



Northern Ireland Climate Change Adaptation Programme 2019 - 2024 **Mid Programme Progress Review 2022**

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Introduction






The UK Climate Change Act 2008 requires Northern Ireland Government Departments to develop an Adaptation Programme that responds to the risks posed by Climate Change as identified in the most recent UK Climate Change Risk Assessment (UKCCRA).

The second Northern Ireland Climate Change Adaptation Programme 2019 - 2024 (NICCAP2) was published in September 2019 and is a

cross-departmental response to the climate change risks identified in the second UKCCRA which was published in 2017 (CCRA2).

The Northern Ireland Climate Change Adaptation Programme was developed with the following aim *‘A resilient Northern Ireland which will take timely and well-informed decisions to address the socio-economic and environmental impacts of climate change’*. To achieve the aim, five key priority areas and seven outcome objectives for NICCAP2 were also agreed and are laid out in Figure 1.

Figure 1: NICCAP2 Key Priority Areas and Outcome Objectives

NICCAP2 Key Priority Areas	NICCAP2 Outcome Objectives and Visions
<p>NC Natural Capital, including Terrestrial Coastal/Marine/Freshwater ecosystems, soils and biodiversity.</p> 	<ul style="list-style-type: none"> - NC1: We will have species, habitats and water bodies that are resilient to the impacts of climate change. - NC2: We have coastal communities, habitats, landforms and infrastructure that are resilient to impacts of climate change. - NC3: We have soils and woodland that are resilient to the impacts of climate change.
<p>IF Infrastructure Services.</p> 	<ul style="list-style-type: none"> - IF1: We have Transport & Network Services that are resilient to the impacts of Flooding & extreme weather.
<p>P People & Built Environment.</p> 	<ul style="list-style-type: none"> - P1: We have people, homes, buildings and communities that are resilient to the impacts of Flooding & extreme of weather.
<p>B Disruption to Businesses & Supply Chains.</p> 	<ul style="list-style-type: none"> - B1: We have businesses that can adapt to impacts of Climate Change & extreme weather.
<p>I Food Security/Global Food Production.</p> 	<ul style="list-style-type: none"> - I1: We have a food system that is resilient to impacts of climate change.

In developing the NICCAP2, relevant sectoral experts from each Government Department identified and provided input on high level strategies, policies and actions to deliver on the CCRA2 recommendations. When implemented over the lifetime of the Programme, these strategies, policies and actions will contribute towards the delivery of the NICCAP2 outcome objectives. From the input received, delivery plans were developed for each outcome objective and contained the following details:

- Title of the key priority area;
- Assigned identification letter and number of the outcome objective;
- The relevant vision for the outcome objective;
- The relevant indicators;
- The list of actions with implementation timelines and responsible named department; and
- NI Evidence Report climate change risks/opportunities to which the relevant action contributes to addressing.

i) Reporting on Progress

The NICCAP2 was expected to evolve over the Programme's 5 year period to take account of the level of uncertainty around the impacts of climate change. Therefore, to enable monitoring and in recognition of this, a mid-programme review and end of programme evaluation process was built into NICCAP2. The mid programme review should provide an assessment of:

- The progress of actions implemented/ to be implemented;
- The effectiveness of adaptation indicators; and
- Progress on delivering the outcome objectives.

ii) Approach to the mid-programme review of NICCAP2

On 6th June, the Climate Change Act (Northern Ireland) 2022 received Royal Assent. Section 48 of the Act introduced a requirement for the UK Climate Change Committee (CCC), as Statutory advisors to Government on matters relating to climate change, to report on their assessment of the implementation of the Adaptation Programme and to make recommendations for future Programmes three years after each Programme is laid in the Assembly. This independent assessment by the CCC is consistent with the approach taken in other Devolved regions such as Scotland.

DAERA, with the agreement of the Cross Department Adaptation Working Group, has commissioned the CCC to undertake an independent expert assessment of the current second adaptation Programme (NICCAP2) ahead of the new legal requirement taking effect for future Adaptation Programmes. It is hoped that this approach will improve transparency and help to better inform the development of the next Adaptation Programme (NICCAP3) which is due to be laid in the Assembly by September 2024.

It is anticipated that the independent review of the NICCAP2, by the CCC, will be published in Spring 2023 with subsequent advice to be provided by the CCC to the Department on early drafts of the NICCAP3 (once available).

Whilst it is not a legal requirement for the CCC to undertake an assessment of, and report on, the NICCAP2, Northern Ireland Executive Departments are keen to obtain the expert assessment and advice of the CCC to allow this advice to be factored into the NICCAP3 development.

In the meantime, pending the publication of the commissioned CCC review, DAERA are publishing this update, on behalf of all Departments, to provide an overview of progress made to date against actions contained within the Programme.

It is intended that the CCC review will include:

- An assessment of the delivery of the NICCAP2 outcome objectives and identification of key gaps.
- A formal scoring methodology, building on the frameworks from other CCC progress reporting to formalise the Committee's assessment of progress.
- A full review of up-to-date indicators of climate risk management across Northern Ireland.
- Recommendations for NICCAP3.

iii) Second Northern Ireland Climate Change Adaptation Programme (NICCAP2) overview

In response to the second Climate Change Risk Assessment (CCRA2), the NICCAP2 was developed and contained sixty-four Government Delivery Plan Actions of which fourteen, at this mid-point review stage, have now been completed. A further nine new implementation actions have also been added to the Programme as part of this mid-programme progress review. In the Civil Society and Local Government Chapter of NICCAP2, there were thirty-three Delivery Plan Actions and a further twenty-seven projects have been added to the Programme as part of this mid-programme progress review.

The following chapters show the progress made on delivery plans up to October 2022 and include the new actions which have been added to the NICCAP2 implementation plan.



CHAPTER 1: Natural Capital, including Terrestrial Coastal/Marine/Freshwater ecosystems, soils and biodiversity

Climate Change continues to impact across the natural environment in Northern Ireland with risks to soils, farming, freshwater resources, natural carbon stores, marine ecosystems, wildlife and habitats. The UKCCRA 2017 Summary Report for Northern Ireland identified that more action is needed to build resilience to these risks. It also identified that more evidence is needed to fully understand other climate change risks that are likely to be important for Northern Ireland's natural environment, including potential changes in agricultural and forestry productivity and land suitability and impacts on freshwater and marine ecosystems.

Northern Ireland's second Climate Change Adaptation Programme (NICCAP2) detailed the actions being implemented, which responded to the risks identified in the second CCRA and, which aim to achieve the following Outcome Objectives and Visions:

- NC1: We will have species, habitats and water bodies that are resilient to the impacts of climate change.
- NC2: We have coastal communities, habitats, landforms and infrastructure that are resilient to impacts of climate change.
- NC3: We have soils and woodland that are resilient to the impacts of climate change.

The following tables detail the actions within the Natural Capital Key Priority Area and the progress made to date on these actions at this mid-programme review stage. Seven new additional actions have also been added to the Programme and are included in the tables below.



