupled system approach shown in Figure 1-1.

APPROVED

Summary for Policymakers

IPCC WGII Sixth Assessment Report

From climate risk to climate resilient development: climate, ecosystems (including biodiversity) and human society as coupled systems

(a) Main interactions and trends

(b) Options to reduce climate risks and establish resilience

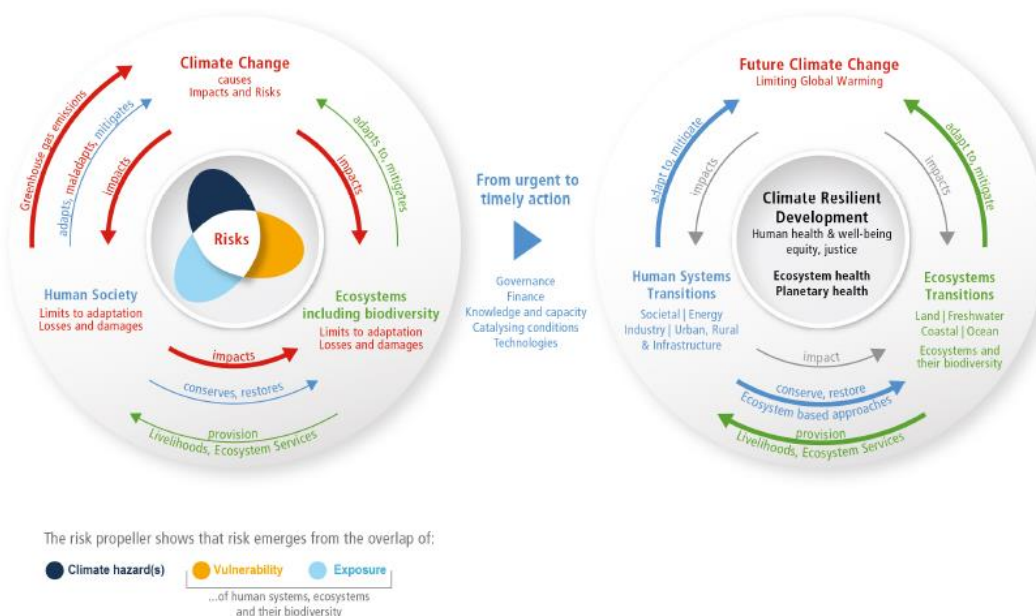


Figure 1-1 Transposing climate risk into climate resilience. (Source: IPCC (2022))

Following completion of the review of 2021 questionnaire and responses and the literature review; questions from the 2021 questionnaire were re-framed and new or additional questions were proposed as draft. After considering the purpose, aim and priority of the draft questions and key themes and outcomes hoping to be drawn out from the questionnaire, the questionnaire framework was devised. The three headings were based on 2021 Scorecard questionnaire to ensure consistency. In an attempt to maintain standardisation between responses and ultimately allow for a more robust assessment, a rough guide to the length of responses expected or a table template for responses was provided for each question.

The final assessment was based on the degree to which the Advisory Council was satisfied progress is being made in the implementation of adaptation policy and increasing resilience with respect to the following three adaptation topics:

4. **Risk, prioritisation and adaptive capacity** - identified risks are being addressed, adaptive capacity is increasing, knowledge gaps are being addressed and risks are being monitored.
5. **Resourcing and mainstreaming** - appropriate resourcing is being applied, long term decisions are taking account of future climate and adaptation is being mainstreamed.
6. **Governance, coordination and cross cutting issues** - systemic coordination is in place and there is good coherence with other policies.

The blank questionnaires developed are provided in Appendix A.

1.2.2 Assessment criteria and scoring

The questionnaire was sent to responsible authorities for priority sectors, local government and the NAF to provide an update on adaptation progress across the last year. An assessment framework was used to grade responses. This framework was consistent with the approach taken in 2021 and used the progress categories shown in Figure 1-2. Once the questionnaire had been distributed to sectors, an optional opportunity to meet with the assessors to discuss their response and the scorecard process more generally was provided to each sector.

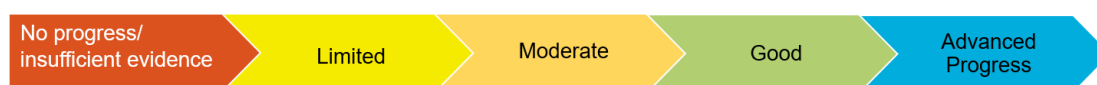


Figure 1-2 Scoring system utilised to track adaptation progress

Grading was achieved through detailed review and screening of responses against the assessment criteria developed through the process outlined in Section 1.2.1. Progress categories were allocated for each of the three areas through a qualitative assessment based on the degree to which responses met the criteria expected of sectors demonstrating advanced progress. This criterion was consistent with the approach taken in 2021 with the exception of the addition of the consideration of biodiversity as well. This included:

- Clear ambition for adaptation with leadership buy-in.
- Implementation of credible policy decisions.
- All/majority of identified risks being addressed.
- Ability to focus on more defined vulnerabilities and risks – the Committee is cognisant of the challenges facing wider crosscutting sectors.
- Evidence adaptive capacity is increasing, and knowledge gaps are being addressed with an effective interface between research and end user needs.
- Evidence long-term decisions are accounting for the future climate with good evidence of mainstreaming.
- Evidence that systemic coordination is in place and good coherence with other policy.
- Good progress in monitoring and building knowledge of risks.
- Evidence appropriate resourcing is being applied to achieve policy goals, including staff and financial resourcing.

- Consideration of the associated socio-economic and environmental (including biodiversity) risks and opportunities.

Once scores were allocated for each of the three adaptation topics, an overall score was determined for each sector. It is important to note that the assessment applies to progress made over the past year only. Actions completed before this timeframe for which no further progress was noted in 2021-2022 were therefore not considered during the scoring process. The assessment was also only based on the information provided within the scorecard response.

The Biodiversity and Electricity and Gas Networks sector did not provide a response to the questionnaire. It was felt that it would be beneficial to have some engagement with these sectors to inform next year’s assessment and an opportunity for Virtual meetings were offered. The Biodiversity sector had a discussion with the assessors to review adaptation progress within the last year. Despite the discussion proving useful in providing an overview of adaptation progress; to ensure consistency across the assessment, a full scorecard assessment for the biodiversity sector was not created based on this discussion. The Electricity and Gas Networks sector did not take up this opportunity. A discussion was also held with the transport sector to support their questionnaire response and answer any queries. Minutes from both discussions can be found in Appendix B.

A summary of results per sector is discussed in Section 2 below.

2 Summary of results

Following the detailed review of sector responses against assessment criteria, progress categories were allocated for the three adaptation topics for each sector, as shown in Figure 2-1. An overall score was also determined for each sector, giving a high-level overview of adaptation progress in Ireland for 2022.

Sector	Risk, prioritisation & adaptive capacity	Resourcing & mainstreaming	Governance, coordination & cross cutting issues	Overall Progress Assessment
Agriculture, Forest and Seafood	Orange	Yellow	Yellow	Yellow
Biodiversity	Red	Red	Red	Red
Built and Archaeological Heritage	Green	Orange	Orange	Orange
Transport infrastructure	Green	Orange	Orange	Orange
Electricity and Gas Networks	Red	Red	Red	Red
Communications Networks	Orange	Yellow	Yellow	Yellow
Flood Risk Management	Green	Green	Orange	Green
Water Quality and Water Services Infrastructure	Orange	Yellow	Orange	Orange
Health	Yellow	Yellow	Yellow	Yellow
Local Government	Green	Orange	Green	Green
National Adaptation Framework	Orange	Orange	Orange	Orange

Figure 2-1 Adaptation Scorecard summary

The assessment shows that most sectors have demonstrated moderate (4 sectors) or limited (3 sectors) progress towards adaptation in the past year. Two sectors provided insufficient evidence and therefore demonstrated no progress. Two sectors showed good progress towards adaptation, but no sectors achieved advanced progress, indicating that there is scope for improvement for every sector in Ireland.

The ‘risk, prioritisation and adaptive capacity’ category showed the strongest progress overall, with least progress demonstrated within the ‘governance, coordination and cross-cutting issues’ category.

A more detailed justification for the Adaptation Scorecard results per sector is outlined in Section 3. The Adaptation Scorecards are provided within Appendix C.

3 National Adaptation Framework Response and Analysis

3.1 National Adaptation Framework

Responsible authority: Department of the Environment, Climate and Communications

3.1.1 Risk, prioritisation and adaptive capacity

Adaptation score: Moderate.

Ireland has clear national ambition for climate adaptation and has joined the National Adaptation Plan (NAP) Global Network. Increasing national adaptive capacity is evidenced through progress towards 12 key actions. Knowledge gaps are being addressed through research projects, including the EPA Research Programme and the development of Ireland's first 5-Year Assessment Report (5-YAR) on Climate Research. Upgrades to the Climate Ireland platform show efforts to improve the interface between research and end user needs are underway. There is some evidence that research outputs are available to feed into policy, however improved translation and dissemination is required to support the capacity of long-term decisions to account for the future climate. Whilst the need for greater cross sectoral research input is needed, there is limited evidence of prioritisation of research based on users' needs and capacities across different sectors. The data required to plan ahead for climate impacts is provided via specific resources such as Climate Ireland, however, there still remains a lack of capacity in specific areas such as risk assessment. Monitoring of progress at a sectoral level is carried out via the National Adaptation Steering group. Although research into developing a national indicator set has begun, piloting, refining and implementing these indicators would better enable effective monitoring of progress.

3.1.2 Resourcing and mainstreaming

Adaptation score: Moderate

Improved resourcing at a national level is evidenced through funding allocations and training programmes. Four Climate Action Regional Offices (CAROs) have been established with a commitment of funding of €10 million from DECC over 5 years and 13000 local authority staff received training on adaptation including flood risk and spatial planning in 2021. The CAROs have undertaken a number of engagement and communication actions in 2021, although resource and capacity constraints are acknowledged, and it is recognised that there is still a need to further expand resourcing of adaptation within all areas and sectors. Some coherence with other policies and mainstreaming is evidenced, particularly through integrating climate change adaptation objectives into existing planning and flood risk policies, although this should be expanded to cover wider policy. Awareness raising with the public is also evident through partnership with the National Dialogue on Climate Action (NDCA) and public engagement activities with targeted populations, including workshops, interviews and focus groups to promote societal response.

3.1.3 Governance, coordination and cross-cutting issues

Adaptation score: Moderate

Funding for the CAROs has assisted the coordination and the role of the local authorities in relation to climate action has expanded but resourcing continues to be an issue. Existing governance mechanisms are strengthened through the Climate Action and Low Carbon (Amendment) Act 2021, which also includes provisions to facilitate better cross sectoral cooperation on adaptation. Adaptation actions in the climate action plan (CAP) are now subject to the oversight of the Climate Action Delivery Board and there is evidence of knowledge sharing, although this could be improved across sectors. More work can be done on challenges facing wider cross-cutting sectors

through ensuring inter-dependencies can be addressed across sectors on a range of responsibilities. Whilst guidance and training for local authorities is mentioned, there is limited evidence to show how national agencies and local authorities are working closely to enable effective adaptation.