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Outcome Objective NC1: We have species, habitats and water bodies that are resilient to the impacts of climate change.					
NE1 NE2	Produce conservation management plans for 95% of Special Areas of Conservation in: 1. Terrestrial European Protected Sites. 2. Marine European Protected sites.	DAERA	By end of 2020		A further 15 draft Conservation Management Plans (CMPs) for our Special Areas of Conservation were completed by 31 March 2022. The CMPs set out the necessary conservation measures for the sites to meet national and international obligations to protect, manage and restore designated sites. These will be key to halting and reversing biodiversity loss, building climate resilience and storing carbon.
NE1	DAERA as a Statutory Consultee will advise Local Planning Authorities and DfI about Habitat Regulations Assessment and Strategic Environmental Assessment requirements for new Local Development Plans.	DAERA	By end of 2020		All Deadlines met and progressing as planned. Preparation of new Local Development Plans is an ongoing process. DAERA have provided responses to councils on 7 draft Plan Strategies (dPS). DAERA continue to engage with these councils as they move towards the next stages of Independent Examination (IE) and then Local Policy Plans. Only Belfast City Council has been through IE and received the Planning Appeals Committee report and direction from the Department for Infrastructure. Four other councils have been through IE or are in the process. We continue to engage with the councils who have yet to publish their dPS (4 councils) and are responding to topic review consultations.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1	Produce and implement management plans for Marine Protected Areas.	DAERA	By end of 2021		Two cross-border regional management plans for the County Down/County Louth and North Coast/North Channel areas and two site specific management plans for Murlough SAC and Carlingford SPA are in draft and are based on the OSPAR guidelines for the management of marine protected areas. These plans are due to be reviewed by the stakeholder steering groups and finalised by the end of the MarPAMM project in September 2022. A stakeholder steering group has been set up for Strangford Lough MPA with the aim of producing a site-specific management plan for the site. An action plan and list of objectives have been created by the group and the plan is due to be finalised in 2023. Rathlin MPA has an existing MPA management plan in place which undergoes regular review by the stakeholder steering group. Timeline revised to end of 2022.
NE1 NE2	Review Priority Species List and provide advice.	DAERA	Ongoing		A review of Tranche 1 of the Priority Species Lists has been completed, with input from external experts and the Council for Nature Conservation and the Countryside (CNCC), DAERA's statutory nature conservation advisors. Ministerial clearance to be sought prior to publication. Work on Tranche 2 is well-advanced. Going forward, Priority Species review is anticipated to be an ongoing activity due in part to climate-driven changes.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE2	Undertake legislative changes to Wildlife Order (Northern Ireland) 1985 in relation to a review of priority species.	DAERA	By end of 2019		This is dependent pending review of action listed directly above.
NE6	Deliver 136 measures in River Basin Management Plans by 2021 to contribute towards the target of up to 70% of water bodies (Rivers, lakes, transitional, coastal and groundwater) at 'good' status according to Water Framework Directive requirements.	DAERA	By end of 2021		<p>Although 96 % of the 136 measures were delivered with the remaining 4 % not being taken forward, the number of surface water bodies being at good ecological status is stagnating. This is due to pressures continuing to act upon the water environment and suggests incomplete implementation of measures. The main pressures are excess nutrients and are related to agricultural land use and sewage infrastructure. Hence, the objective to have 70% of waterbodies being at good status in 2021 has not been achieved.</p> <p>Urgent, substantial and holistic actions are required to achieve the objectives outlined in the draft 3rd cycle River Basin Management Plan (RBMP) and its Programme of Measures. The final 3rd cycle RBMP covers the 6-year period from 2021 to 2027 and is subject to Executive approval.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE7	Creation of riverine riparian native tree planting areas where river habitat enhancement schemes are carried out by Inland Fisheries.	DAERA	Future areas for planting will be identified in 2019/20. Business plans subject to resources being in place and the necessary landowner permissions.		Some tree planting was carried out in the Loughs Agency area. No opportunities were available in the DAERA area in 2020/21.
NE13	Deliver the Collaborative Oceanography and Monitoring for Protected Areas and Species (COMPASS INTERREG VA project).	AFBI/DAERA	The COMPASS project has been initiated and will be complete in March 2022.		Good progress is continuing to be made and all deliverables of the COMPASS project are on schedule for completion by Autumn 2022.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE9	Carry out fish stock assessment work to capture changes to marine vertebrates including commercial species and the economic consequences of such changes.	DAERA	Ongoing - Stock assessments completed on an annual basis.		Annual assessments of inshore fish stocks now take place as well as the quota species stocks assessed annually by ICES.
NE9	Continue to update the NI Plant Health Risk Register and implement contingency plans as necessary. Update will include any changes to the plant health risk (pests and pathogens) which may be contributed to by the impact of Climate Change.	DAERA	The NI Plant Health Risk Register updated monthly and published on the web.		Progress continues reviewing and updating the NI PH Risk Register. This is undertaken in partnership with AfBI who provide scientific input and evidence to update the pest /pathogen risks identified as impacting NI. The assessment of risk is based on updated Pest Risk Analysis (PRA). These provide data and evidence on the source, impact and significant of the pests/pathogens identified. The PRA also includes an assessment of the impact of climate change on the risk identified, indicating how climate change has contributed to the increased range of the pest/pathogen which has emerged as a risk to NI.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE6	Publish the Water Resource and Supply Resilience Plan.	NI Water Ltd/ Dfl	By March 2020		This action is complete. NI Water continues to implement the WRSRP and has started to work on the next WRSRP which is due to be published in 2023.
NE1	Complete 23 catchment studies as part of the Sustainable Catchment Area Management Planning Northern Ireland (SCaMP NI) project.	NI Water Ltd/ Dfl	By end of 2021		NI Water completed Catchment Management Studies in 2019 for the following priority drinking water catchment areas: Killylane, Dorisland, Clay Lake, Derg (Inc. Strule), Lough Braden, Caugh Hill, Carmoney, Seagahan, Altnahinch, Drumaroad (Inc. Silent Valley, Annalong & Lough Island Reavey), Fofanny, Dunore Point, Castor Bay, Moyola, Ballinrees, Loughmacrory, Lough Fea, Glenhordial, Carron Hill, Rathlin, Dungonnell, Killyhevlin and Belleek. These studies undertook a scoping and planning study of these catchments areas, using the approach advocated in the UK Water Industry Research (UKWIR) framework for quantifying the benefits of catchment management. This established the basis for the NI Water sustainable catchment management programme that provides business benefit to NIW by helping meet water quality, biodiversity and carbon objectives, supporting drinking water source protection as well as wider WFD obligations.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE7	Investigate the possibility of securing baseline stock level data for climate change susceptible lake freshwater fish species, accounting for other short term causes of variation.	DAERA	Continue with current annual assessment of stock and recruitment for pollan in 2019 on Lough Neagh.		2020 lake surveys for Pollan completed and 2021 Survey underway at time of reporting. Baseline data on Larval abundance and Pre-spawning stock available for 2020 and almost complete for 2021. Commercial fishery dealer returns will provide further supporting data to DAERA.
NE6	Review NI Water Ltd Abstraction licences on water bodies with potential seasonal vulnerability to water resource availability.	DAERA	Ongoing - Stock assessments completed on an annual basis.		Ongoing Delivery. Review programme linked with the Water Resource Resilience Plan. Review of 4 Licences to date. Establishment of a Tracking Working Group on Abstraction Licence Review to take account of the findings of the SAC Conservation Management Plans.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1	Engage with councils to assist them in bringing forward Local Development Plan policies and proposals that take account of climate change adaptation considerations in accordance with the provisions of the Strategic Planning Policy Statement and any other policies or advice in guidance issued by Dfl.	Dfl- Planning	By end of 2021		As of April 2022, Dfl has provided consultation responses in respect of 7 draft Plan Strategy documents. This is the first stage in the Local Development Plan programme. 4 of these draft Plan Strategies are currently going through the Independent Examination process and 4 Councils remain to publish draft Plan Strategy documents. In preparing Local Development Plans for their area, Councils are required to take account of the RDS and SPPS which include regional strategic policy on reducing our carbon footprint and mitigating and adapting to climate change. The Department's consultation responses have highlighted the need to take account of the climate objectives of the RDS and SPPS and the most recent responses have also highlighted the Minister's priorities in respect of tackling the climate emergency and securing a 'Green Recovery' from the pandemic. Following the outcome of an Independent Examination, the Department recently issued a formal direction to Belfast City Council requiring modifications be made to its draft Plan Strategy to make it sound. The modifications include a new strategic policy in relation to phasing and infrastructure. The Department is continuing to engage with the Belfast City Council to ensure compliance with the Departments direction.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE2	Implement the All-Ireland Pollinator Plan 2015 - 2020.	DAERA	Ongoing - In accordance with Local Council Development Plan timetables.		<p>AIPP 2015 - 2020 completed, progress published in Working Together for Biodiversity at: https://pollinators.ie/wp-content/uploads/2021/02/AIPP-Working-Together-for-Biodiversity-2015-2020-WEB.pdf</p> <p>AIPP 2021 - 2025 increased to 186 actions with 6 key objectives to make public, private and farm-land pollinator friendly, develop a Honeybee Strategy, and conserve rare bees with a strategic coordination element. https://pollinators.ie/wp-content/uploads/2021/03/FINAL-All-Ireland-Pollinator-Plan-2021-2025-WEB.pdf</p> <p>All Local Councils in NI have now signed up to support the Plan, along with key NGOs, businesses, land-owners.</p>
PB13	EU INTERREG SWIM Project. To develop a System for Bathing Water Quality Monitoring to predict poor bathing water quality events associated with rainfall. This is to inform bathers prior to swimming.	AFBI/DAERA	By end of 2020		Legacy project continuing through AFBI and Keep Northern Ireland Beautiful (KNIB). Live predictions on bathing water quality available on KNIB website.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Outcome Objective NC2: We have coastal communities, habitats, landforms and infrastructure that are resilient to the impacts of climate change.					
NE12	Provide a baseline study and gap analysis of coastal erosion risk management in NI.	DAERA/ DfI	By end of 2020		<p>A “Baseline Study and Gap Analysis of Coastal Erosion Risk Management in Northern Ireland” was prepared by Amey Consulting with HR Wallingford and was reported in January 2019. This report concluded that the data currently available is insufficient for effective management of our coast; more information is required to bring our understanding of coastal change to a sufficient level.</p> <p>Following publication of this report the Northern Ireland Coastal Forum was reconvened and a work programme was developed that would implement the recommendations of the baseline and gap analysis study. This work programme has now been agreed by Ministers and details therein form part of the next Action Plan.</p>
IN3	Carry out surveys along the coastline to assess the impact of coastal erosion on sea walls and verges adjacent to the carriageway.	DfI	By end of 2019		<p>Coastal routes are inspected as part of the DfI routine road network inspections, meeting the requirements of this action. Particular attention is given to sea walls and verges on roads along known higher risk stretches of coastline. DAERA and DfI are members of the Coastal Forum and work is ongoing to complete LIDAR surveys of the Northern Ireland coastline.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB6	Contribute to UK-wide project - 'Coastal Flood Boundary Conditions for the UK Mainland and Islands - 2016 Update' which will include the updating of coastal extreme boundary conditions for the NI coastline.	DfI	By end of 2019		<p>April 2022: This UK national project, 'Coastal Flood Boundary Conditions for the UK Mainland and Islands - 2016 Update', was completed by the release of key findings, reports and new Coastal Flood Boundary datasets on the 'GOV.UK' website in April 2019. DfI Water & Drainage Policy Division and DfI Rivers provided relevant Northern Ireland datasets, information and contributory funding to this UK national project. All the relevant information can be found on the GOV.UK website via the link: https://www.gov.uk/government/publications/coastal-flood-boundary-conditions-for-uk-mainland-and-islands-design-sea-levels.</p> <p>Relevant UK datasets are available at:- https://data.gov.uk/dataset/73834283-7dc4-488a-9583-a920072d9a9d/coastal-design-sea-levels-coastal-flood-boundary-extreme-sea-levels-2018</p> <p>A Northern Ireland GIS data extract from the above project is available on the Open Data (NI) portal via the link: https://www.opendatani.gov.uk/dataset/coastal-flood-boundary-extreme-sea-levels-2018-ni-extract-irish-grid-projection</p> <p>The CFB Update project continues to meet periodically to discuss future data improvements and possible new tide gauging which may be incorporated into the next CFB update. Last meeting was in February 2022.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IN3 PB6	Engage with councils to assist them in bringing forward Local Development Plan policies and proposals that take account of climate change adaptation considerations in accordance with the provisions of the Strategic Planning Policy Statement and any other policies or advice in guidance issued by Dfl.	Dfl Planning	Ongoing - In accordance with Local Council Development Plan timetables.		As of April 2022, Dfl has provided consultation responses in respect of 7 draft Plan Strategy documents. This is the first stage in the Local Development Plan programme. 4 of these draft Plan Strategies are currently going through the Independent Examination process and 4 Councils remain to publish draft Plan Strategy documents. In preparing Local Development Plans for their area, Councils are required to take account of the RDS and SPPS which include regional strategic policy on reducing our carbon footprint and mitigating and adapting to climate change. The Department's consultation responses have highlighted the need to take account of the climate objectives of the RDS and SPPS and the most recent responses have also highlighted the Minister's priorities in respect of tackling the climate emergency and securing a 'Green Recovery' from the pandemic. Following the outcome of an Independent Examination, the Department recently issued a formal direction to Belfast City Council requiring modifications be made to its draft Plan Strategy in order to make it sound. The modifications include a new strategic policy in relation to phasing and infrastructure. The Department is continuing to engage with the Belfast City Council to ensure compliance with the Departments direction.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB6	Implement the Flood Risk Management Plans for NI.	DfI	Ongoing		<p>April 2022: The first cycle Flood Risk Management Plans, for the period 2015 - 2021 were published in December 2015. A Final Progress Report on the implementation of the 1st Cycle FRMPs has just been completed, which details the progress that has been made on implementing the measures which includes the establishment of seven Local Community Resilience Groups, three Coastal Emergency Response Plans and five Flood Alleviation Projects being completed within the lifetime of the plan. Other uncompleted measures have been carried over into the 2nd cycle FRMP and will continue to be monitored. The 2nd cycle FRMP was published in December 2021 in accordance with legislation.</p>
PB6	Introduce the updated Technical Flood Risk Guidance in relation to Allowances for Climate Change in NI which relates to the inclusion of allowances for climate change in design of river and drainage infrastructure and	DfI	By end of 2019		<p>April 2022: This Action was completed in 2019 through the publication of DfI's Technical Flood Risk Guidance in relation to Allowances for Climate Change in Northern Ireland. The Guidance can be found via the link:- https://www.infrastructure-ni.gov.uk/publications/technical-flood-risk-guidance-relation-allowances-climate-change-northern-ireland</p> <p>The Guidance and the included information on allowances for Climate Change in Development Planning & Management and in Flood Risk Management are based on UKCP09 information. The Guidance is currently being</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
	advice on flood risk provided for development planning.				embedded into routine work of the Department and of Local Planning Authorities etc. Further work is on-going by Dfl and stakeholders regarding the incorporation of Climate Change into the definition of river and coastal floodplains. Note that UKCP09 has been superseded and that UKCP18 information is now available, see update below in relation to consideration of these new projections.
PB6	Consider implications of the UK Climate Projections 2018 project outputs for drainage and flood risk management.	Dfl	By end of 2024		April 2022: UKCP18 Climate Projections were published during 2018 which have superseded previous UKCP09 Climate Projections. Consideration throughout the UK is being given to new UKCP18-based allowances for Climate Change in Development Planning & Management and Flood Risk Management. Work is underway by Dfl to digest the latest UKCP18 research information and approaches taken by other UK jurisdictions, and to assess how this information may translate into new NI guidance on allowances for Climate Change in Flood Risk Management and Development Planning and Management. To inform this Dfl is progressing a NI Coastal Mapping Update which will consider 3 scenarios for future Sea Level Rise for the NI coast. Similar research in relation to future fluvial and surface water projections will also have to be progressed. Dfl also continue to meet with counterparts from other jurisdictions, to discuss appropriate Climate Change Allowances based on UKCP18.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE12 IN3 PB6	In accordance with the UK Marine Policy Statement and Marine Plan for NI (once adopted) all public authorities must consider the potential impact of proposals on greenhouse gas emissions and the proposals ability to adapt to a changing climate.	DAERA	Ongoing		DAERA continues to advise public authorities regarding their responsibilities for climate change mitigation, adaptation and resilience (under the UK Marine Policy Statement and draft Marine Plan for Northern Ireland) with regard to decision making (including plans, policies, activities, development and licensing) which may affect any part of Northern Ireland's inshore and offshore marine area (including estuaries and rivers as far as the tide flows at Mean High Water Spring Tides). Much of this advice to public authorities is provided by DAERA in its role as a consultee, including for planning applications, the Local Development Plans of councils and the SEAs, SAs, HRAs, etc. produced by public authorities in their decision-making capacity.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE12	The INTERREG VA MarPAMM* project will undertake coastal processes assessments with Murlough special area of conservation and adjoining coastal areas which will examine future scenarios and model future shoreline behaviour in the context of projected climate and sea level changes.	AFBI /DAERA	By end of 2022		The INTERREG VA MarPAMM project has completed assessments of coastal processes in the Murlough SAC/ Dundrum Bay area, demonstrating various coastal geomorphology behaviours in response to sea level rise scenarios. Monthly beach profile measurements provided real time analyses of geomorphology changes. These were combined with SWAN wave energy and sediment dynamics model simulations to identify areas of sediment erosion and accretion and enable the discrimination of areas most at risk from future sea level rise. In general, developed areas (Newcastle, Dundrum) will be at higher risk to climate change effects than natural areas (Murlough and Ballykinler dune systems) which will likely demonstrate higher resilience to those impacts. This project is due to be complete by 30th September 2022.
Outcome Objective NC3: We have soils and land types that are resilient to the impacts of climate change.					
NE4 NE5	Implement the Environmental Farming Scheme as part of the NI Rural Development Programme.	DAERA	By end of 2020		DAERA has offered a 6th application Tranche for EFS Higher and Wider in 2022. The EU funding component of the Scheme will end on the 31 December 2023. Following this, agreements will be continued to be paid from national funds. The Minister has announced several decisions on Future Agricultural Policy which includes a Farming with Nature package and work on developing the policy for this package is currently progressing. This will provide a successor programme for EFS.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE5	DAERA as a Statutory Consultee will advise Local Planning Authorities and DfI about Habitat Regulations Assessment and Strategic Environmental Assessment requirements for new Local Development Plans.	DAERA	By end of 2019		<p>NED continue to respond to SEA related consultations and have met all required deadlines.</p> <p>Preparation of new Local Development Plans in an ongoing process.</p> <p>DAERA have provided responses to councils on 7 draft Plan Strategies (dPS). DAERA continue to engage with these councils as they move towards the next stages of Independent Examination (IE) and then Local Policy Plans. Only Belfast City Council has been through IE and received the Planning Appeals Committee report and direction from Department for Infrastructure. Four other councils have been through IE or are in the process. We continue to engage with the councils who have yet to publish their dPS (4 councils) and are responding to topic review consultations.</p>
NE8	Maintain an emergency Forest Service fire plan and monitor and report the extent of fire damage to forest and open ground (hectares) on Forest Service managed property annually.	DAERA	Ongoing - In accordance with Local Council Development Plan timetables.		The annual implementation of the Forest Service Emergency Fire Plan is normal business.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE5 NE8	Encourage creation of new resilient woodland (hectares) through the Forest Expansion Scheme by favouring projects with a wider variety of tree species and larger woodland areas to enhance ability of individual species to endure climate change.	DAERA	Ongoing - Reported annually in July for the proceeding financial year.		<p>During 2021/22 Forest Service recorded 525 hectares of new woodland created under both the Forest Expansion Scheme and the Small Woodland Grant Scheme. This represents a significant increase compared to previous years.</p> <p>Grant schemes have contributed to 808 hectares of new woodland under the Forest for Our Future Programme. Forest Service has planted 68 hectares of native woodland under the programme, contributing to an overall area of 876 hectares to date.</p> <p>The revision of the Forest Expansion Scheme and the introduction of the Small Woodland Grant Scheme have resulted in a significant increase in the rate of afforestation. However further increases are required to meet the 2020 to 2030 target of 9000 hectares.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE3 NE4	Complete 23 catchment studies as part of the Sustainable Catchment Area Management Planning Northern Ireland (SCaMP NI) project.	NI Water Ltd	By end of 2021		NI Water completed Catchment Management Studies in 2019 for the following priority drinking water catchment areas: Killylane, Dorisland, Clay Lake, Derg (Inc. Strule), Lough Braden, Caugh Hill, Carmoney, Seagahan, Altnahinch, Drumaroad (Inc. Silent Valley, Annalong & Lough Island Reavey), Fofanny, Dunore Point, Castor Bay, Moyola, Ballinrees, Loughmacrory, Lough Fea, Glenhordial, Carron Hill, Rathlin, Dungonnell, Killyhevlin and Belleek. These studies undertook a scoping and planning study of these catchments areas, using the approach advocated in the UK Water Industry Research (UKWIR) framework for quantifying the benefits of catchment management. This established the basis for the NI Water sustainable catchment management programme that provides business benefit to NIW by helping meet water quality, biodiversity and carbon objectives, supporting drinking water source protection as well as wider WFD obligations.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE8	Engage with councils to assist them in bringing forward Local Development Plan policies and proposals that take account of climate change adaptation considerations in accordance with the provisions of the Strategic Planning Policy Statement and any other policies or advice in guidance issued by Dfl.	Dfl Planning	Ongoing - In accordance with Council Local Development Plan timetables		As of April 2022, Dfl has provided consultation responses in respect of 7 draft Plan Strategy documents. This is the first stage in the Local Development Plan programme. 4 of these draft Plan Strategies are currently going through the Independent Examination process and 4 Councils remain to publish draft Plan Strategy documents. In preparing Local Development Plans for their area, Councils are required to take account of the RDS and SPPS which include regional strategic policy on reducing our carbon footprint and mitigating and adapting to climate change. The Department's consultation responses have highlighted the need to take account of the climate objectives of the RDS and SPPS and the most recent responses have also highlighted the Minister's priorities in respect of tackling the climate emergency and securing a 'Green Recovery' from the pandemic. Following the outcome of an Independent Examination, the Department recently issued a formal direction to Belfast City Council requiring modifications be made to its draft Plan Strategy to make it sound. The modifications include a new strategic policy in relation to phasing and infrastructure. The Department is continuing to engage with the Belfast City Council to ensure compliance with the Departments direction.



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE10	Engage with stakeholders to explore potential to develop a strategy to manage, prioritise and coordinate intervention, prevention and response measures for wildfires.	DAERA	Ongoing		A Northern Ireland Strategic Wildfire Group of key Government Departments and Agencies was established in March 2021 with the aim of developing a strategic way forward to address the wildfire issue in NI. A NI Wildfire Stakeholder Forum was established in January 2022 to help further develop this strategic direction and to develop an associated Action Plan. Numerous multi-lateral consultations with key stakeholder groups have taken place and broadly agreed strategic goals and recommendations for action have been developed to cover the 6 themes of Governance; Engagement; Land Management; Response; Policy, Legislation and Enforcement; and Evidence.

New actions for NICCAP2

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE12 IN3 PB6 NE10	Research into the impacts of climate change on geological tourist sites and their adaptive capacity to reduce these.	GSNI (DfE)	End 2023		A full report (MSc thesis) has been produced on the impacts of climate change on UNESCO-designated sites in Northern Ireland. This has identified the main climate stressors on each site, as well as the impact on economic, social and environmental aspects. An assessment of the adaptation measures has been carried out with the conclusion that whilst the adaptive capacity to extreme temperature and increased precipitation is moderate to high, for sea level rise and storm surges it is low in all cases. Recommendations have been provided to carry out further research including a full Climate Vulnerability Index (CVI) assessment for the Giant's Causeway.
NE12 IN3 PB6 BU2	Assessment of coastal vulnerability to erosion around Northern Ireland to assist planners and developers in assessing risk. To be carried out in conjunction with the NI Coastal Forum working group.	GSNI (DfE)	End 2024		GSNI have continued to attend Coastal Forum Working Group meetings and contributing to the work programme as required. On behalf of DAERA, GSNI has produced a bedrock coastal geology dataset from 200m inland to the 10m contour line offshore for the entire coastline of Northern Ireland. Several pilot sites have been assessed to carry out a similar exercise for the superficial geology of the coastline. This has identified shortcomings in the existing data and provided recommendations for further coastal mapping and a methodology for taking this further.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE14 NE10 BU2	INTERREG IVB Atlantic Area Platform for Geohazard Management (AGEO) project to establish a Citizens' Observatory to monitor and assess the risk from geological hazards in response to climate change at the Giant's Causeway and Carrickarede.	GSNI (DfE)	End 2022		Significant progress has been made on the AGEO project in the data acquisition phase of the work. Photogrammetry surveys, LiDAR scanning, InSAR data, and other EO data available from the Copernic service have all been acquired producing an excellent baseline for the site so that future rockfall monitoring can take place. The Citizens' Observatory has also made good progress with the facility to add photos via a dedicated email address, as well as the near completion of the project App to gather rockfall event information.
NE12	NI 3D Coastal Survey which will provide a high resolution baseline survey covering the full extent of the NI coast. The survey will include a topographic LiDAR survey and orthophotography	DAERA/Dfl	End 2021		The NI 3-Dimensional Survey is complete and has been fully validated by the UK Hydrographic Office. Marine & Fisheries Division (M&FD) are currently working with ESRI Ireland and Digital Services Division in DAERA to develop a map viewer which will make this data readily available to stakeholders to both view and download. This work will provide further evidence to be considered alongside that gathered through the Dfl coastal road inspection regime.