3.1.4 Overall Progress Assessment

Adaptation score: Moderate

Evidence of national adaptive capacity developing. There are clear advancements towards achieving adaptation actions and addressing knowledge gaps with a number of ongoing research projects, although there remains a lack of capacity in specific areas such as risk assessment. Increasing provision of financial and staff resourcing for adaptation is evident which should be expanded to all areas and sectors. Continued development, testing and implementation of national adaptation indicators will enable improved monitoring. There is more work to be done in standardising and consolidating monitoring and reporting, and analysis of future climate impacts on the economy, society and environment. More work is also needed in standardising risk and adaptation assessments to facilitate prioritisation for adaptation, particularly where there are interdependencies.

4 Local Adaptation Strategies Response and Analysis

4.1 Local Government

Responsible authority: Local Authorities, Climate Action Regional Offices (CAROs)

4.1.1 Risk, prioritisation and adaptive capacity

Adaptation score: Good

A 6.5% rise in completed actions is noted across the sector suggesting an increase in adaptive capacity. The second annual progress report reported 83% of all actions are either complete or are ongoing. There is strong evidence for the monitoring of progress, which is conducted through the Action, Transport and Networks Committee. Capacity-building appears to be well supported and resourced and adaptive capacity generally appears to be increasing. The senior management involvement within the Climate Action Teams or Climate Action Steering Groups exemplified leadership buy-in. Identification of risk is carried out via the semi-quantitative climate risks and vulnerability assessment as well as other research projects. Knowledge gaps are being addressed. Changes in risk is also evident showing flexibility in approach to climate adaptation as well as addressing risks. Consideration of future climate and responding to varying levels of vulnerability is evident. Resourcing is identified as a main barrier to delivery but is in the process of being addressed due the submissions of a Business Case to the government. Evidence of the consideration of the associated socio-economic and environmental (including biodiversity) risks and opportunities is unfortunately lacking.

4.1.2 Resourcing and mainstreaming

Adaptation score: Moderate

Mainstreaming is demonstrated within sectors which is facilitated by CAROs. For example, the Department of Transport demonstrate mainstreaming through the development of guidance documents to help with day-to-day activities in integrating climate adaptation. Awareness of potential weaknesses and possible ways forward is shown through the discussion of adaptation policy and how best to achieve and integrate this. The spatial distribution of vulnerability is also considered which hopes to allow for greater future cross sector collaboration. Formal training is evidenced with

a high engagement as well as informal training opportunities which should aid with mainstreaming. Once again, some issues with resourcing are discussed as well as the requirement for further clarity from the DECC regarding the CAROs. The requirement for further national policy is highlighted. Coordination is currently implemented in areas which require development, however a national approach under the NAF would facilitate greater cross sector integration. This demonstrates a drive to address knowledge gaps. A greater focus on the associated socio-economic and environmental (including biodiversity) risks and opportunities could be progressed next year.

4.1.3 Governance, coordination and cross-cutting issues

Adaptation score: Good

Coordination across organisations is integral to the climate change adaptation work local authorities conduct. This is evident with risk and vulnerability assessments requiring input from other sectoral plans and datasets owned by the relevant departments / agencies and participation in cross-sectoral working groups (WGs) developing actions and tools to build adaptation capacity and preparedness. Mainstreaming and integration is demonstrated by the incorporation of Climate Action into Senior Management Team meetings. This also shows leadership buy-in. Mitigation is considered alongside adaptation within some policy suggesting implementation of credible policy decisions. Cross sectoral adaptation building, and knowledge sharing occurs via the climate action governance structures. This shows evidence of systematic coordination. Progress on key actions is tracked and provided and progress generally appears good. The desire for closer working with national agencies on risk assessments, adaptation policies and tools for use by local authorities was highlighted. Government structures initially developed to oversee the implementation of adaptation measures have since evolved to also include mitigation. This demonstrates a dynamic approach but also the building of adaptive capacity. There is a lack of comment on the associated socio-economic and environmental (including biodiversity) risks and opportunities.

4.1.4 Overall Progress Assessment

Adaptation score: Good

The integration of mitigation with adaptation demonstrates good progress. The climate action training programme appears to be successful and should hopefully increase mainstreaming in the future. Obtaining sufficient resource appears to be a priority of the CARO over the near future which should reduce challenges to implementation. Further detail of how knowledge gaps are being addressed would provide some benefit. This sector would benefit from further consideration and coordination of the associated socio-economic and environmental (including biodiversity) risks and opportunities and actions to manage these. The key challenge remains the resourcing of dedicated staff to ensure consistency, coordination and implementation. The realised desire noted for closer working with national agencies on risks assessments, adaptation policies and tools for use by local authorities is essential to enabling progress on adaptation by the local authorities and national agencies.

5 Sectoral Responses and Analysis

5.1 Flood Risk Management

Responsible authority: Office of Public Works (OPW)

5.1.1 Risk, prioritisation and adaptive capacity

Adaptation score: Good

This sector demonstrates good progress in monitoring and building knowledge of risks and addressing risks. There is evidence of sharing international best practice on adaptation demonstrated through attendance of the workshop 'Adapting flood risk management for climate change'. Adaptive capacity is increasing, and knowledge gaps are being addressed through more action on research projects to improve the spatial resolution of climate projections for Ireland. Specifically, the projects on developing high resolution coupled atmosphere ocean wave regional climate projections and the sensitivity of fluvial flood peak flows, the inclusion of nature-based solutions and sustainable drainage in catchment management, training for Local Authorities and under the Local Authority Climate Action Training Programme and the development of a National Fluvial Forecast System for Ireland. There is also evidence that training has been delivered under the Local Authority Climate Action training. However, it is likely that this needs to be scaled up to meet the future challenges and may need to have a broader scope to enable greater cross sector integration.

5.1.2 Resourcing and mainstreaming

Adaptation score: Good

The additional resources allocated towards the Climate Adaptation and Strategic Assessment (CASA) team in 2022 demonstrates that appropriate resourcing is being applied to achieve policy goals, including staff. The restructure of the Flood Risk Services in one division should also help to mainstream adaptation and ensure that the potential impacts of climate change are prioritised. The policy change (in progress) to include the damages associated with future flood risk as part of the economic appraisal will help to mainstream the inclusion of adaptation measures as part of the design process. There is evidence of embedding climate change adaptation within work and improved resourcing with additional staff resources and training of Local Authority staff. There is evidence that the consistent 'scenario-based approach to climate change' has been adopted to inform decision making and some evidence of how this helps to mainstream adaptation. A review of existing policies to find opportunities to integrate adaptation action will also aid with mainstreaming adaptation.

5.1.3 Governance, coordination, and cross cutting issues

Adaptation score: Moderate

The sector has demonstrated evidence that systematic coordination is in place through the establishment of the Climate Adaptation and Strategic Assessment team and monthly progress meetings and the reporting that takes place. An important point was made with regards to addressing conflicting priorities between housing growth and flood risk which needs to be collaboratively addressed with other sectors and managed at a local regional and national scale. However, there is still the need for a step change in how this sector interacts with local authorities in more proactive than reactive with regards to future spatial planning and development. Progress has been made on including and valuing nature-based solutions in catchment management and social benefits in some economic appraisal of Flood Relief Schemes. However, it is likely that this needs to be scaled up and mainstreamed to inform design and meet future challenges. Also, the current economic appraisal framework does not factor in the net economic benefits of adaptation and the near-term rising cost of raw materials is seen

as a barrier to implementation. This will require a step change in the approach of the economic appraisals to value the net benefits of adaptation. A review of the coherence of policies to address long-term decision-making and cross sector integration of adaptation may provide some opportunities.

5.1.4 Overall Progress Assessment

Adaptation score: Good

Progress has been made on including and valuing nature-based solutions in catchment management and social benefits in some economic appraisal of Flood Relief Schemes. However, it is likely that this needs to be scaled up to meet future challenges. Also, the current economic appraisal framework does not factor in the net economic benefits of adaptation and the near-term rising cost of raw materials is seen as a barrier to implementation. The policy change to include the damages associated with future flood risk (Sectoral Adaptation Plan (SAP) Action 2D) included in the economic appraisal will help to mainstream the inclusion of adaptation measures as part of the design process. There seems to be a potential opportunity to integrate this approach into the methodology that is currently being developed to include the damages associated with future flood risk in economic appraisals. This sector would benefit from a review of policies that influence long term decisions to account for future climate damages and to consider wider socioeconomic and environmental (including biodiversity) risks and opportunities and to mainstream these through changes in economic appraisals and other policy amendments.

5.2 Water Quality and Water Services Infrastructure

Responsible authority: Department of Housing, Local Government and Heritage

5.2.1 Risk, prioritisation and adaptive capacity

Adaptation score: Moderate

A variety of resource plans and programmes are described but there is limited evidence on how these enabling actions translate into increase adaptive capacity. Identified knowledge gaps are attempted to be closed via research which includes climate actions. Sufficient knowledge of climate change impacts identified from baseline assessments is outlined but detail on the indicators used is not provided. Research is being used to address knowledge gaps which have been identified and this indicates knowledge building of risks. Adaptation actions are seen to be increasing through the inclusion of additional measures developed since the publication of the sectoral adaptation plan (SAP). Systematic coordination is demonstrated through use of the SAP to develop plans for other areas of the sector. Improved monitoring is proposed; however, there is a lack of detail on monitoring processes. Consideration and coordination of the associated socio-economic and environmental (including biodiversity) risks and opportunities and actions to manage these is demonstrated through the development of plans for ecosystem and habitat restoration.

5.2.2 Resourcing and mainstreaming

Adaptation score: Limited

Adaptation seems to have been allocated adequate resourcing. However, the focus appears to be enabling actions and there is a lack of specific links to projects or tangible change in adaptation. Awareness of the associated benefits of investing in nature is built upon. Training is being utilised to build upon knowledge within the sector and mainstream adaptation. A greater focus on mainstreaming however would provide some benefit due to the potential impacts of climate change upon this sector. Further

comment on human resourcing is needed to understand how adaptive capacity is being built and aiding implementation of climate adaptation.

5.2.3 Governance, coordination, and cross cutting issues

Adaptation score: Moderate

Coordination and consultation with other sectors, departments and systems are noted on risks and cross-cutting issues. Monitoring is highlighted as a key challenge to implementing successful adaptation, a rough plan to address this is identified with more detail to be produced in the future. This sector would benefit from the development of this given the magnitude of climate change impacts this sector will face. Awareness of the multiple benefits adaptation measures can bring is built upon. Overall progress within this section appears moderate.

5.2.4 Overall Progress Assessment

Adaptation score: Moderate

Good evidence of awareness of knowledge gaps and associated socio-economic and environmental risks and opportunities is provided. Further development or evidence of leadership buy-in would benefit the sector and is paramount due to the likely intensive impacts of climate change upon this sector and those highly dependent on water resources. Effectively outlining the human and financial resources used to build capacity would benefit tracking how this translates into built capacity. Momentum on building adaptive capacity within the sectors of water quality and water services must be maintained in order to effectively build resilience to such a vulnerable sector.