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
	<p>of the intertidal area extending 200m inland (including the full extent of dune systems and coastal ASSIs), satellite-derived bathymetry of the marine environment to a depth of 10m and a pilot bathymetric LiDAR survey of a marine section along the east coast.</p>				<p>In association with this baseline survey, further evidence gathering on the coast is currently being overseen by M&FD. A Historical Shoreline Analysis project is underway which will provide a detailed understanding of the coast's position and geometry over annual to decadal time periods, providing a dynamic picture of change since the early 1800s. This project is being undertaken by Ulster University and is due to be complete by the end of 2022.</p> <p>DAERA has also partnered with the GSNI to build our evidence base on coastal bedrock geology, which match the limits of the NI 3D Coastal Survey. This project is largely complete and is being extended to look at superficial geology of the coast.</p> <p>Following the recent storm events in February 2022 which resulted in extensive coastal erosion along the north coast, a LiDAR survey was flown mid-March 2022 to access the extent of change since the NI 3D Coastal Survey which was flown in 2021. This post-storm LiDAR survey will quantify the extent of storm damage along soft sedimentary coastlines and provide valuable information on the impacts of extreme storm events at the coast. In October 2022 a further LiDAR survey will be flown of the</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
					<p>same coastal area to quantify how the beach system has recovered over the summer period. Repeated surveys along these soft sedimentary coastlines here will provide insight to the impacts of extreme storm events which are associated with climate change.</p> <p>Following on from the success of the bathymetric pilot project, which was part of the NI 3D Coastal Survey, M&FD procured the Nearshore Seabed Mapping project which will map the nearshore bathymetry, using LiDAR, for all Northern Ireland. This will provide high resolution data on the white ribbon data - an area where there is generally minimum data. This project should be awarded October 2022 and should be complete by 2024.</p>
NE5	DAERA as the Consultation Body under The Environmental Assessment of Plans and Programmes Regulations (NI) 2004 will respond to all SEA related consultations within the legislative and agreed timeframes.	DAERA	Ongoing		<p>NED continue to respond to SEA related consultations and have met all required deadlines.</p> <p>For example, DAERA provided 47 SEA and HRA related responses in 21/22. These have included amongst other things River Basin Management plans, Agri-food strategies, waste management strategies and tourism strategies.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1	Assessing peat slide risk as part of the Planning Process.	GSNI (DfE)	April 2023 (Comm date: Sept 2021)		<p>GSNI, together with NIEA are working to address the issue of assessing peat slide risk as part of the Planning Process. There is currently no government department with responsibility for assessing peat slide risk, most notably in association with wind farm developments. By working together, GSNI and NIEA are aiming to produce Standing Advice for planners and developers on what is required as part of the Peat Slide Risk Assessment (PSRA). In addition, there is the opportunity for shared learning between the two organisations with regards to the different requirements associated with PSRAs and how they are managed as part of the planning consultation process.</p> <p>By providing clear and concise information on how to carry out a Peat Slide Risk Assessment it will ensure that proper consideration is given to development in these highly sensitive areas. Increasing temperatures and unpredictable precipitation patterns, as a result of climate change, places peatlands at risk from habitat deterioration, declining water levels, and increasing instability puts their role in natural flood management in jeopardy. By helping protect them from further stressors associated with inappropriate development it aids in their climate change adaptation capabilities but also</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
					safeguards their critical role in climate change mitigation. Progress will be monitored by the production of a published Standing Advice document on Peat Slide Risk Assessment for planners and developers. This will be augmented by workshops developed for local council planners jointly by GSNI and NIEA.
NE5	Develop a new Peatlands Strategy for Northern Ireland and associated implementation Plan to drive forward the restoration of and protection of peatlands.	DAERA	By end of 2022 (implementation plan Mar 2023)		Strategy has been revised to reflect public consultation response. Strategy goal now aligned to Climate Change Committee recommendations. Further public consultation required for EQIA - launched on 12th August 22 for 12 weeks.



CHAPTER 2: Infrastructure Services

Infrastructure, such as the roads and railway network, provides vital services to the economy and wellbeing of communities in Northern Ireland.

The UKCCRA 2017 Summary Report for Northern Ireland identified that Infrastructure is exposed to range of climate hazards. Impacts on some assets have the potential to cascade on to others as part of interdependent networks. Flooding poses the greatest long-term risk to infrastructure performance from climate change, but the growing risks from heat, water scarcity and slope instability caused by severe weather could be significant.

NICCAP2 details the actions being implemented which respond to the risks identified in the CCRA and which in turn aim to achieve the following Outcome Objective and Vision:

- IF1: We will have Transport & Network Services that are resilient to the impacts of Flooding & extreme weather.

The following tables details the actions within the Infrastructure Priority Area and the progress made to date on these actions. Two additional actions have also been added to the Programme and are included in the tables below.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Outcome Objective IF1: We have transport & network services that are resilient to the impacts of flooding and extreme weather.					
IN1 IN9	Publish the Water Resource and Supply Resilience Plan.	NI Water Ltd/ Dfl	By March 2020		This action is complete. NI Water continues to implement the WRSRP and has started work on the next WRSRP which is due to be published in 2023.
IN4	Remove properties from the 'Out of Sewer Flooding Register'.	NI Water Ltd/ Dfl	By end of 2021		<p>Ravenhill Avenue Project at 'construction stage'. The project will reduce out-of-sewer flooding removing almost 9 hectares of impermeable area from the combined sewer network. Completion of this project in June 2023 will enable 11 properties to be removed from the internal Flooding Register.</p> <p>NI Water proposes to remove a total of 57 properties from the internal Flooding register by the end of the PC21 Price Control period (2021 - 2027).</p> <p>On Track for revised deadline 2023.</p>
IN4	Increase the number of Sustainable Drainage Systems (SuDS) introduced in new developments.	NI Water Ltd/ Dfl	By end of 2024		Dfl & NI Water are continuing to work with other stakeholders to promote the implementation of SuDS. The Stormwater Management Group (SMG) are continuing to take forward work with specific focus on approval and adoption/maintenance of landscaped SuDS to help inform policy development in this area. A Subgroup of the SMG is continuing to identify and work through issues and risks with developers when implementing landscaped SuDS.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IN1 IN2 IN5	Risks to bridges and pipelines from high river flows & bank erosion- Monitor, inspect and maintain road and rail/ bridge network and implement action plans.	Dfl & Translink	Ongoing		Dfl continues to deliver on its programme of structural inspections in line with DMRB requirements. In respect of scour, Dfl continues to manage the risk of scour/erosion to structures through an interim scour management strategy involving additional inspections following extreme rainfall events. Translink is currently undertaking a programme of scour risk assessments of bridges and culverts in accordance with Network Rail/NIR policy requirements and regularly complete asset inspections following flash flood/intensive rainfall events. Translink also delivers an annual programme of structural inspections and maintenance programmes in accordance with policy.
NE3 NE4	Future bridge design will take into account climate change.	Dfl & Translink	Ongoing		Action identified as complete in 2021. Dfl continues to be represented on Technical Standards Committees, responsible for the ongoing review of national DMRB standards. Translink policy requires the impacts of climate change to be considered in all new bridge design.
IN1 IN2 IN6	Risks to transport networks from slope & embankment failure - Continue geotechnical inspection regime for road and rail embankments and prioritise actions.	Dfl & Translink	Ongoing		In conjunction with QUB, Dfl has developed a geotechnical asset risk assessment model. Strategic level risk assessments have been carried out on all identified trunk roads sites (slopes over 10m), in compliance with the Department's limited adoption of CS 641. The next steps are to be determined.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IN2 IN4	Engage with councils to assist them in bringing forward Local Development Plan policies and proposals that take account of climate change adaptation considerations in accordance with the provisions of the Strategic Planning Policy Statement and any other policies or advice in guidance issued by the DfI.	DfI Planning	Ongoing - In accordance with Council Local Development Plan timetables.		As of April 2022, DfI has provided consultation responses in respect of 7 draft Plan Strategy documents. This is the first stage in the Local Development Plan programme. 4 of these draft Plan Strategies are currently going through the Independent Examination process and 4 Councils remain to publish draft Plan Strategy documents. In preparing Local Development Plans for their area, Councils are required to take account of the RDS and SPPS which include regional strategic policy on reducing our carbon footprint and mitigating and adapting to climate change. The Department's consultation responses have highlighted the need to take account of the climate objectives of the RDS and SPPS and the most recent responses have also highlighted the Minister's priorities in respect of tackling the climate emergency and securing a 'Green Recovery' from the pandemic. Following the outcome of an Independent Examination, the Department recently issued a formal direction to Belfast City Council requiring modifications be made to its draft Plan Strategy in order to make it sound. The modifications include a new strategic policy in relation to phasing and infrastructure. The Department is continuing to engage with the Belfast City Council to ensure compliance with the Departments direction.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IN1 IN2 IN4 IN5 IN6	Provide input to review and update of the 'Design Manual for Roads and Bridges' which will include addressing climate change adaptation.	Dfl	By end of 2020	Green	Action complete, however Dfl continues to be represented on Technical Standards Committees, responsible for the ongoing review of national DMRB standards.
IN11	Carry out a detailed tree survey which will examine the risk of tree related incidents due to high wind events.	Translink/Dfl	By end of 2020	Orange	Work commissioned in September 2021 is ongoing. When the reports are available Dfl will be in a position to determine the appropriate long-term strategy to manage this risk.
IN13	Carry out a project to update the Stress Free Temperatures records of its rails to identify locations that could be at risk during extreme heat.	Translink/Dfl	By end of 2020	Green	The action to undertake a stress free temperature review of the rail network was completed in the 20/21 financial year. Following this, the recommendations have moved into business as usual maintenance and renewal of the rail network.

New actions for NICCAP2

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IN5 IN11 IN13	Research to increase knowledge, awareness and use of local carbon Earth energy resources and the potential for geological storage of energy and carbon, thus ensuring energy security and minimising risk for businesses.	GSNI (DfE)	Ongoing		GSNI has continued to progress the action via Geothermal webinars continuing monthly (9 organised for 2022), videos posted online. Geothermal Week was organised for 13-17 June 2022, with 120 stakeholders at Monday event, field trips and online public lecture. Continuing monthly meetings of Geothermal Advisory Committee chaired by GSNI. Regular stakeholder meetings to provide data and advice to SMEs, researchers and LGAs. Development of consortium of partners for geothermal Peace Plus bid, with call expected in summer 2022. GSNI is working with Energy Group in DfE to progress geothermal demonstrators as per Action 16 on the Energy Strategy Action Plan 2022. In March 2022 DfE funded 2x analytical research projects on geothermal reservoir geochemistry. GSNI continued research contribution to EPSRC funded project on Aquifer Thermal Energy Storage for Heating and Cooling. DfE letters of support and planned GSNI research involvement on 2x new geothermal research bids to NERC Highlight topics 2022 Addressing Environmental Challenges. GSNI Provision of data and geological advice to researchers covering energy storage potential. Contribution to research articles on geothermal, including UK Country Update for European Geothermal Congress 2022.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IN9 PB14 BU3	Research to better understand NI's groundwater resources, allowing decisions to be made more accurately about when and where groundwater could be used for low energy water supply, shallow geothermal heating and cooling, and energy storage.	GSNI (DfE)	Ongoing		<p>Through a new Service Level Agreement with NI Water, the GSNI is providing technical advice and support on a groundwater abstraction feasibility exercise to inform optioneering to address the outcomes of the Water Resource and Supply Resilience Plan. Groundwater can provide low carbon water supplies in areas with water supply deficits this mitigating the effects of climate change with low carbon technology. Draft Groundwater Resources Research and Development Platform produced and undergoing review prior to publishing to stakeholders. This will enable targeted and focused groundwater research to be undertaken by researchers from around the world to address key questions about Northern Ireland's groundwater resources. This will enable them to be used more sustainably to mitigate the effects of climate change and ensure they are properly protected. Also, a study funded by the NIEA and carried out by GSNI/BGS has found that conservation management measures to remove non-native Sea Buckthorn and trees from 2 sand dune sites on the north coast of Northern Ireland have within 6 years mitigated the effects of recent long dry periods by increasing the amount of water recharging the sand dune groundwater systems.</p>



CHAPTER 3: People & Built Environment

The second Climate Change Risk Assessment (CCRA2) Evidence Report suggests that there are potential health benefits from warmer winters in Northern Ireland, but more action is needed to manage current risks to people from cold temperatures through addressing fuel poverty. There are several risks that might be important for Northern Ireland but there is not enough evidence to assess to what extent adaptation action is already underway to manage the risks. Such areas include risks to communities from flooding and sea level rise, extreme weather impacts on the healthcare system, risks to building fabric from moisture, risks to culturally valued buildings, and risks to health from overheating buildings, poor air quality and pathogens. For these risks, the CCRA2 identified that more research in Northern Ireland is urgently needed.

NICCAP2 details the actions being implemented by Departments which respond to these risks and which in turn aim to achieve the following Outcome Objective and Vision:

- P1: We have people, homes, buildings and communities that are resilient to the impacts of Flooding & extreme of weather.

The following tables details the actions within the People & Built Environment Priority Area and the progress made to date on these actions.



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Outcome Objective P1: We have people, homes, buildings and communities resilient to the impacts of flooding & extremes of weather.					
PB1	Implement the Fuel Poverty Strategy in NI.	DfC	By end of 2023		Preliminary work has commenced on scoping the co-design of a new Fuel Poverty Strategy.
PB1	Establish an online climate change and health information exchange platform for health practitioners.	DoH/Climate NI	Launch of platform by the end of 2019 and maintain platform from 2019 onwards.		The Climate NI Health and Wellbeing Platform was launched in September 2019 to meet a request from Health stakeholders for easier access to climate and health information relevant to NI. Due to Covid-19, access to information from health partners was disrupted, and interest of the primary audience in the health sector was seen to be greatly reduced, so update of the platform was put on hiatus in April 2020. However, the platform remains accessible, and retains a broad range of information. As of September 2022, membership has grown to 90 members, from a wide range of public, private, academic and voluntary bodies. Climate NI began updating the platform with information again in April 2022, for example, uploading Climate Change Risk Assessment sector briefings. The Climate NI Health and Wellbeing Platform restarted in Summer 2022 and a review of the platform will be part of its work in 2023.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB5	Carry out review of the Preliminary Flood Risk Assessment.	Dfl	By end of 2019		April 2022: Review of the 2011 Preliminary Flood Risk Assessment under the requirements of the EU Floods Directive and related NI Regulations was completed in December 2018 and reported to the European Commission on schedule in March 2019. This Review is summarised in the Northern Ireland Flood Risk Assessment 2018 (NIFRA 2018) which is available via the following link: https://www.infrastructure.ni.gov.uk/publications/northern-ireland-flood-risk-assessment-nifra-2018
PB5	Remove properties from the out of sewer flooding register.	NI Water Ltd/ Dfl	By end of 2021		Ravenhill Avenue Project at 'construction stage'. The project will reduce out-of-sewer flooding removing almost 9 hectares of impermeable area from the combined sewer network. Completion of this project in June 2023 will enable 11 properties to be removed from the internal Flooding Register. NI Water proposes to remove a total of 57 properties from the internal Flooding register by the end of the PC21 Price Control period (2021 - 2027). On track for revised deadline 2023.
PB5	Develop models for sewer risk and sewer capacity mapping.	NI Water Ltd/ Dfl	By end of 2021		NI Water continues to develop its modelling techniques for sewer risk and sewer capacity mapping, which helps to ensure accurate drainage area plans. New information is passed to councils re wastewater capacity, to inform local development plans.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB5 PB8	Engage with councils to assist them in bringing forward Local Development Plan policies and proposals that take account of climate change adaptation considerations in accordance with the provisions of the Strategic Planning Policy Statement and any other policies or advice in guidance issued by Dfl.	Dfl Planning	Ongoing		As of April 2022, Dfl has provided consultation responses in respect of 7 draft Plan Strategy documents. This is the first stage in the Local Development Plan programme. 4 of these draft Plan Strategies are currently going through the Independent Examination process and 4 Councils remain to publish draft Plan Strategy documents. In preparing Local Development Plans for their area, Councils are required to take account of the RDS and SPPS which include regional strategic policy on reducing our carbon footprint and mitigating and adapting to climate change. The Department's consultation responses have highlighted the need to take account of the climate objectives of the RDS and SPPS and the most recent responses have also highlighted the Minister's priorities in respect of tackling the climate emergency and securing a 'Green Recovery' from the pandemic. Following the outcome of an Independent Examination, the Department recently issued a formal direction to Belfast City Council requiring modifications be made to its draft Plan Strategy in order to make it sound. The modifications include a new strategic policy in relation to phasing and infrastructure. The Department is continuing to engage with the Belfast City Council to ensure compliance with the Departments direction.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB5	Increase the number of Sustainable Drainage Systems introduced in new developments.	NI Water Ltd/ Dfl	By end of 2024		Dfl & NI Water are continuing to work with other stakeholders to promote the implementation of SuDS. The Stormwater Management Group (SMG) are continuing to take forward work with specific focus on approval and adoption/maintenance of landscaped SuDS to help inform policy development in this area. A Subgroup of the SMG is continuing to identify and work through issues and risks with developers when implementing landscaped SuDS.
PB5	Develop the 'Living with Water' Project Plan.	Dfl/NI Water Ltd	By end of 2019		Following Executive approval of the £1.4billion, 12 year Living With Water in Belfast Plan, delivery is now underway through the development of the nine Catchment Delivery Plans (CDPs) that make up the Plan. Each CDP will include an integrated programme of drainage and wastewater management projects for a catchment area. Work is now also underway to develop a Living With Water Plan for Derry.
PB8	Conduct condition surveys at NI Water's Historic Sites taking into account climate change.	NI Water Ltd/ Dfl	By end of 2021		Complete. NIW is progressing to delivering the remedial measures identified within the condition surveys.



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB5 PB8 PB9	Implement the Flood Risk Management Plans for NI.	DfI	Ongoing		<p>April 2022: The first cycle Flood Risk Management Plans, for the period 2015 - 2021 were published in December 2015. A Final Progress Report on the implementation of the 1st Cycle FRMPs has just been completed, which details the progress that has been made on implementing the measures which includes the establishment of seven Local Community Resilience Groups, three Coastal Emergency Response Plans and five Flood Alleviation Projects being completed within the lifetime of the plan. Other uncompleted measures have been carried over into the 2nd cycle FRMP and will continue to be monitored. The 2nd cycle FRMP was published in December 2021 in accordance with legislation.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB5	Introduce the updated Technical Flood Risk Guidance in relation to Allowances for Climate Change in NI which relates to the inclusion of allowances for climate change in design of river and drainage infrastructure and advice on flood risk provided for development planning.	Dfl	By end of 2019		<p>April 2022: This Action was completed in February 2019 through the publication of Dfl's Technical Flood Risk Guidance in relation to Allowances for Climate Change in Northern Ireland. The Guidance can be found via the link: https://www.infrastructure-ni.gov.uk/publications/technical-flood-risk-guidance-relation-allowances-climate-change-northern-ireland</p> <p>The Guidance and the included information on allowances for Climate Change in Development Planning & Management and in Flood Risk Management are based on UKCP09 information. The Guidance is currently being embedded into routine work of the Department and of Local Planning Authorities etc. Further work is on-going by Dfl and stakeholders regarding the incorporation of Climate Change into the definition of river and coastal floodplains. Note that UKCP09 has been superseded and that UKCP18 information is now available, see update below in relation to consideration of these new projections.</p>



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB5	Consider implications of the UK Climate Projections 2018 project outputs for drainage and flood risk management.	Dfl	By end of 2024		<p>April 2022: UKCP18 Climate Projections were published during 2018 which have superseded previous UKCP09 Climate Projections. Consideration throughout the UK is being given to new UKCP18-based allowances for Climate Change in Development Planning & Management and Flood Risk Management. Work is underway by Dfl to digest the latest UKCP18 research information and approaches taken by other UK jurisdictions, and to assess how this information may translate into new NI guidance on allowances for Climate Change in Flood Risk Management and Development Planning and Management. To inform this Dfl is progressing a NI Coastal Mapping Update which will consider 3 scenarios for future Sea Level Rise for the NI coast. Similar research in relation to future fluvial and surface water projections will also have to be progressed. Dfl also continue to meet with counterparts from other jurisdictions, to discuss appropriate Climate Change Allowances based on UKCP18.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB8	Develop a strategy on Climate Change and the historic environment to include research and the development of appropriate guidance.	DfC	By end of 2019		Climate change is now an active consideration in the management and conservation of our state care monuments; and research is being completed on climate change risks for heritage working across the UK. We have agreed an MOU with the Irish Government on climate change and heritage. And have further worked planned in 2022-23 as part of the DfC Climate Change Action Plan. We intend to undertake further stakeholder engagement later in 2022. DfC have moved on from the creation of a self-standing strategy, to take prioritised actions with regard to heritage and climate change. These are embedded in DfC Action Plans and will be considered as the NI Action Plan is developed as required by the Climate Change Act.
PB7	Monitor research and development of uplifts to the Building Regulations in other regions of the UK and Republic of Ireland, and assess need for local measures.	DoF	Ongoing		Ongoing - consideration of overheating assessment being included in review of related building regulations for 2023.