5.3 Built and Archaeological Heritage

Responsible authority: Department of Housing, Local Government and Heritage

5.3.1 Risk, prioritisation and adaptive capacity

Adaptation score: Good

This sector demonstrates good evidence of monitoring and evaluation of SAP actions. Progress in building adaptive capacity is evident through engagement with a range of stakeholders and the formation of the Advisory Group and Working Groups, although there is limited evidence to demonstrate the effectiveness of these groups. Knowledge gaps are being addressed through research projects, for example Climate Ireland is working with the Atlantic Sea Board North CARO to develop a semi-quantitative risk assessment methodology. The Met Éireann-research project TRANSLATE is also working to standardise climate projections and develop some climate services to assist with risk assessments. Development and piloting of new approaches is also evidenced through the €2.2 million granted to Irish Research Council in 2022/2023 by National Monuments Service to support dedicated research relating to archaeological heritage. Development of an effective interface between research and user end needs would help maximise research value. Though there are now structures in place to promote coherence with heritage plans and policies, there is limited evidence on how adaptation considerations have permeated decision-making or informed credible policy decisions. Whilst there is evidence that risks are being addressed, implementing a process for prioritisation of risks would enable improved action.

5.3.2 Resourcing and mainstreaming

Adaptation score: Moderate

Staffing capacity constraints remain the key challenge for this sector. However, progress towards systematic coordination and appropriate resourcing is evidenced

through the appointment of external support to assist in coordinating, facilitating, and tracking progress of adaptation plan actions. Increased financial resourcing for building resilience of architectural and archaeological heritage is demonstrated through significant heritage budget increases awarded over the last 2 years and the roll out of expansive heritage grant schemes. Good evidence of mainstreaming is shown through the linking of grant funding and building climate resilience in heritage assets, information sharing and social media campaigns (i.e., #climateheritage). Good coherence with other policy is evidenced as climate change priorities have been embedded into the new cross-government national heritage plan, Heritage Ireland 2030.

5.3.3 Governance, coordination and cross-cutting issues

Adaptation score: Moderate

Evidence is provided to show how this sector is managing the majority (7 of 9) of identified risks from the Sectoral Plan. Working groups have been formed to coordinate and deliver outputs and maximise engagement capacity and an Advisory Group has been assembled to oversee development, but there is limited evidence to demonstrate the effectiveness of these groups. Governance will be further strengthened by the planned appointment of an external coordinator to manage progress. However, increased efforts to develop cross sectoral links would enable a more integrated adaptation response. Although there are now structures in place to promote coherence with heritage plans and policies, there is limited evidence on how adaptation considerations have permeated decision-making or informed credible policy decisions.

5.3.4 Overall Progress Assessment

Adaptation score: Moderate

Key constraints, including staffing capacity and engagement, are identified and actions are in place to overcome challenges. There is clear ambition for adaptation, although this sector would benefit from further development of cross sectoral links and deeper consideration of associated socio-economic and environmental (including biodiversity) risks and opportunities and actions to manage these.

5.4 Transport Infrastructure

Responsible authority: Department of Transport

5.4.1 Risk, prioritisation and adaptive capacity

Adaptation score: Good

There is evidence of monitoring through the annual internal review of the sectoral adaptation plan (SAP). This is primarily conducted by the Energy, Air and Adaptation Division (EAAD). A gap analysis and assessment of current adaptive capacity is conducted within this. This continual review of the SAP has allowed for a flexible and dynamic approach to adaptation and has allowed knowledge gaps to be identified early. It is acknowledged that there are inconsistencies in the climate data used and a desire to address this through current research projects. Further detail regarding policy prioritisation and implementation is required. Engagement and strengthened relations with other departments and agencies is highlighted as a focus and evidences systematic coordination. Multiple actions to improve adaptation are provided including those conducted in collaboration with other departments. For example, work in collaboration with CAROs to identify 'lifeline roads' and work with the Department of Health to discuss future projects regarding this theme to assess the potential risks to these valuable networks. The appointment of resource (such as the Engineers dedicated to considering carbon savings for Cork County Council as funded by the Department of Transport) shows an understanding of the socio-economic opportunities

climate change adaptation can bring. It is acknowledged that interventions have generally been more reactive and that some sub sectors of the transport sector are lagging in progress on adaptation.

5.4.2 Resourcing and mainstreaming

Adaptation score: Moderate

The re-establishment of the external Transport Adaptation Stakeholders Working Group and Core Adaptation Team demonstrates appropriate resourcing and systematic coordination. Leadership buy-in is demonstrated from the engagement with the management board. However, the implementation of credible policy decisions could be used to further mainstream adaptation across all sub sectors of the transport sector. Access to resources was noted as a key enabler to implementation which demonstrates sufficient resourcing. However, a lack of sophisticated tools to predict local impacts on infrastructure was identified as an issue which could therefore be developed in the future. Guidance is being developed to inform the design of future infrastructure which will help to maintain adaptation; however, the issue of consistent climate data will need to be addressed. Insufficient resource in other departments was also noted as a challenge to working across departments. This may halt progress and impact adaptation. Once again, collaboration is highlighted through the focus on the TRANSLATE project which also utilises more up-to-date research. Adaptive capacity is noted to be increasing through increasing the withstanding-built capacity of assets. Some evidence of training provisions is provided. The provision of multiple grants to other authorities further demonstrates sufficient resourcing. Some plans goals for the upcoming year are provided however further clarity of this would have been beneficial.

5.4.3 Governance, coordination and cross-cutting issues

Adaptation score: Moderate

Cross-cutting themes have been considered via the use of cross-divisional working groups known as Horizontal Working Groups. Co-ordination with multiple other departments, bodies and sectors is exemplified such as the tourism, freight, and maritime sector. All actions are highlighted as either complete or on schedule demonstrating good progress. The various sub-sectors of transport is noted to be a challenge. These variations can make adaptive capacity fragmented. Staffing resource is highlighted as an issue in some areas which may slow progress. The approach of developing tools to be used by stakeholders with a range of expertise shows the implementation of appropriate and credible resources. Work on 'lifeline' roads and the 'Map Road system' are good examples of cross sector adaptation planning. Some adaptation actions have also led to progress in climate change mitigation, but this could be expanded and mainstreamed given the sectors contribution to greenhouse gas emissions. The issue of confidential assets owned by other sectors has limited the ability to accurately prioritise interventions and should be addressed in the future.

5.4.4 Overall Progress Assessment

Adaptation score: Moderate

The sector has built on the engagement with other critical infrastructure sectors outlined last year but momentum needs to be maintained to ensure adaptive capacity is continuing to increase. There is some concern this could get lost due to the challenges outlined. Enabling strengthened and continued coordination could be the focus of this sector over the next year to ensure adaptation is mainstreamed across all sub-sectors. Future climate change is being incorporated and mainstreamed to some degree, but this would be expanded moving forward. Regular meetings to assess gaps allows for a more constant monitoring of risk but it is essential this is maintained. It is recognised that the availability and use of consistent climate data across sectors and overcoming

the issue of confidential assets would aid with addressing future climate risks, including effective coordination of adaptation policies and their implementation.

5.5 Agriculture, Forestry and Seafood

Responsible authority: Department of Agriculture, Food and the Marine

5.5.1 Risk, prioritisation, and adaptive capacity

Adaptation score: Moderate

There is some evidence that adaptive capacity is increasing, and knowledge gaps are being addressed with an effective interface between research and end user need through the TRANSLATE project which aims to standardise national climate projections for Ireland and develop climate services. The Seafood sector has several projects integrating adaptation into long terms management and an implementation plan to follow the Sectoral Adaptation Plan as well as holding monthly meetings to exchange knowledge through the Seafood Climate Action Group. The work on resilient forests as part of the national Forestry Programme will increase adaptative capacity in this sector. The majority of opportunities in the agriculture sector will be delivered under Ireland's CAP to support the maximum possible environmental, biodiversity and climate ambition in CAP 2023-2027, this will need to be translated into credible policies that mainstream adaptation. Similarly, the climate adaptation impact and vulnerability assessment has been reviewed and updated; however, it was not clear how this will translate into policy and the mainstreaming of adaptation. Generally, there seems to be a greater level of understanding and action on carbon mitigation than on adaptation. These sectors would benefit from integrating adaptation and mitigation policies, actions and resources.

5.5.2 Resourcing and mainstreaming

Adaptation score: Limited

There is evidence of training and knowledge exchange opportunities across all sectors. The lack of a clear ambition on adaptation is a key challenge as resources are prioritised for mitigation. The loss of experienced staff has impacted progress on adaptation. There are several plans, programmes, and strategies where adaptation is mentioned as an add-on rather than fully integrated or central to the initiatives. There is limited evidence of mainstreaming or that systematic coordination is in place or good coherence with other policies.

5.5.3 Governance, coordination, and cross cutting issues

Adaptation score: Limited

There are several actions highlighted in the CAP where adaptation is mentioned as an add-on rather than fully integrated or central to the initiatives. There is limited evidence of consideration of the associated socio-economic and environmental (including biodiversity) risks and opportunities. There are a few projects examining climate smart agriculture and forestry and significant investment in research projects. However how all these initiatives and research projects translate into credible policies that support mainstreaming adaptation is key and again the challenge to implementation has been highlighted as resource dedication to mitigation rather than adaptation. There are limited crossover/lessons learned within the three sectors identified where there may be interdependencies.

5.5.4 Overall Progress Assessment

Adaptation score: Limited

There seems to be a greater level of understanding and action on carbon mitigation than on adaptation. These sectors would benefit from integrating adaptation and

mitigation policies, actions, and resources. There are several high-level actions outlined in the CAP, for example, Action 325 Develop and finalise appropriate interventions under Ireland's CAP Strategic Plan to support the maximum possible environmental, biodiversity and climate ambition in CAP 2023-2027. Full advantage should be taken of the opportunity to translate actions in the plan into credible policies that support mainstreaming adaptation.

5.6 Biodiversity

Responsible authority: Department of Housing, Local Government and Heritage

5.6.1 Overall Progress Assessment

Adaptation score: No progress / insufficient evidence

Last year the Council found that the biodiversity sector had made limited progress, highlighting that a wide range of adaptation challenged face this key, deeply interdependent sector and that further coordinated actions is essential. The absence of a completed consultation template this year means limited information is available and in light of this a score of 'No progress/insufficient evidence' has been assigned. This is particularly concerning given the need to integrate adaptation, mitigation and biodiversity actions to achieve the National Climate Objective.

5.7 Electricity and Gas Networks

Responsible authority: Department of the Environment, Climate and Communications.

5.7.1 Overall Progress Assessment

Adaptation score: No progress / insufficient evidence

Last year the Council found that this sector had made limited progress. This is a concern particularly given the potential climate vulnerability arising from the electrification of the power systems, personal transport, heat etc. as part of decarbonisation (in addition to cascading effects for other sectors). Though actions may be underway to enhance the resilience of national distribution infrastructure, the Council has not received sufficient information to show how these are coherent with the priorities of the statutory sectoral plan in place under the NAF.