CHAPTER 4: Disruption to Businesses & Supply Chains

Flooding and extreme weather events which damage assets and disrupt business operations pose the greatest climate change risks to businesses in Northern Ireland now and in the future. Flooding continues to be the costliest hazard to businesses and this could be compounded by a lack of adaptive capacity. Resilient infrastructure, in particular power, energy supplies and ICT, is crucial in enabling businesses to minimise disruptions to their operations from climate hazards.

NICCAP2 details the actions being implemented by Departments which respond to risks identified and which in turn aim to achieve the following Outcome Objective and Vision:

- B1: We have businesses that can adapt to impacts of Climate Change & extreme weather.

The following tables details the actions within the Business Priority Area and the progress made to date on these actions.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Outcome Objective B1: We have businesses that can adapt to the impacts of climate change & extreme weather.					
BU3	Publish the Water Resource and Supply Resilience Plan.	NI Water Ltd/ Dfl	By March 2020		This action is complete. NI Water continues to implement the WRSRP and has started to work on the next WRSRP which is due to be published in 2023.
BU1 BU2 BU5 BU6 BU7	DfE Energy Branch will liaise with the Oil, Gas and Electricity Industries to promote and encourage thinking on climate change issues. The sectors will be encouraged to plan for the future and have regard for possible impacts due to severe weather, and in particular to consider flooding risks.	DfE	Ongoing - Once a year at Industry Security of Supply Meetings.		DfE Energy Branch has maintained engagement with the energy industry and will continue its focus on the issue of Climate Change. Energy Policy teams within the Department have been kept informed on the issue of climate change adaptation and issues arising from meetings/workshops.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
BU1 BU2 BU5 BU6 BU7	Invest NI through the nibusinessinfo.co.uk platform, working in partnership with other bodies, will maintain and develop 'Adapt your business to climate change' guidance to reflect emerging climate change outcomes, response planning and government strategy.	Invest NI	Ongoing		<p>The Invest Northern Ireland nibusinessinfo.co.uk website is engaged in the ongoing maintenance and development of online advice and guidance to communicate climate adaptation and mitigation messages and highlight associated support. This activity includes highlighting financial and advisory support schemes, policy information and dissemination of advice on these business areas.</p> <p>Advice, support and guidance have been made available through information guides within the Efficiency and environment section (www.nibusinessinfo.co.uk/environment), Business news (www.nibusinessinfo.co.uk/news), Events Finder (www.events.nibusinessinfo.co.uk), Business Support Finder (www.nibusinessinfo.co.uk/support), monthly newsletter (issued to over 10,500 customers) and social media channels (combined following of over 58,000 customers).</p> <p>New online guidance on "Adapt your business to climate change", published since Northern Ireland's second Climate Change Adaptation Programme (NICCAP2) September 2019 launch, has been the 11th most viewed guide in the nibusinessinfo.co.uk Efficiency and environment theme. A dedicated site page highlighting "Prevent climate breakdown: six practical steps your business can take" features in the top 10% of Efficiency and environment accessed guidance.</p>



CHAPTER 5: Food Security/Global Food Production

Climate change will impact upon on water security, agricultural production and economic resources around the world. These impacts can in turn exacerbate risks from conflict, migration, and humanitarian crises abroad, with implications for the UK. The main risks arising for the UK from climate change overseas are through impacts on the food system, economic interests abroad, and increased demand for humanitarian aid. Policy areas relevant to these risks, such as food supply and safety policies, are devolved to Northern Ireland, there we must respond to these particular risks and take appropriate action.

NICCAP2 details the actions being implemented by Departments which respond to risks identified to food security within CCRA and which in turn aim to achieve the following Outcome Objective and Vision:

- IF1: We have a food system that is resilient to impacts of climate change.

The following tables details the actions within the Food (International Dimensions) Priority Area and the progress made to date on these actions.



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Outcome Objective I1: We have a food system that is resilient to impacts of climate change.					
IT1 IT2	Development of a strategic approach to surveillance in the food system. The approach includes but is not confined to risks associated with climate change.	Food Standards Agency (FSA)	Initial phase of surveillance strategy to be implemented by end of 2019.		<p>FSA have continued to evolve our work in the various projects that are run within Strategic Surveillance. In relation to climate change:</p> <ol style="list-style-type: none"> 1. Signal Prioritisation Dashboard - The service is being made more robust, and we are planning to soon open up access to external parties. 2. Risk Likelihood Dashboard - This service is currently being used by 995 users from 150 Local and Port Health Authorities, to inform their sampling initiatives. The dashboard provides specific information on climate related risks like aflatoxins. 3. Aflatoxin climate model - We created a model to understand the factors influencing number of aflatoxin alerts, establish link between climate and aflatoxin alerts and worked with the Met office to use their long-term climate projections in our model to determine future changes in aflatoxin risks.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IT1 IT2 IT3	Food Standards Agency to continue working to improve its understanding of global food system risks with a wider and longer-term foresight approach, complementing the nearer-term approach in surveillance. Food Standards Agency to continue working with its Science Council to: (i) update and develop the understanding of the future food system and the associated risks and opportunities for food safety and authenticity in the UK, and the opportunities.	FSA	Report from Science Council and Food Standards Agency response agreed by end of 2019		FSA have created a dedicated foresight function that works with the Science Council and other partners to provide a systems approach to identifying emerging challenges and opportunities. The team have produced a range of published reports on topics such Emerging Technology in the Food System, and the Development of Alternative Proteins. The FSA has also established a food systems partnership with Oxford University to improve our systems thinking capability, and our understanding of the UK food system. A series of food systems capability development sessions have been held, and a systems thinking resource is being developed for use throughout the agency.



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
	(ii) identify how Food Standards Agency can strengthen its capability in food system foresight. Includes but is not limited to climate change and its impacts.				
PB12	Food Standards Agency to continue to examine the trends and new risks in relation to food-borne illness, working with expert advisers, other government departments, and other partners, in the UK and internationally.	FSA	Ongoing		Since the last update we have worked to build cross-government data partnerships and advertised an external fellowship jointly funded by Newcastle University with a focus on the analysis of patterns in foodborne disease.

CHAPTER 6: Civil Society and Local Government Adapts

Voluntary and community organisations, businesses, researchers and local councils play an important and interconnected role in land use, infrastructure networks, the built environment and other vital societal support structures. It is therefore imperative that central government, local government and civil society take a collaborative approach to considering climate change impacts, undertaking climate change adaptation planning, implementing practical actions and monitoring progress.

Climate Northern Ireland facilitated the mid-programme review of the information from civil society stakeholders. This involved contacting stakeholders who originally contributed projects to NICCAP2. Stakeholders were asked to review the information and provide an update on the progress and to consider how these actions are contributing to the delivery of the NICCAP2 outcome objectives. Further detail on the projects and actions can be found in the [Civil Society and Local Government Adapts Supporting Document](#).

The second stage of the mid-programme review involved reaching out to stakeholders across academia, the voluntary and community sector and the private sector to incorporate additional actions into this report. The new projects with actions from civil society are included in Annex A of this report.

NICCAP online platform

Climate NI developed an online platform to raise awareness of the climate adaptation actions being taken by civil society and local government stakeholders. Climate NI will update the platform with the progress and outcomes of the actions outlined in this report as well as adding new projects to encourage further adaptation action in this NICCAP cycle.

The following chapter outlines the progress made against existing climate adaptation actions listed in the NICCAP, new adaptation projects are included in Annex A.

Existing Projects - Civil Society

Stakeholders from across academia, the community and voluntary sector and the private sector were asked to provide an update on projects listed in the Northern Ireland Climate Change Adaptation Programme (NICCAP2) report.

Outcome Objective NC1: We will have species, habitats and water bodies that are resilient to the impacts of climate change

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Academic Contribution					
NE13	<p>Research Project: Maritime, Ocean Sector and Ecosystem Sustainability (MOSES)</p> <p>Develop a common methodology for the quantitative assessment of sectoral pressures on the marine environment and the vulnerability of marine and coastal areas.</p>	<p>Dr Wesley Flannery, Queen’s University Belfast</p>	Project complete		<p>This research project assessed the vulnerability of coastal areas to sectoral pressures from maritime-related socio-economic activities. A Data Envelopment Analysis-based method was proposed to construct a synthetic index of anthropogenic vulnerability with which to rank European Atlantic Area countries and regions down to a regional scale. The set of indicators selected for this index focuses on five important vectors: marine spills, port activities, tourism, protection of natural areas, and water quality and waste management. The detailed analysis may help regional policy makers as a diagnostic tool to detect and assess vulnerability weaknesses so that they can design and carry out appropriate actions in line with integrated European coastal management policies.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE9	<p>Research Project: Mitigating Animal Health Impacts of Climatic Variation</p> <p>Improve upon methods of forecasting parasite transmission from weather data.</p>	<p>Professor Eric Morgan, Queen's University Belfast</p>	Ongoing		<p>Models have been improved for predicting and adapting to impacts of climate change on parasite transition and control at farm level. The predictive models have been further developed and updated using results of experiments on parasite transmission, and field observations of parasite occurrence on farms. Specifically, models were extended to include liver fluke and lungworm in cattle and sheep, and refined to support application at field level and hence increase utility for farmer decision support under changing weather patterns. Trials of model implementation have been conducted at farm level and consequences for sustainable parasite control evaluated. The 'basket of options' for mitigating climate change impact on parasites on farms has been disseminated across Europe under the COMBAR COST Action. Work continues primarily using UKRI funding.</p>



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE11	<p>Research Project: SALine INtrusion in coastal Aquifers: Hydrodynamic Assessment and Prediction of Dynamic Response (SALINA)</p> <p>Produce an early warning mechanism to prevent salt water from contaminating coastal aquifers and provide evidence of how (and if) risks are changing.</p>	<p>Dr Raymond Flynn, Queen's University Belfast</p>	<p>Project complete</p>	<p style="background-color: green; color: white;"> </p>	<p>Project completed in 2021, research results published in multiple scientific papers. This project successfully employed geophysical tools to detect the imminent arrival of sea water into coastal groundwater supplies.</p>



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1	<p>Research Project: Towards Quantification of Blanket Bog Ecosystem Services to Water (QUBBES)</p> <p>Identify links between vegetation maps and hydrological processes to allow critical source areas in blanket bogs to be identified where restoration measures can be implemented.</p>	<p>Dr Raymond Flynn, Queen's University Belfast</p>	<p>Project complete</p>	<p style="background-color: green; color: white; text-align: center;">RAG Status</p>	<p>Project complete in 2021, research results published in multiple scientific papers. This project provided a means of quantifying benefits of intact blanket bogs to the wider environment and society.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Community and Voluntary Contribution					
NE1 NE2 NE7 NE9	Practical Project: Ancient Woodland Restoration and New Woodland Creation Create new woodlands, secure, restore and protect existing ancient woodlands.	Woodland Trust Forestry Agents, Landowners, Royal Forestry Society and Local Councils	Ongoing		<p><u>Create new woodlands:</u> Since 2019, the Woodland Trust have carried out two large scale native woodland creation projects at Aughrim Hill and Glas-na-Bradán Wood. Planting native trees means that woods are more genetically diverse and therefore more resilient against pests, diseases and the effects of climate change. Aughrim Hill in County Down, has been transformed from a bare hillside with no tree cover to a habitat with over 110,000 native trees covering a total of 60ha. Glas-na-Bradán Wood is a 98-hectare site in the Belfast Hills purchased by the Woodland Trust in 2021 with funding from Biffa Award and Northern Ireland Environment Agency. The site will be planted with over 150,000 native trees over a five-year programme with over 45,000 trees planted in the first year. Creating these new woodlands will help to reduce the risk of flooding caused by increased rainfall due to climate change as the leaves, branches and trunks of trees slow the speed at which rain reaches the ground, increase water infiltration and reduce and slow run-off giving drains longer to carry water away.</p> <p><u>Secure, restore and protect existing ancient woodlands:</u> Ancient woodlands are crucial to the climate change effort, supporting more threatened species than any other land-based habitat in Northern Ireland.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
					<p>They make up 25% of all UK woodland, but hold 37% of all the carbon stored in woods and trees. However, ancient woodland makes up just 0.04% of land cover in Northern Ireland. The Woodland Trust's State of the UK's Woods and Trees 2021 report revealed that ancient and long-established woodlands store an estimated 77 million tonnes of carbon. That volume is set to triple over the next century too, as ancient woods continue to capture and store an extra 1.7m tonnes of carbon each year. In 2021 the Woodland Trust purchased 156ha of the 212ha Mourne Park estate with funding from DAERA, Garfield Weston Foundation and gifts in wills. Mourne Park is one of the most important areas of natural beauty in Northern Ireland with 73ha of ancient woodland. A key focus will be to protect this extensive area of precious habitat through the ongoing removal of invasive species such as rhododendron and laurel and other work. This will enable natural regeneration of native trees and plants, and help wildlife to thrive.</p> <p>The Woodland Trust are working with local landowners and farmers in the Faughan Valley to buffer, restore and protect small pockets of ancient woodland with tree planting, riparian planting and creating larger blocks of native woodland to build resilience for the future. The Woodland Trust's MoreWoods scheme provides support</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
					to landowners through funding, supplying saplings and offering advice. There are lots of mutual benefits for landowners planting trees including flood reduction and carbon offsetting. This is particularly important in the River Faughan ASSI as climate change produces more intense rainfall.
NE1 NE2 NE14	Strategic Project: Co-operation Across Borders for Biodiversity (CABB) - Develop and publish Conservation Action Plans for Garron Plateau SAC, Montiags Moss SAC and the Pettigo Plateau SAC.	RSPB NI BirdWatch Ireland, RSPB Scotland, NI Water, Butterfly Conservation and Moors for the Future	Project complete		All three Conservation Action Plans (CAPs) have been completed and are currently with NIEA awaiting official sign off. The CAPs cover 6,670ha of peatland sites and have been put in place to ensure that in future the bog will be properly managed and protected. The restored bog provides a habitat that can support a wide variety of plants and animals including birds and plants such as hen harrier, merlin and marsh saxifrage. By managing habitats and installing fencing at key nesting sites, 894 pairs of endangered breeding waders have been safeguarded.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE2	<p>Practical Project: Collaborative Action for Natura Network (CANN)</p> <p>Improve the condition of peatland and wetland habitats in Special Areas of Conservation.</p>	<p>Ulster Wildlife reporting on behalf of Newry, Mourne and Down District Council</p>	Ongoing to September 2022		<p>Significant progress in delivering Conservation Action Plans for 26 peatland and wetland Special Areas of Conservation, with 22 drafts submitted to date. These plans outline the management actions required to ensure that the habitats and species achieve or maintain good ecological condition status. The healthier these habitats are the more resilient they are and the species which rely on them will be to the effects of climate change. The CAPs provide a roadmap to achieving this resiliency. Wildfire Management Plans have also been developed for two large cross-border sites (Cuilcagh and Anierin Uplands SACs and Sliabh Beagh SACs), which provide recommendations for reducing the impact and severity of wildfires into the future.</p>



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE9 NE13	<p>Strategic Project: Sea Deep and Marine Engagement work</p> <p>Map and monitor intertidal and elasmobranch species to identify current distribution, changes to distribution and potential pressures and threats.¹</p>	<p>Ulster Wildlife</p> <p>SeaSearchNI and Queen's University Belfast</p>	Ongoing		<p>Ulster Wildlife continues to collect elasmobranch distribution and species diversity data through the Sea Deep tagging programme and Intertidal species distribution data through Shore NI. The data is provided to CEDaR and is used by DAERA in decision-making. The project is generating a baseline data set for elasmobranch and intertidal species in Northern Ireland which are both data poor groups. The data is essential to make evidence based management and conservation decisions, and to track changes in species distribution which may be due to a changing climate.</p>

¹ Ulster Wildlife updated the action to reflect changes in the project since the original NICCAP2 report.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE9 NE13	<p>Strategic Project: NI Marine Task Force (NIMTF)</p> <p>Ensure nature-based solutions are promoted and adopted as key tools in mitigating the effects of, and helping with adaptation to climate change by influencing government and public policy.</p>	<p>Ulster Wildlife</p> <p>National Trust, RSPB, NIEL, Friends of the Earth, WWT, WWF, and Marine Conservation Society, Keep NI Beautiful, and Irish Whale and Dolphin Group.</p>	Ongoing		<p>NIMTF emphasised the importance of protecting blue carbon stores and processes, restoring coastal habitats, and promoting nature-based solutions in the following consultation responses:</p> <ul style="list-style-type: none"> • Draft Environment Strategy • Draft Green Growth Strategy • The development of fisheries management measures in MPAs • Discussion document on a NI Climate Change Bill <p>This has resulted in a commitment by DAERA to produce a Blue Carbon Action Plan and a revised Marine Protected Area strategy by March 2023, which will specifically include climate change impact mitigation and adaptation.</p>
NE11 NE14	<p>Strategic Project: Shifting Shores - Playing our Part on the Coast</p> <p>Promote partnership working and develop coherent strategies to deal with risks to NI's coastal aquifers, habitats and landscape character.</p>	<p>National Trust</p> <p>Coastal Local Authorities in NI, Ulster University and local community representatives</p>	Ongoing		<p>This project continues to progress understanding of coastal change through projects such as the MaRPAMM project at Murlough NNR (led by Ulster University), which will produce detailed modelling of coastal change at Murlough dunes.</p> <p>The National Trust is working on adaptation planning and hazard mapping for National Trust's sites throughout Northern Ireland. Through this work, a key lesson learned is that more detailed data is required to adequately assess vulnerability. The development of local climate adaptation strategies has been delayed due to Covid-19.</p>

Outcome Objective NC2: We have coastal communities, habitats, landforms and infrastructure that are resilient to impacts of climate change.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Academic Contribution					
IN3 PB6	<p>Research Project: UrbanARK: Assessment, Risk Management & Knowledge for Coastal Flood Risk Management in Urban Areas</p> <p>Develop immersive virtual reality applications to enhance emergency management and preparedness of urban communities, including infrastructure assets and networks.</p>	<p>Dr Ulrich Ofterdinger, Queen's University Belfast</p>	<p>Due to Covid-19 impacts the project has been extended until March 2023.</p>		<p>The project has collected high-resolution mobile LiDAR data for Belfast City Centre as well as parts of the Dublin and New York study areas. Initial flood model simulations for Belfast City Centre integrating underground spaces as identified in the LiDAR data have been completed. These indicate the impact of the underground spaces on the flood dynamics within the urban environment. Further modelling studies are currently ongoing. Initial prototype virtual reality tools to communicate flood risks have been developed by NYU and interim project findings have been presented at international conferences, at various stakeholder engagement events and in published scientific papers.</p>



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Community and Voluntary Contribution					
NE12	<p>Strategic Project: Sea Deep and Marine Engagement work</p> <p>Map and monitor intertidal and elasmobranch species to identify current distribution, changes in distribution and potential pressures and threats. Raise awareness among coastal and sea-user communities to promote local-level action².</p>	<p>Ulster Wildlife</p> <p>SeaSearchNI and Queen's University Belfast</p>	Ongoing		<p>The project is generating a baseline data set for elasmobranch and intertidal species in Northern Ireland which are both data poor groups. The data is essential to make evidence based management and conservation decisions, and to track changes in species distribution which may be due to a changing climate. We have trained over 80 volunteer anglers, who have tagged over 500 individual elasmobranchs of 11 different species. We have trained over 70 people in intertidal species ID. The community has submitted over 6000 records of 565 different intertidal species.</p>