5.8 Communications Networks

Responsible authority: Department of the Environment, Climate and Communications

Note on the telecommunications sector in Ireland:

Electronic communications services are provided in Ireland by competing network and service providers within a fully liberalised market. A wide range of services are available to customers over infrastructure, including fixed and mobile networks, voice, data, and internet services, cable television, developments in next generation networks and broadcast networks for radio and television. The Telecommunications Policy and Regulation Division (TPRD) within the Department of the Environment, Climate and Communications (DECC) is responsible for developing policy and regulation in the area.

Note on ComReg:

ComReg is the statutory body responsible for the regulation of the electronic communications sector (telecommunications, radio communications, broadcasting transmission and premium rate services) and the postal sector in Ireland. ComReg operates under Irish and EU Legislation in these areas.

5.8.1 Risk, prioritisation and adaptive capacity

Adaptation score: Moderate

There is evidence of a clear ambition for adaptation with leadership buy-in however this may be framed in this sector through the terms "network security and resilience". This is evident in ComReg's latest electronic communications strategy statement and goal to ensure that network security and resilience is effectively managed, operators should have a comprehensive understanding of all relevant risks to which they are exposed and have appropriate risk-based procedures in place to manage them. There is evidence that adaptive capacity is increasing, and knowledge gaps are being addressed with an effective interface between research and end user needs as ComReg has initiated a project on 'climate change impact and adaptation of telecom networks in Ireland' (NOU16) to identify vulnerabilities and risks and identify measures required to adapt to climate change impacts on vulnerable infrastructure. There is evidence of progress in monitoring and building knowledge of risks for example, through the e-licensing incident reporting portal and prioritisation of actions that 'could impact resilience'. There is awareness that the postal sector must support and advance climate action, but limited evidence of action.

5.8.2 Resourcing and mainstreaming

Adaptation score: Limited

Resourcing issues and the pandemic have been highlighted as barriers to progress. There is limited evidence that appropriate resourcing is being applied to achieve policy goals, including staff and financial resourcing. There has been training with an emphasis on sustainability in general, but this should be expanded to include specific training on how to resource and mainstream climate change adaptation.

5.8.3 Governance, coordination and cross-cutting themes

Adaptation score: Limited

There is some evidence of enhanced cooperation and communication between departments, agencies, state bodies and other stakeholders to ensure that communications infrastructure and services are resilient to the impacts of climate change through sustainability and adaptation meetings and webinars and research projects. There is limited evidence of the consideration of the associated socio-economic and environmental (including biodiversity) risks and opportunities.

5.8.4 Overall Progress Assessment

Adaptation score: Limited

This sector recognises in its strategy and goals the importance of adaptation (framed as network security and resilience), however there is limited evidence that this has been translated into credible policy decisions. There is limited evidence that long-term decisions are accounting for the future climate or evidence of mainstreaming, systematic coordination, and coherence with other policies. This sector is still at the stage of identifying risks and vulnerabilities and building capacity.

5.9 Health

Responsible authority: Department of Health

5.9.1 Risk, prioritisation and adaptive capacity

Adaptation score: Limited

The COVID-19 pandemic has caused substantial delays to the implementation of the Health Sectoral Adaptation Plan. The implementation of the plan therefore began in earnest in 2021. Consequently, no monitoring activities of implementation actions were

carried out in the last year. Progress on implementation actions is evident but limited and key priorities for the next year are identified which will hopefully allow for more focussed and efficient progress. Challenges brought by the COVID-19 pandemic also prevented the meeting of several important groups for enabling delivery. Progress in building adaptive capacity is evident through the establishment of the Climate Change Oversight Group and upcoming similar establishment of a Climate Change Unit in the Health Service Executive (HSE). This demonstrates evidence of systemic coordination. Due to the lack of scorecard response in 2021 (caused by the COVID-19 pandemic), unfortunately no evidence of addressing risks were identified from the response provided for the past year. However, this should perhaps be greater reasoning to increase adaptation efforts and means that this area therefore offers potential for progress and development in the future. Evidence of monitoring adaptation is noted through the consideration of the resilience of health infrastructure to the impacts of climate change. Some evidence of progress towards increasing adaptive capacity in the past (pre-COVID-19 pandemic) is demonstrated.

5.9.2 Resourcing and mainstreaming

Adaptation score: Limited

The delays in implementing adaptation measures caused by the COVID-19 pandemic also made it difficult to provide information on any knowledge gaps identified or performance indicators used as implementation actions are currently at early stages. No evidence of addressing knowledge gaps with an interface between research and end user needs is therefore provided. Progress within informal and training and awareness raising was more evident. This is primarily through the Climate Change Unit within the Department of Health which has been the driver in informal raising of awareness of interlinkages across the Department. This approach is expected to be adopted by the Health Service Executive, indicating the success of this method and demonstrates appropriate resourcing. The need for formal training has not been identified currently and so perhaps offers a potential area for development of resourcing and progress in the future. Some progress is demonstrated through the mainstreaming of climate considerations across the Oversight Group however overall progress is limited.

5.9.3 Governance, coordination and cross-cutting themes

Adaptation score: Limited

The requirement for further cross-sectoral coordination is highlighted. The implementation of the Energy Efficient Design (EED) approach indicates good progress in the ability to focus on more defined vulnerabilities and risks and that long-term decisions are accounting for the future climate. Consideration of the associated socio-economic and environmental (including biodiversity) risks and opportunities is particularly noted within this section. Awareness of co-benefits or unexpected challenges is more limited due to the delays in implementation. Evidence of systemic coordination and good coherence with other policy is demonstrated through the implementation of the EED however overall progress within this section appears limited.

5.9.4 Overall Progress Assessment

Adaptation score: Limited

The unprecedented challenge which the COVID-19 pandemic has brought to the health sector since the beginning of 2020 has ultimately impacted climate adaptation and resulted in limited progress. Climate change adaptation and action will require great progress within the health sector due to the interconnected nature of climate, health and implications for wellbeing, and the likelihood for the climate crisis to lead to a health crisis. Ultimately, climate action is also health action. Developing this would also

lead to improvements in the consideration of the associated socio-economic and environmental risks and opportunities.

6 Scorecard findings and recommendations

6.1 Scorecard findings

6.1.1 Risk, prioritisation and adaptive capacity

Across all sectors, the most advanced progress was seen within risk, prioritisation and adaptive capacity. Actions for addressing knowledge gaps are in place for most sectors, although some research areas remain underrepresented, for example further work to standardise risk and adaptation assessments nationally would help to facilitate prioritisation for adaptation. Knowledge sharing between sectors could also be improved. Although research advancements are apparent, overall there is a clear need for improved translation and dissemination to ensure research outputs are available to feed into policy. Evidence of effective interfaces between research and end user needs varies between sectors but is generally limited. National upgrades to the Climate Ireland platform show some efforts to increase user access are underway, but further improvement in this area across all sectors has scope to make a significant impact towards increased adaptive capacity and maximise research value.

The 2022 Adaptation Scorecard assessments found overall limited evidence on how adaptation considerations have permeated decision-making or informed credible policy decisions which account for the future climate in the long-term. Details around the use of prioritisation were also lacking. Although there was generally evidence that risks were being addressed, implementing a process for prioritisation of risks would enable improved action. Prioritisation of research by the NAF based on user needs and capacities across different sectors should also be considered. The assessment highlighted an overall lack of detail with regards to risk monitoring processes, although some sectors did provide high level information: for example, the Communications sector uses the e-licensing incident reporting portal for monitoring and building knowledge of risks. National monitoring at the sectoral level is undertaken by the Adaptation Steering Group but would be better enabled by implementation of the national indicator set.

There is clear national ambition for climate adaptation, but in several sectors there is a greater level of understanding and action on carbon mitigation than on adaptation. For example, within the Agriculture, Forestry and Seafood sector there are several plans, programmes, and strategies where adaptation is mentioned as an add on rather than fully integrated or central to the initiatives. The assessment has highlighted that these sectors would benefit from better integrating adaptation and mitigation policies, actions, and resources.

6.1.2 Resourcing and mainstreaming

Resourcing remains a key constraint across many of the sectors. The COVID-19 pandemic has acted as barrier for achieving policy goals and restricted progress, most notably for the Health and Communications sectors. The resourcing of dedicated staff to ensure consistency, coordination and implementation appears to remain challenging across all sectors, nationally and within local government, although there is evidence to show clear actions are underway to target this. For example, for the Flood Risk Management sector additional staff have been appointed in the CASA team, and the Built and Archaeological Heritage sector are planning to appoint external support to assist in coordinating, facilitating, and tracking progress of adaptation plan actions. Training programmes have also contributed to improved resourcing, and 13,000 local authority staff received training on adaptation including flood risk and spatial planning

in 2021. The climate action training programme should increase resourcing and mainstreaming in the future, particularly for the Flood Risk Management sector but will require scaling up to meet future challenges and a broader scope to enable greater cross-sector integration. Despite training programmes, there is also limited evidence to show how national agencies and local authorities are working closely to enable effective adaptation.

Nationally, the establishment of four CAROs with a commitment of funding of €10 million from DECC over 5 years provides evidence of improved financial resourcing for adaptation. Although the CAROs have undertaken engagement and communication actions, there is still the need to further expand resourcing of adaptation with all areas and sectors. Increased funding allocation for adaptation within some sectors was also apparent, for example within the Built and Archaeological Heritage sector there have been significant budget increases awarded and the roll out of heritage scheme grants for adaptation and resilience actions. Further improvements to financial resourcing could be achieved through increased cross-sector funding arrangements.

The assessment found some evidence of planned policy changes to facilitate mainstreaming, for example, the Flood Risk Management sector include the damages associated with future flood risk within economic appraisals to mainstream inclusion of adaptation measures as part of design. However, there is still a need for this to be broadened and more proactive rather than reactive across the board. Individual sectors also demonstrate some action towards mainstreaming. For example, the Department of Transport demonstrate mainstreaming through the development of guidance documents to help with day-to-day activities in integrating climate adaptation. Sectoral actions could be strengthened through better interactions and more collaborative working with local authorities and other sectors, although some sectoral evidence of coherence with other policy was identified, for example for the Built and Archaeological Heritage sector, climate change priorities have been embedded into the new cross-government national heritage plan, Heritage Ireland 2030. However, the inclusion of adaptation within policy needs to be scaled up to achieve mainstreaming more broadly.

6.1.3 Governance, coordination and cross-cutting issues

The assessment found that governance, coordination, and cross-cutting issues was the weakest area generally across all sectors, although high-level evidence of improved systematic coordination and governance structures was provided by the majority of sectors, particularly through the establishment of working and steering groups. For example, the Transport sector have re-established the external Transport Adaptation Stakeholders Working Group and Core Adaptation Team to increase coordination capacity. Similarly, the Health sector established the Climate Change Oversight Group and are planning the upcoming similar establishment of a Climate Change Unit in the Health Service Executive (HSE). However, there was limited evidence to demonstrate tangible progress made by these groups and further work is needed to understand their effectiveness. Alongside this, strengthening leadership buy-in across sectors would help drive adaptation ambition and govern actions.

There was a general lack of comment on cross-cutting issues and the associated socio-economic and environmental (including biodiversity) risks and opportunities across sectors and actions to manage these. The assessment also highlighted a need for greater cross-sectoral efforts, particularly with regard to research inputs and knowledge sharing, although there is some evidence that cross sectoral adaptation building occurs, such as via the climate action governance structures. For the Transport sector, cross-cutting themes have been considered via the use of cross-divisional working groups known as Horizontal Working Groups and co-ordination with other departments, bodies and sectors is exemplified such as the tourism, freight, and maritime sector. Expansion of this multi-sector working approach should be taken forward to drive collaborative adaptation action. Closer working between national

agencies and local authorities on risk assessments, adaptation policies and tools will also be essential to enable progress on adaptation nationally.

6.2 Limitations of this assessment

Over the course of this assessment, limitations with the approach were identified. The nature of this work meant that developing a quantitative scoring approach was challenging. The main limitation of this work was therefore that high-level qualitative criteria were used for scoring, which resulted in subjective assessments based on expert judgement. For consistency with the approach taken in 2021, criteria were only developed for 'Advanced Progress' scores, which left scoring open to interpretation for the other progress categories and reduced consistency. In addition, some sectors did not provide responses. This may have been due to lack of understanding of the assessment or adaptation principles, limited resourcing or inadequate support and engagement with these sectors. Moreover, the assessment was only based on actions which were included and discussed within the scorecard responses. This was therefore reliant on sectors accurately reporting all adaptation progress and the overall scores of sectors progress may have been understated due to missing details in scorecard responses. The limited space on the slides themselves also constrains that amount of detail that can be included. The assessment period had a short timeframe which also happened to coincide with Easter and St Patricks Day public holidays. This was managed effectively; however, it did mean that there were very short timescales for feedback.

6.3 Recommendations for future assessments

The findings of this work have highlighted several recommendations for future Adaptation Scorecard assessments. Increased robustness of the scoring methodology should be main priority going forward. This could be achieved through developing defined scoring criteria for each progress category to provide clear distinctions between categories, reduce subjectiveness and improve standardisation. Over time, the development of a numeric scoring approach would aid consistency, reduce subjectivity, and better allow comparisons over time and between sectors.

Providing additional support to encourage responses from all sectors should be considered going forward. This could take the form of an introductory webinar with assessment guidance and instructions for completing responses, along with follow up interviews to discuss any queries on the assessment and ensure responses give a true and thorough representation of adaptation. The discussions held with the transport and biodiversity sectors proved particularly beneficial in understanding progress (Appendix B). Definitions for key words should be provided to ensure consistent understanding across sectors. Notably, definitions for adaptation, mitigation and mainstreaming should be provided. However, it is also recognised that alternative terms can also be better understood in different sectors. For example, 'Network resilience' for the communication sector is a useful term in describing actions on adaptation.

In the future, it may also be necessary to review the inclusion of mainstreaming within the scoring criteria, as some evidence suggests that mainstreaming can be restrictive in terms of the nature and scope of adaptation that can and will be considered and implemented. Long-term decisions accounting for future climate with good evidence of mainstreaming may be potentially problematic as many of such decisions will require transformational adaptation, which may conflict with existing policies and systems. Discussion around mainstreaming adaptation with existing policy should therefore be framed carefully during the next assessment.

6.4 Conclusions

The results of the Adaptation Scorecard assessment provide a valuable overview of adaptation progress in Ireland. Generally, progress across sectors appears slow considering the urgency of the climate crisis and no sector received a score of advanced progress in this year's scorecard. However, analysis of sectoral, national, and local government responses has facilitated the identification of key areas where future progress should be targeted and should hopefully allow for more rapid future progress. It also provides an opportunity to improve knowledge on adaptation and promote cross sector issues. Annual review of adaptation actions will continue to promote greater emphasis on adaptation within Irish policy making to enable effective adaptation and long-term decision-making which accounts for the future climate.

Appendices

A Adaptation Scorecard Questionnaires

A.1 Questionnaire Introduction



ASSESSING PROGRESS IN ADAPTATION AND RESILIENCE **Climate Change Advisory Council Consultation Template 2022**

On behalf of the Advisory Council, the Adaptation Committee invites you to address a questionnaire as part of its work in assessing progress in adaptation and resilience. The Council and Adaptation Committee will use these responses to prepare the adaptation component of the Council's Annual Review 2022 and specifically its second adaptation scorecard.

The IPCC's contribution of Working Group II to the Sixth Assessment report, *Climate Change 2022: Impacts, Adaptation, and Vulnerability* states that maladaptation can be avoided by flexible, multi-sectoral, inclusive, and long-term planning and implementation of adaptation actions with benefits to many sectors and systems. To move towards climate resilient development, we need to identify actions on adaptation, measure progress on the implementation of adaptation policy and inform the development of future policies. The following questions have been developed by undertaking a literature review to understand best practise in the implementation of adaptation, as well as considering the responses provided for last year's scorecard.

Similar to last year, the final assessment will be outlined in the Annual Review 2022 and will be based on the degree to which the Advisory Council is satisfied progress is being made in implementing adaptation policy and increasing resilience. The questionnaire is categorised into three areas:

- Risk, prioritisation and adaptive capacity
- Resourcing and mainstreaming
- Governance, coordination and cross cutting issues

Following review of the submitted responses, representatives of the Adaptation Committee will engage with respondents to discuss its preliminary assessment. The preliminary assessment will be made available to you in advance for your observations. The timeline is as follows:

- 20 April 2022: Response template to be issued
- **13 May 2022: Completed response templates returned to the Advisory Council**
- The preliminary assessment of responses and engagement with sectors, CAROs and DECC will take place during May and June.
- The Assessment will be finalised for the Advisory Council Annual Review 2022 at the end of June.

The assessment in the Annual Review will primarily be the result of a desk-based exercise drawing on the questionnaires, so completeness is reliant on the input received from stakeholders and the Adaptation Committee's subsequent engagement with you. Where

relevant please set out the specific projects, actions or policies that have begun (with expected completion date), been completed or put into force.

The proposed decision-making framework will be consistent with the approach taken in 2021 but this may be refined in light of the information received.

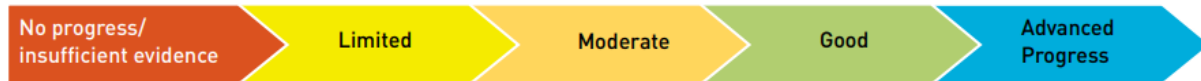


Figure 2. Scoring system to track adaptation progress in the CCAC 2021 Annual Review

Please return your response to the questionnaire attached to info@climatecouncil.ie no later than 5pm on 13 May 2022.

A.2 Questionnaire – National Adaptation Framework

Risk, prioritisation and adaptive capacity

- 1 Please provide an update on the key actions (1-12) not completed to date under the National Adaptation Framework.

(Suggested Table for response below [add additional rows as required]).

Action	Timeline	Stakeholders	Progress to action	Comment/ justification

- 2 Please provide an update on each of the 13 identified Supporting Objectives in implementing the Framework.

(Suggested Table for response below [add additional rows as required]).

Action	Timeline	Stakeholders	Progress to action	Comment/ justification

- 3 Outline actions taken in the last year to actively monitor and evaluate the implementation progress of the Framework and identify and address knowledge gaps.

(Suggested word count: 350)

- 4 Identify and explain the main challenges and enablers encountered over the past year when implementing the Framework.

(Suggested word count: 350)

Resourcing and mainstreaming

- 5 Outline actions taken in the last year to address gaps in adaptation planning which were previously identified by the Advisory Council in the [2021 Annual Review](#).
(Suggested word count: 350)
- 6 Discuss how communication and consultation on adaptation has been undertaken across government at the national, regional, and local scales.
(Suggested word count: 350)
- 7 Provide examples and innovations that have been introduced (over the past year) that have facilitated integration of adaptation into practices and policies.
(Suggested word count: 200)
- 8 Provide examples of where resourcing has enabled implementation and where resourcing is acting as a barrier to implementation.
(Suggested word count: 200)

Governance, coordination, and cross-cutting issues

- 9 Discuss how adaptation has been integrated and mainstreamed into other government policy as a result of the implementation of the Framework.
(Suggested word count: 350)
- 10 Identify and discuss how adaptation has resulted in any changes in governance.
(Suggested word count: 350)
- 11 Demonstrate how the adaptation framework has been integrated with the [Climate Action Plan 2021](#) and provide an update on additional national adaptation actions identified in the Plan.
(Suggested Table for response below [add additional rows as required]).

Action	Timeline	Stakeholders	Progress to action	Comment/justification

- 12 Describe any other unanticipated challenges or benefits that were not covered above.
(Suggested word count: 200)

A.3 Questionnaire – Local Adaptation Strategies

Risk, prioritisation and adaptive capacity

13 Please give an update on the progress on the high-level goals or action areas (if applicable) in the local adaptation strategies.

(Suggested Table for response below [add additional rows as required]).

Action	Timeline	Stakeholders	Progress to action	Comment/justification

14 What activities were carried out to actively monitor and evaluate the implementation progress of the strategies and/or their implementation, outputs and outcomes?

(Suggested word count: 350)

15 How were risks (which were identified in the local adaptation strategies, in the previous scorecard response, and comments in the [2021 Annual Review Adaptation Scorecard](#)) addressed in the last year?

(Suggested word count: 200)

16 Identify and explain the main challenges and enablers supporting delivery of the strategies encountered when implementing any actions over the past year.

(Suggested word count: 350)

17 What actions implemented in collaboration with or solely by other organisations have been implemented in the past year that have contributed to the strategies or have resulted in building adaptive capacity and preparedness?

(Suggested word count: 200)

Resourcing and mainstreaming

18 What data and indicators (e.g. KPIs, climate model projections) are currently used to influence actions and decisions, and implement adaptation measures? What data and knowledge gaps are currently present and therefore preventing the achievement of adaptation actions set out in the strategies? How have these data gaps been addressed?

(Suggested word count: 350)

19 Please provide details on the training (informal and formal) which has been provided to local authority staff to increase skills and capacity within climate adaptation. Please also provide details on the training provided to elected members.

(Suggested word count: 200)

20 Provide an overview of the dedicated staff (e.g. Climate Action Teams) and resources within local authorities tasked with delivering climate adaptation.

(Suggested word count: 200)

21 What policy is currently used to influence actions and decisions and implement adaptation measures? What policy gaps are currently presents and therefore preventing the achievement of adaptation actions set out in the plan?

(Suggested word count: 200)

Governance, coordination, and cross-cutting issues

- 22 Provide examples of where procedures, policies, and regulations have changed in local authority development plans as a result of the adaptation strategies and their implementation.
(Suggested word count: 200)
- 23 What are the mechanisms to ensure the 'windows of opportunity' to integrate adaptation in updated policies, procedures, and plans within the policy and planning cycles have been identified and acted on?
(Suggested word count: 350)
- 24 Provide an update on actions identified in the local adaptation strategies relative to those identified in the [Climate Action Plan 2021](#).
(Suggested Table for response below [add rows as required]).

Action	Timeline	Stakeholders	Progress to action	Comment/justification

- 25 Demonstrate where adaptation actions within the adaptation strategies have resulted in progress on mitigation.
(Suggested word count: 200)
- 26 Describe any other positive impacts/co-benefits generated through adoption of the adaptation strategies that were not covered above. Describe any unanticipated challenges (e.g. conflicting priorities) or negative effects.
(Suggested word count: 200)

A.4 Questionnaire - Sectoral adaptation plans

Risk, prioritisation and adaptive capacity

27 What activities were carried out in the last year to monitor and evaluate the implementation progress of your Sectoral Adaptation plan and/or its outputs and outcomes?

(Suggested word count: 350)

28 Please provide an update on the progress of all applicable Sectoral Adaptation Plan actions over the past year (i.e. each of the actions set out against each of your objectives). Please include completed and on-going multi-year actions (if applicable).

(Suggested Table for response below [add additional rows as required]).

Action	Timeline	Stakeholders	Progress to action	Comment/ justification

29 How were risks which were identified in the plan, the 2021 scorecard response provided by your sector, and comments in the [2021 Annual Review Adaptation Scorecard](#), addressed in the last year?

(Suggested word count: 200)

30 Identify and explain the main challenges and enablers supporting delivery of your plan which were encountered over the past year when implementing actions in the adaptation plan.

(Suggested word count: 350)

31 What actions implemented in collaboration with or solely by other organisations have been implemented in the past year that have resulted in building adaptive capacity and preparedness to your sector?

(Suggested word count: 200)

Resourcing and mainstreaming

32 What data and indicators (e.g. KPI's, climate model projections) are currently used to influence your actions and decisions when implementing adaptation measures? What data and knowledge gaps are currently present and therefore preventing the achievement of adaptation actions set out in the plan? How have these data gaps been addressed?

(Suggested word count: 350)

33 What training (informal and formal) is provided to staff within your sector to increase skills and capacity within climate adaptation? Additionally, please identify any training (informal or formal) you are aware of within your sector.

(Suggested word count: 200)

34 Demonstrate where the plan resulted in adaptation being mainstreamed or integrated into rules, policies, or regulations within your sector. What factors do you believe specifically contributed to this integration?

(Suggested word count: 350)

Governance, coordination, and cross-cutting issues

35 Provide an update on any adaptation actions identified for your sector in the [Climate Action Plan 2021](#).

(Suggested Table for response below [add rows as required]).

Action	Timeline	Stakeholders	Progress to action	Comment/justification

36 Have any challenges to implementing adaptation (including building adaptive capacity) at different scales (local, regional, national) been identified? Have any challenges to implementing adaptation across sectors been identified? And what actions, if any, have been taken to address these challenges?

(Suggested word count: 350)

37 Demonstrate where adaptation actions have resulted in progress on mitigation.

(Suggested word count: 200)

38 Describe any other positive impacts or co-benefits generated by your adaptation plan and its implementation that were not covered above. Describe any unanticipated challenges (e.g. conflicting priorities) or negative effects generated by your plan and its implementation.

(Suggested word count: 200)

B Adaptation Progress Meeting Minutes

B.1 Transport Infrastructure

Transport Sector Adaptation Scorecard Response Discussion

This year the focus was on maritime and aviation within this response. Lots of work with local government has been conducted.

The primary discussion involved the work conducted surrounding the road network:

Examples of work progressed include the rewriting of guidance and colour coding schemes (red, amber, green [RAG] rating) to record drainage and any flooding issues to allow for targeted investment. This allows the local authority to then apply for the appropriate funding. Ongoing with the RMO (road management office).

The department is also funding studies and developing guidance on the resilience of local networks. This aims to give local authorities the tools, knowledge and ability to go assess areas which may be vulnerable or are essential (known as 'lifeline' roads) e.g., hospital access, home access, which have to be protected. This information will be available to local authorities so they can then apply for funding, again based on the RAG rating.

Carbon management and how to save carbon moving forward is also ongoing especially in road construction projects. Circular economy is also being considered. Medium- and long-term impacts and possibility are being considered.

The asset management database (Map Road) is key to ensuring the protection of lifeline roads. Incorporation of future predications and risks. Trying to get to the proactive stage, currently at the reactive stage e.g., currently responding to some areas of road collapse after extreme events.

Liaison with multiple bodies currently. Department of housing has done an assessment of how infrastructure will be affected by the various climate future scenarios.

How is funding allocated? Resilience funding application is the current process. A cost benefit (social, environmental, economic) assessment matrix is considered, also considers how 'essential' the road is, how long a detour would be etc. Major change by small investment with a high return is the current aim and focus. Over time, cost of investment is planning to increase to larger projects. The cost ratio is likely to change overtime.

Matrix to determine where to funding should go is currently utilised. Need to cut off what is a 'lifeline' road and what is most at risk. Major challenge is some information is confidential, especially from Irish Water. Multiple research projects have also highlighted this.

Discussion of progress within the rail sub-sector:

Coastal and fluvial flooding has been looked at which considers the vulnerability and risk. The assessment has then been upgraded for individual road schemes. Detailed analysis is then the final output. Other climate parameters have not been addressed. This includes light rail and road assets for other climate vulnerability e.g., temperature. Scoping is currently ongoing, standard, and technical guidance is currently undergoing. More detailed analysis will be coming later in the year.

Key tools used to help track projects resources and impacts include the road emissions tool and updated carbon tool. Mitigation is linked to adaptation and therefore this has becoming increasingly included and focussed upon. The Earthworks tool is also used to allow for maximum use of earthwork material.

The adaptation strategy must be complete in December, working group is now focussing on this. Other working group is also focussing on circular economy etc. Some work also with NBS. Another working group to then revisit all of this. NBS is now currently standard.

EPA projections are the one being used. Getting predictions for specific parameters seems to be a challenge e.g., parameter-based rainfall change. 20% is then added to current projections.

Some guidance on projections so all sectors are using the same guidance would be of substantial benefit.

Sensitivity analysis, what areas are prone to extreme events. Different projections can allow for over inflation of the importance of certain sectors, everyone using the same projections would help this. Gaps are also likely to arise. Further bi-lateral work is required. TRANSLATE project is likely/aiming to tackle this.

General discussion:

Guidance and tools are currently provided to the various sectors and organisations which may not have their own tools e.g., airports.

Strong asset maintenance within the rail sub-sector. Rainfall and storm events have been covered; heat is also being studied. Rail is especially vulnerable to this e.g., the critical rail temperature, then speed restriction. Again, this is quite a reactive approach. Some trial of painting railways white, this is slightly more of a proactive approach.

Railway undertaking is dealt with separately e.g., comfort of passengers in hot conditions.

Bi-lateral collaboration work is lacking within this sector.

Resilience is being built into some assets as future proofing.

Increasing in human resourcing to work on future projections. Trying to move from reactive to proactive. Trying to develop the bilateral work that is occurring. Getting better site of airports and ports and better understanding of risks and risk assessments is the main progress from last year. Various workshops etc have been conducted to try and bring this information in.

B.2 Biodiversity

Biodiversity Sector Adaptation Scorecard Discussion

A National Biodiversity Conference is scheduled for week commencing 6 June 2022 as part of ongoing consultations relating to the preparation of the 4th National Biodiversity Action Plan. The sector was therefore not in a position to respond initially to the scorecard due to difficulties with resourcing.

General progress discussion:

Responsibility for the restoration of biodiversity cross cuts many Government Departments.

Only 10% of funding for Biodiversity comes through the National Parks and Wildlife Service, the majority of funding comes through the Department of Agriculture, Food and Marine. Agriculture also has a key role in the work involving restoring biodiversity.

General governance and oversight of the adaptation plan is quite challenging. Strong action from others sector (especially the Department of Agriculture, Food and the Marine (DAFM)) is required.

The main agenda is restoration and to restore ecosystems to build adaptation to climate change. The next biodiversity action plan is currently being drafted which will contain restoration actions.

A raised bog restoration programme is currently being implemented. Post-production peatlands are also being restored. The National Parks and Wildlife Service act as the regulator for this work and work closely with Bord na Móna. 32,000 hectares of peatland are being restored as part of this scheme.

EU LIFE programmes and European Innovation Partnerships are currently on going. Working with landowners and piloting restoration in more complex areas including blanket bogs which are typically difficult to restore due to relief and other factors. Co-ordination with multiple stakeholders is required including landowners. A scorecard is being utilised to assess for the allocation of additional payments.

Removing plantations on peatland is being utilised to restore peatland to build resilience. Periods of extreme rainfall (which may be caused by climate change) is likely to lead to landslides if these landscapes are not made to be more resilient.

How to effectively mobilise finance is a key consideration. Vast finance is needed which will have to be private or blended and then be passed on to the landowner. Peatland restoration is finance intensive and a key priority is trying to get the funding to the landowners.

Monitoring work is ongoing, to measure the effectiveness of these measures and is currently being utilised as well as greenhouse gas flux monitoring.

Other areas are slightly outside remit of the biodiversity sector. A land use review is currently on going and underpinned by a land use map. The development of this updated map should help to identify risks and opportunities. Hopefully, the review will identify policy needs and allow for an increase in capacity accordingly, however it is still uncertain at this time how this will work and under which department's remit it will sit under as it is so crosscutting.

Coming into the next phase of the adaptation planning the focus will be calling for Nature Based Solutions (NBS) across plans with appropriate Biodiversity safeguards to ensure there is not maladaptation.

The National Parks and Wildlife Service have less of a connection with what is occurring at a local level. A mechanism to pull information together to provide an understanding of local biodiversity actions would be beneficial.

There are plans for river restoration and the expansion of marine protected areas to be included in the next biodiversity action plan.

In terms of planning for future climate change, changes in the distributions of selected species and habitats is undertaken, however it is not always possible to directly link changes to climate change. Uncertain how this will be built into plans in the future.

Changing patterns in freshwater fish stocks is being looked at by Inland Fisheries Ireland.

In terms of habitats, saltmarshes and the impact of coastal squeeze is a particular focus. The coastal zone management group will be considering this.

Governance is a main challenge, improved governance in the next plan is attempting to be a focus to better monitor progress.

Actions relating to natural capital accounting will led by the Central Statistics Office.

There is currently a Biodiversity Working Group which has representation from DAFM. Agriculture policy is mainly driven by the Common Agriculture Policy (CAP) and DAFM however. The EU Restoration law (which is estimated to come into effect later this year) will require more collaborative work in restoration and cross governance, to improve ownership of areas to be restored. Also need to bring in private finance.

Multiple disciplines involved in restoration projects meaning restoration is resource hungry. How will this be scaled up needs to be a focus. Private investors are interested but needs scaling up. The hope is the EU Restoration Law will help focus minds. Other sectors are aware of this law, especially agriculture.

As part of targets within the EU Biodiversity Strategy the Protected area footprint will increase and there is an ambition for 10% of carbon rich ecosystems to fall under strict protection.

Need to realise the vision of the EU Biodiversity Strategy so this can be built into the new biodiversity action plan.

A Strategic Action Plan which aims to deliver an NPWS that is more resilient, better resourced, and better equipped to play its part in Ireland's response to the biodiversity emergency, on the national and international stage has been published. The Plan will equip the NPWS with the organisational capability and supporting structures to enable it to deliver its mandate in protecting our natural heritage. The Plan sets out an ambitious timeline for a full organisational restructuring of the NPWS, and a substantial €55m additional investment in the organisation across three budgetary cycles, together with the early recruitment of 60 key staff for critically important roles.

It is recognised restored habitats also have climate change mitigation importance as well as adaptation.

Landowners have to be considered, finance should be put back into the pockets of the landowners to try and evolve a more sustainable way of farming and living off the land.

The EPA co-ordinates research relating to the impacts of climate change on biodiversity.

C Adaptation Scorecard Assessments

C.1 Agriculture, Forestry and Seafood



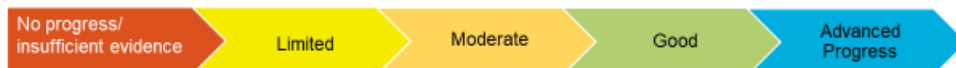
Adaptation Progress in Agriculture, Forest and Seafood: Preliminary Scorecard

June 2022

CLIMATE CHANGE ADVISORY COUNCIL

Summary of Final Assessments

Sector	Risk, prioritisation & adaptive capacity	Resourcing & mainstreaming	Governance, coordination & cross cutting issues	Overall Progress Assessment
Agriculture, Forest and Seafood	Yellow	Yellow	Yellow	Yellow
Biodiversity	Red	Red	Red	Red
Built and Archaeological Heritage	Green	Yellow	Yellow	Yellow
Transport infrastructure	Green	Yellow	Yellow	Yellow
Electricity and Gas Networks	Red	Red	Red	Red
Communications Networks	Yellow	Yellow	Yellow	Yellow
Flood Risk Management	Green	Green	Yellow	Green
Water Quality and Water Services Infrastructure	Yellow	Yellow	Yellow	Yellow
Health	Yellow	Yellow	Yellow	Yellow
Local Government	Green	Yellow	Green	Green
National Adaptation Framework	Yellow	Yellow	Yellow	Yellow



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Agriculture, Forest and Seafood

Risk, prioritisation and adaptive capacity	Moderate. There is some evidence that adaptive capacity is increasing, including the prioritisation of actions, for example through reviewing and updating the Impact and Vulnerability Assessment. There is evidence of specific updates on each of the three sectors; however, it is not clear how all the actions were prioritised and relate to increasing adaptive capacity.
Resourcing and mainstreaming	Limited. There is evidence of training and knowledge exchange opportunities across all sectors. The lack of a clear ambition on adaptation is a key challenge as resources are prioritised for mitigation. The loss of experienced staff has impacted progress on adaptation. There is limited evidence of mainstreaming or that systematic coordination is in place or good coherence with other policies.
Governance, coordination and cross cutting issues	Limited. There are several actions highlighted in the Climate Adaptation Plan where adaptation is mentioned as an add-on rather than fully integrated or central to the initiatives. There is limited evidence of consideration of the associated socio-economic and environmental (including biodiversity) risks and opportunities. There is significant investment in research, however there is limited evidence of how all these initiatives and research projects translate into credible policies that support mainstreaming adaptation. There is some evidence of adaptation actions in the forest and agriculture sectors, however these are limited. There is limited crossover/lessons learned within the three sectors identified where there may be interdependencies.
CCAC Progress Assessment	Limited. There seems to be a greater level of understanding and action on carbon mitigation than on adaptation and would benefit from greater focus on adaptation and integrating adaptation and mitigation policies, actions and resources. There are several high-level actions outlined in the Climate Action Plan, for example, Action 325 Develop and finalise appropriate interventions under Ireland's CAP Strategic Plan to support the maximum possible environmental, biodiversity and climate ambition in CAP 2023-2027. Full advantage should be taken of the opportunity to translate actions in the plan into credible policies that support mainstreaming adaptation.

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Sectors with the Advanced Progress Demonstrated:

- Clear ambition for adaptation with leadership buy-in.
- Implementation of credible policy decisions.
- All/majority of identified risks being addressed, including a process for assessing prioritisation.
- Ability to focus on more defined vulnerabilities and risks – the Committee is cognisant of the challenges facing wider, crosscutting sectors.
- Evidence adaptive capacity is increasing, and knowledge gaps are being addressed with an effective interface between research and end user needs.
- Evidence long-term decisions are accounting for the future climate with good evidence of mainstreaming.
- Evidence that systematic coordination is in place and good coherence with other policy.
- Good progress in monitoring and building knowledge of risks and adaptation.
- Evidence appropriate resourcing is being applied to achieve policy goals, including staff and financial resourcing.
- Consideration and coordination of the associated socio-economic and environmental (including biodiversity) risks and opportunities and actions to manage these.

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C.2 Biodiversity

Between scorecards for each sector, the majority of slides remain consistent with the example shown in Appendix C.1. Consequently, from here on out, only the scorecard slide will be inserted from the assessment.

Biodiversity

Risk, prioritisation and adaptive capacity	No progress/insufficient evidence
Resourcing and mainstreaming	No progress/insufficient evidence
Governance, coordination and cross cutting issues	No progress/insufficient evidence
CCAC Progress Assessment	No progress/insufficient evidence. Last year the Council found that the biodiversity sector had made limited progress, highlighting that a wide range of adaptation challenges face this key, deeply interdependent sector and that further coordinated action is essential. The absence of a completed consultation template this year means limited information is available and in light of this a score of 'No progress/insufficient evidence' has been assigned. This is particularly concerning given the need to integrate adaptation, mitigation and biodiversity actions to achieve the National Climate Objective.

C.3 Built and Archaeological Heritage

Built and Archaeological Heritage

Risk, prioritisation and adaptive capacity	Good. This sector demonstrates good evidence of monitoring and evaluation of Sectoral Action Plan actions. Progress in building adaptive capacity is evident through engagement with a range of stakeholders and the formation of the Advisory Group and Working Groups, although there is limited evidence to demonstrate the effectiveness of these groups. Knowledge gaps are being addressed through research projects to develop semi-quantitative risk assessment methodologies and standardise climate projections, but development of an effective interface between research and user end needs would help maximise research value. Whilst there is evidence that risks are being addressed, implementing a process for prioritisation of risks would enable improved action.
Resourcing and mainstreaming	Moderate. Staffing capacity constraints remain the key challenge for this sector. However, progress towards systematic coordination and appropriate resourcing is evidenced through the appointment of external support to assist in coordinating, facilitating and tracking progress of adaptation plan actions. Increased financial resourcing for building resilience of architectural and archaeological heritage is demonstrated through the expansion of the heritage budget and heritage grant schemes. Good evidence of mainstreaming is shown through the linking of grant funding and building climate resilience in heritage assets, information sharing and social media campaigns.
Governance, coordination and cross cutting issues	Moderate. Evidence is provided to show how this sector is managing the majority (7 of 9) of identified risks from the Sectoral Plan. Working groups have been formed to coordinate and deliver outputs and maximise engagement capacity and an Advisory Group has been assembled to oversee development, but there is limited evidence to demonstrate the effectiveness of these groups. Governance will be further strengthened by the planned appointment of an external coordinator to manage progress. However, increased efforts to develop cross sectoral links could enable a more integrated adaptation response. Although there are now structures in place to promote coherence with heritage plans and policies, there is limited evidence on how adaptation considerations have permeated decision-making or informed credible policy decisions.
CCAC Progress Assessment	Moderate. Key constraints, including staffing capacity and engagement are identified, and actions are in place to overcome challenges. There is clear ambition for adaptation, although this sector would benefit from further development of cross sectoral links and deeper consideration of associated socio-economic and environmental (including biodiversity) risks and opportunities and actions to manage these.

C.4 Transport Infrastructure

Transport Infrastructure

Risk, prioritisation and adaptive capacity	Good. There is good evidence of monitoring progress and adaptive capacity. The approach to adaptation is generally noted as dynamic and flexible which has allowed knowledge gaps to be identified early. It is acknowledged that there are inconsistencies in climate data used and a desire to address this through current research projects. Further detail regarding policy prioritisation and implementation. It is acknowledged that interventions have generally been more reactive and that some sub sectors of the transport sector are lagging in progress on adaptation.
Resourcing and mainstreaming	Moderate. Appropriate resourcing and systematic coordination is demonstrated through the re-establishment of the working group and adaptation team. Guidance is being developed to inform the design of future infrastructure which will help to mainstream adaptation; however, the issue of consistent climate data will need to be addressed. The provision of grants helps to support sufficient resourcing. Leadership buy-in is also apparent through engagement with the management board. However, the implementation of credible policy decisions could be used further to mainstream adaptation across all sub sectors of the transport sector.
Governance, coordination and cross cutting issues	Moderate. Cross cutting themes and co-ordination are widely considered and utilised. However, resourcing issues in some areas are slowing progress. Some adaptation actions have led to progress in climate change mitigation. The issue of confidential assets belonging to other sectors has limited the ability to accurately prioritise interventions and should be addressed in the future. The approach of developing tools to be used by stakeholders with a range of expertise shows the implementation of appropriate and credible resources. Work on 'lifeline' roads and the 'Map Road system' are good examples of cross sector adaptation planning.
CCAC Progress Assessment	Moderate. The sector has built on the engagement with other critical infrastructure sectors outlined last year but momentum needs to be maintained to ensure adaptive capacity is continuing to increase as well as enabling strengthened and continued coordination to ensure adaptation is mainstreamed across all sub-sectors. It is recognised that the availability and use of consistent climate data across sectors and overcoming the issue of confidential assets would aid with addressing future climate risks, including effective coordination of adaptation policies and their implementation.

C.5 Electricity and Gas Network

Electricity and Gas

Risk, prioritisation and adaptive capacity	No progress/insufficient evidence
Resourcing and mainstreaming	No progress/insufficient evidence
Governance, coordination and cross cutting issues	No progress/insufficient evidence
CCAC Progress Assessment	No progress/insufficient evidence. Last year the Council found that this sector had made limited progress. This is a concern particularly given the potential climate vulnerability arising from the electrification of the power system, personal transport, heat etc. as part of decarbonisation (in addition to cascading effects for other sectors). Though actions may be underway to enhance the resilience of national distribution infrastructure, the Council has not received sufficient information to show how these are coherent with the priorities of the statutory sectoral plan in place under the NAF.

C.6 Communication Networks

Communication Networks

Risk, prioritisation and adaptive capacity	Moderate. There is evidence of a clear ambition for adaptation with leadership buy-in however this may be framed in this sector through the terms "network security and resilience." There is evidence that adaptive capacity is increasing, and knowledge gaps are being addressed with an effective interface between research and end user needs as ComReg has initiated a project on 'climate change impact and adaptation of telecom networks in Ireland' (NOU16) to identify vulnerabilities and risks and identify measures required to adapt to climate change impacts on vulnerable infrastructure. There is evidence of progress in monitoring, such as the e-licensing incident reporting portal and prioritisation of actions that 'could impact resilience'. There is awareness that the postal sector must support and advance climate action, but limited evidence of action.
Resourcing and mainstreaming	Limited. Resourcing issues and the pandemic have been highlighted as barriers to progress. There is limited evidence that appropriate resourcing is being applied to achieve policy goals, including staff and financial resourcing. There has been training with an emphasis on sustainability in general, but this should be expanded to include specific training on how to resource and mainstream climate change adaptation.
Governance, coordination and cross cutting issues	Limited. There is some evidence of enhanced cooperation and communication between departments, agencies, state bodies and other stakeholders to ensure that communications infrastructure and services are resilient to the impacts of climate change through sustainability and adaptation meetings and webinars and research projects. There is limited evidence of the consideration of the associated socio-economic and environmental (including biodiversity) risks and opportunities.
CCAC Progress Assessment	Limited. This sector recognises in its strategy and goals the importance of adaptation (framed as network security and resilience), however there is limited evidence that this has yet to be translated into credible policy decisions or that long-term decisions are accounting for the future climate. This sector is still at the stage of identifying risks and vulnerabilities and building capacity.

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C.7 Flood Risk Management

Flood Risk Management

Risk, prioritisation and adaptive capacity	Good. This sector demonstrates good progress in monitoring and building knowledge of risks and addressing risks and there is evidence of sharing international best practice on adaptation. Adaptive capacity is increasing, and knowledge gaps are being addressed through more action on research projects to improve the spatial resolution of climate projections for Ireland, the inclusion of nature-based solutions and sustainable drainage in catchment management, training for Local Authorities and under the Local Authority Climate Action Training Programme and the development of a National Fluvial Forecast System for Ireland.
Resourcing and mainstreaming	Good. The restructure of the Flood Risk Services in one division should help to mainstream adaptation and ensure that the potential impacts of climate change are prioritised. There is evidence of embedding climate change adaptation within work and improved resourcing with additional staff resources and training of Local Authority staff. There is evidence that the consistent 'scenario-based approach to climate change' has been adopted to inform decision making and some evidence of how this helps to mainstream adaptation. A review of existing policies to find opportunities to integrate adaptation action will also aid with mainstreaming adaptation.
Governance, coordination and cross cutting issues	Moderate. The sector has demonstrated evidence that systematic coordination is in place through the establishment of the Climate Adaptation and Strategic Assessment team and monthly progress meetings and the reporting that takes place. While acknowledging the conflicting priorities between housing growth and flood risk which needs to be collaboratively addressed with other sectors, there is still the need for a step change in how this sector interacts with local authorities in more proactive rather than reactive terms with regards to future spatial planning and development. A review of the coherence of policies to address long-term decision-making and cross sector integration of adaptation may provide some opportunities.
CCAC Progress Assessment	Good. This sector would benefit from a review of policies that influence long term decisions to account for future climate damages and to consider wider socioeconomic and environmental risks and opportunities and to mainstream these through changes in economic appraisals and other policy amendments.

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C.8 Water Quality and Water Services Infrastructure

Water Quality and Water Services Infrastructure

Risk, prioritisation and adaptive capacity	Moderate. A variety of resource plans and programmes are described but there is limited evidence on how these enabling actions translates into increase adaptive capacity. Sufficient knowledge of climate change impacts identified from baseline assessments is outlined but detail on the indicators used is not provided. Research is being used to close knowledge gaps. Systematic coordination is demonstrated through use of the SAP to develop plans for other areas of the sector; however, there is a lack of detail on monitoring processes. Consideration and coordination of the associated socio-economic and environmental (including biodiversity) risks and opportunities and actions to manage these is demonstrated through the development of plans for ecosystem and habitat restoration.
Resourcing and mainstreaming	Limited. Adaptation seems to have been allocated adequate resourcing. However, the focus appears to be enabling actions and there is a lack of specific links to projects or tangible change in adaptation. Awareness of the associated benefits of investing in nature is increasing. Training is being utilised to build upon knowledge within the sector and mainstream adaptation. A greater focus on mainstreaming however would provide some benefit due to the potential impacts of climate change upon this sector. Further comment on human resourcing is needed to understand how adaptive capacity is being built and aiding implementation of climate adaptation.
Governance, coordination and cross cutting issues	Moderate. Coordination and consultation with other sectors, departments and systems are noted on risks and cross-cutting issues. Monitoring is highlighted as a key challenge to implementing successful adaptation, a rough plan to address this is identified with more detail to be produced in the future. This sector would benefit from the development of this given the magnitude of climate change impacts this sector will face. Awareness of the multiple benefits adaptation measures can bring is evidenced to be continually developing.
CCAC Progress Assessment	Moderate. Good evidence of awareness of knowledge gaps and associated socio-economic and environmental risks and opportunities is provided. Further development or evidence of leadership buy-in would benefit the sector and is paramount due to the likely intensive impacts of climate change upon this sector and those highly dependent on water resources. Effectively outlining the human and financial resources would benefit tracking how this translates into built capacity. Momentum on building adaptive capacity within the sectors of water quality and water services should be increased in order to effectively build resilience to such a vulnerable sector.

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C.9 Health

Health

Risk, prioritisation and adaptive capacity	Limited. The COVID-19 pandemic has caused substantial delays to the implementation of the Health Sectoral Adaptation Plan which therefore began in earnest in 2021. Progress on implementation actions is evident but limited and key priorities for the next year are identified. Progress in building adaptive capacity is evident through the establishment of the Climate Change Oversight Group and upcoming similar establishment of a Climate Change Unit in the HSE which also demonstrates some evidence of systemic coordination. Due to the lack of scorecard response in 2021, no evidence of addressing risks highlighted from that response was provided. However, this should perhaps be greater reasoning to increase adaptation efforts. Greater evidence of progress of increasing adaptive capacity in the past is provided.
Resourcing and mainstreaming	Limited. Delays made it difficult to provide information on any knowledge gaps identified or performance indicators used and therefore provides no evidence of addressing knowledge gaps with an interface between research and end user needs. Progress with informal training and awareness raising was more evident and the establishment of the Climate Change Unit also demonstrates appropriate resourcing. The need for formal training has not been identified currently and so perhaps offers a potential area for development and progress in the future and develop resourcing. Some progress is demonstrated through the mainstreaming of climate considerations across the Oversight Group.
Governance, coordination and cross cutting issues	Limited. The implementation of the Energy Efficient Design (EED) approach indicates good progress in the ability to focus on more defined vulnerabilities and risks. Consideration of the associated socio-economic and environmental risks and opportunities is particularly noted within this section. Awareness of co-benefits or unexpected challenges is more limited due to the delays in implementation. Evidence of systemic coordination and good coherence with other policy is demonstrated.
CCAC Progress Assessment	Limited. The unprecedented challenge which the COVID-19 pandemic has brought to the health sector since the beginning of 2020 has ultimately impacted climate adaptation and resulted in limited progress. Climate change adaptation and action will require great progress within the health sector due to the interconnected nature of climate and health and implications for wellbeing. Ultimately, climate action is also health action. Developing this would also lead to improvements in the consideration of the associated socio-economic and environmental risks and opportunities.

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C.10 Local Government

Local Government

Risk, prioritisation and adaptive capacity	Good. There is strong evidence for the monitoring of progress. Capacity building appears to be well supported and increasing. Leadership buy-in is demonstrated through the involvement of senior management in the Climate Actions Teams and steering groups. Risk is identified in numerous ways which is also used to close knowledge gaps. Changes in risk is also noted showing flexibility in approach to climate adaptation as well as addressing risks. Consideration of future climate and responding to varying levels of vulnerability is evident. Progress is continuing with the implementation of actions from Climate Change Adaptation Strategies and Climate Action Plans as well as with new actions identified.
Resourcing and mainstreaming	Moderate. The key challenge remains the resourcing of dedicated staff to ensure consistency, coordination and implementation. Mainstreaming is facilitated by CARO. Awareness of potential weaknesses and possible ways forward is shown. The spatial distribution of vulnerability is considered to allow for greater future cross sector collaboration. Coordination is currently implemented in areas which require development, however a national approach under the NAF would facilitate greater cross sector integration. A greater focus on the associated socio-economic and environmental (including biodiversity) risks and opportunities could be progressed next year.
Governance, coordination and cross cutting issues	Good. Coordination across organisations is evident with risk and vulnerability assessments requiring input from other sectoral plans and datasets owned by the relevant departments / agencies and participation in cross-sectoral working groups (WGs) developing actions and tools to build adaptation capacity and preparedness. Mitigation is considered alongside adaptation within some policy indicating the implementation of credible policy decisions. Progress on key actions are tracked and provided which generally appears good. The desire for closer working with national agencies on risk assessments, adaptation policies and tools for use by local authorities was highlighted.
CCAC Progress Assessment	Good. The integration of adaptation with mitigation demonstrates good progress. The climate action training programme appears to be successful. This sector would benefit from further consideration and coordination of the associated socio-economic and environmental (including biodiversity) risks and opportunities and actions to manage these. The key challenge remains the resourcing of dedicated staff to ensure consistency, coordination and implementation. The realised desire noted for closer working with national agencies on risks assessments, adaptation policies and tools for use by local authorities is essential to enabling progress on adaptation by the local authorities and national agencies.

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C.11 National Adaptation Framework

National Adaptation Framework

Risk, prioritisation and adaptive capacity	Moderate. Increasing national adaptive capacity is evidenced through progress towards 12 key actions. Knowledge gaps are being addressed through research projects and upgrades to the Climate Ireland platform show efforts to improve the interface between research and end user needs. There is some evidence that research outputs are available to feed into policy, however improved translation and dissemination is required to support the capacity of long-term decisions to account for the future climate. Whilst the need for greater cross sectoral research input is needed, there is limited evidence of prioritisation of research based on users' needs and capacities across different sectors. There still remains a lack of capacity in specific areas such as risk assessment. Although research into developing a national indicator set has begun, piloting, refining and implementing these indicators would better enable effective monitoring of progress.
Resourcing and mainstreaming	Moderate. Improved resourcing at a national level is evidenced through funding allocations and training programmes. Four Climate Action Regional Offices (CAROs) have been established and have undertaken a number of engagement and communication actions in 2021, although resource and capacity constraints are acknowledged. It is recognised that there is still a need to further expand resourcing of adaptation within all areas and sectors. Some coherence with other policies and mainstreaming is evidenced, particularly through integration with existing planning and flood risk policies. This should be expanded to cover wider policy.
Governance, coordination and cross cutting issues	Moderate. Funding for the CAROs has assisted the coordination and the role of the local authorities in relation to climate action has expanded but resourcing continues to be an issue. Existing governance mechanisms are strengthened through the Climate Action and Low Carbon (Amendment) Act 2021, which also includes provisions to facilitate better cross sectoral cooperation on adaptation. More work can be done on challenges facing wider, cross-cutting sectors through ensuring inter-dependencies can be addressed across sectors on a range of responsibilities. Whilst guidance and training for local authorities is mentioned, there is limited evidence to show how national agencies and local authorities are working closely to enable effective adaptation.
CCAC Progress Assessment	Moderate. Evidence of national adaptive capacity developing. Increasing provision of financial and staff resourcing for adaptation is evident. This should be expanded to all areas and sectors. There is more work to be done in standardising and consolidating monitoring and reporting, and analysis of future climate impacts on the economy, society and environment. More work is also needed in standardising risk and adaptation assessments to facilitate prioritisation for adaptation, particularly where there are interdependencies.

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