² Ulster Wildlife updated the action to reflect changes in the project since the original NICCAP2 report.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE12 PB6	<p>Strategic Project: Shifting Shores - Playing our Part on the Coast</p> <p>Promote partnership working and develop coherent risk management strategies to deal with risks to habitats, heritage, and coastal communities.</p>	<p>National Trust</p> <p>Coastal Local Authorities in NI, Ulster University and local community representatives</p>	Ongoing		<p>The NI Coastal Forum has been established, led by the DfI and DAERA Ministers/Permanent Secretaries, and includes coastal Councils. This partnership has progressed substantial work to establish baseline data e.g. LiDAR of the coastline which is being used to understand how the coast of NI is changing and the impact climate change is having on coastal communities, habitats and landscapes. Work to produce a coastal policy framework continues.</p>
Private Sector Contribution					
IN3	<p>Strategic Project: Business Continuity Planning</p> <p>Incorporate projected climate change and information from modelling to into Business Continuity Planning process, risk management strategies, warning and informing system, operational controls and new developments.</p>	<p>Belfast Harbour Commissioners</p>	Ongoing		<p>As part of the Belfast Emergency Preparedness Group, and particularly its Harbour Working Group, Belfast Harbour Commissioners has had increased engagement with the Met Office to get earlier warning notification of extreme weather events. This has allowed the organisation to be better prepared for the impacts of such events.</p> <p>The organisation continually investigates new technologies such as flood monitoring systems to allow maximum planning for any weather-related emergency.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Academic Contribution					
NE3 NE4 NE5 NE8	<p>Research Project: Towards Quantification of Blanket Bog Ecosystem Services to Water (QUBBES)</p> <p>Identify critical source areas in blanket bogs, where land use/blanket bog restoration measures can be implemented to restore peatlands and limit losses of dissolved (and sequestered) organic carbon.</p>	<p>Dr Raymond Flynn, Queen's University Belfast</p>	Project complete		Project complete in 2021, outputs include multiple scientific papers. This project provided a means of quantifying benefits of intact blanket bogs to the wider environment and society.
Community and Voluntary Contribution					
NE4 NE5 NE8	<p>Research Project: Weathering Below Blanket Bogs</p> <p>Quantify the capacity of blanket bogs to regulate climate.</p>	<p>Dr Raymond Flynn, Queen's University Belfast</p>	Project complete		Project complete, reported as a PhD thesis titled: 'Weathering below Irish blanket bogs and impacts on carbon dynamics'. This research project demonstrated that weathering below blanket peat can provide significant benefits and may impact on greenhouse gas dynamics, depending on rock types weathered.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE4 NE8	<p>Strategic project: Ancient Woodland Restoration and New Woodland Creation</p> <p>Provide advice to landowners on good practices for plantation of new trees, improving conditions of land and soil, and implementation of sustainable management practices.</p>	<p>Woodland Trust</p> <p>Forestry Agents, Landowners, Royal Forestry Society and Local Councils</p>	Ongoing		<p><u>Secure, restore and protect existing ancient woodlands:</u></p> <p>All the trees used by the Woodland Trust are sourced and grown in the UK and Ireland. They only use certified nurseries where the trees are fully traceable from seed collection through to planting. This helps to reduce the risk of inadvertently importing pests and diseases as well as conserving and maintaining local gene pools. The Woodland Trust through their outreach work advise landowners to plant locally sourced and grown trees and assist with acquiring these trees from tree nurseries in the UK and Ireland.</p> <p>The Woodland Trust through its Emergency Tree Fund have provided financial support and advice to Belfast City Council and Lisburn & Castlereagh City Council to establish tree nurseries that will provide locally grown native trees. These trees will be better suited to local conditions and further reduce the risk of importing pests and diseases. It is hoped that these tree nurseries will be used to demonstrate to businesses and other organisations how to establish similar enterprises across Northern Ireland. This will result in more resilient woodland creation projects in the future.</p> <p>The woodland creation projects at Aughrim Hill and Glas-na-Bradán Wood are made up of a mix of native species.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
					<p>This mix makes these woodlands more resilient against pests, diseases and the impacts of climate change on any one species of tree.</p> <p>The Woodland Trust has engaged with other organisations and private landowners to deliver landscape scale projects such as the Farm and Farmland Sustainability Project as part of the Heart of the Glens Landscape Partnership Scheme. This project involved working with 13 landowners to develop farm plans that identified and delivered new green infrastructure in the area including the planting of new native farm woodland, hedgerows and riparian woodland to improve drainage and provide shelter for livestock.</p>
NE4 NE5	<p>Practical and Strategic Project: Co-operation Across Borders for Biodiversity (CABB) - Improve the conditions and restore blanket bogs, fens and raised bogs across three sites in NI.</p>	<p>RSPB NI BirdWatch Ireland, RSPB Scotland, NI Water, Butterfly Conservation and Moors for the Future</p>	Project complete		<p>The Co-operation Across Borders for Biodiversity (CABB) project has been restoring blanket bogs, fens and raised bogs across three sites in NI. 500ha blanket bog in recovering condition on the Garron Plateau as a result of blocking of drains with peat, wood and stone dams. Water levels have been raised and sphagnum mosses are recolonising. A grazing plan has been written for the site and is being implemented by NI Water, the main landowner of the restoration site.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE4 NE5	<p>Practical Project: Collaborative Action for Natura Network (CANN)</p> <p>Co-ordinate and implement targeted soil conservation and peatland restoration.</p>	<p>Ulster Wildlife reporting on behalf of Newry, Mourne and Down District Council</p>	<p>To be complete September 2022.</p>		<p>The project is on track to deliver 3,650ha of on-ground restoration works, which includes measures to rewet peatland sites, revegetate bare peat, remove invasive species drying out and degrading these habitats and implementing sustainable grazing regimes. All these actions improve the sites' resiliency to climate change. Wildfire Management Plans have also been developed for two large cross-border sites (Cuilcagh and Anierin Uplands SACs and Sliabh Beagh SACs), which provide recommendations for reducing the impact and severity of wildfires into the future.</p>

Outcome Objective IF1: We have transport & network services that are resilient to the impacts of flooding and extreme weather.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Academic Contribution					
IN5 IN6	<p>Research project: Investigating the impact of flooding on the stability of small single and multi-span masonry arch bridges</p> <p>Quantify climate change impacts, including projected increases in heavier and more frequent rainfall events and bridge scour risk.</p>	<p>Dr Brian Solan, Ulster University</p>	<p>The project is complete with the Royal Society and a final report was submitted.</p>		<p>Paper published in the ASCE Journal of Hydraulic Engineering. The paper is titled ‘Scour Concerns for Short-Span Masonry Arch Bridges’. Results found masonry arch bridges on shallow footings are highly vulnerable to scour under extreme weather events, increasing the need to consider effective scour countermeasures such as underpinning foundation footings. Further research is planned in this area.</p>
Private Sector Contribution					
IN11 IN13	<p>Strategic Project: Safety and Emergency Planning</p>	<p>Belfast City Airport</p>			<p>No update provided.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
IN1	<p>Strategic Project: Business Continuity Planning</p> <p>Identify, review and assess extreme weather risks to port operations as part of the interdependent infrastructure network. Information to support emergency planning to be shared with relevant port stakeholders.</p>	<p>Belfast Harbour Commissioners (BHC)</p>	Ongoing		<p>As part of the Belfast Emergency Preparedness Group and particularly its Harbour Working Group, BHC has had increased coordination and information sharing with other agencies and port users to plan for weather events, particularly in relation to flooding events. As part of this interaction BHC is working with the DfI on the Belfast Flood Alleviation Scheme and is ensuring that newly constructed and planned buildings are designed to take account of increased flood risks.</p>
IN1	<p>Strategic Project: Smart Port Initiative</p> <p>Modelling sedimentation risk from coastal change, hydrographic flows and sedimentation will offer accurate projections to inform operational decision-making for long-term action on port infrastructure and operations.</p>	<p>Belfast Harbour Commissioners</p>	By end of 2025		<p>Belfast Harbour Commissioners continues to follow its multi-year survey programme. Each set of hydrographic study information is compared to the previous to identify changes and trends. To this point no further sedimentation study has been progressed, although this will be kept under review through the period of the NICCAP.</p>



Outcome Objective P1: We have people, homes, buildings and communities that are resilient to the impacts of flooding and extremes of weather.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Academic Contribution					
PB10	<p>Research Project: Impact of 20mph Speed Limits on health (including modelling of climatic changes) - Assess the impact of the 20mph speed limits in Belfast (within the context of changing wind patterns and blocking episodes) on air quality and associated risks to health.</p>	<p>Professor Ruth Hunter, Queen's University Belfast</p>	Project complete		<p>This research project is complete, the full National Institute for Health Research report is expected to be published in August 2022. Results have been published in multiple scientific papers. Research shows that implementing a 20mph speed limit can impact the health of the public by improving road safety and increasing active travel.</p>



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Community and Voluntary Contribution					
PB9	Practical Project: Health and Wellbeing Network - Information Platform Provide online platform for the provision of information and guidance on the impacts of climate change in current and future Health and Social care delivery.	Climate NI Health and Wellbeing Network	Ongoing		The Climate NI Health and Wellbeing Platform was launched in September 2019 to meet a request from Health stakeholders for easier access to climate and health information relevant to NI. Due to Covid-19, access to information from health partners was disrupted, and interest of the primary audience in the health sector was seen to be greatly reduced, so update of the platform was put on hiatus in April 2020. However, the platform remains accessible, and retains a broad range of information. As of September 2022, membership has grown to 90 members, from a wide range of public, private, academic and voluntary bodies. Climate NI began updating the platform with information again in April 2022, for example, uploading Climate Change Risk Assessment sector briefings. The Climate NI Health and Wellbeing Platform restarted in Summer 2022 and a review of the platform will be part of its work in 2023.
PB5	Strategic Project: Belfast City Airport: Safety and Emergency Planning				No update provided.

Outcome Objective B1: We have businesses that can adapt to the impacts of climate change and extreme weather.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Private Sector Contribution					
BU1 BU3 BU4 BU5 BU6 BU7	<p>Strategic Project on Business Resilience Toolkit for Dairy Farmers</p> <p>Monitor the number of farmers using the Business Resilience toolkit to provide understanding of resilience planning among the 30% of dairy farmers covered by Lakeland Dairies in NI.</p>	<p>Lakeland Dairies NI Climate NI</p>	<p>Pilot complete. Upgraded project underway.</p>		<p>Lakeland Dairies and Climate NI jointly produced a Farm Business Resilience Toolkit for Dairy Farmers, which covered a range of business areas specific to the sector. This was circulated to Lakeland Dairies Farmers with options for use as both an online tool and in paper format. Although response was positive, it was limited. Lessons learned from this project included the need to build in more structured monitoring and evaluation to future toolkits, and allocate more resource to follow up with users. Further to this initial pilot, the Climate NI Steering Group noted Resilience in Agriculture remained a priority area of work.</p> <p><u>Building a Rural Resilience Network in Northern Ireland</u></p> <p>Successful PCAN funding application by Northern Ireland Environment Link (Climate NI) led to the development of a Rural Resilience Network in 2022 - working with stakeholders (UFU, Dale Farm, CIEH and QUB). This group will advance progress and monitoring of Agricultural Resilience with aims to raise awareness, share best practice and support action in relation to climate risk and adaptation within rural and agricultural communities in NI.</p>

Outcome Objective I1: We have a food system that is resilient to impacts of climate change.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
Private Sector Contribution					
IT2	<p>Strategic Project: Improving the Safety and Security of the Food Chain</p> <p>Annually review and update risk assessments to improve the safety and security of the food chain. Provide coordination of a rapid expert advice mechanism for members, regulators and industry partners to respond to risks.</p>	<p>Food Fortress Ltd. Institute of Global Food Security (IGFS) at Queens University Belfast and NI Grain Trade Association.</p>	Ongoing		<p>Food Fortress continues to strategically assess risks to the supply of imported and home grown food materials and finished feeds. Currently 80 feed producing companies throughout Ireland submit samples for analysis with results shared with network members, industry partners and regulators. The screening program for mycotoxins has been extended to cover a wide ranging sweep for new and emerging risks including masked and modified mycotoxins carried out by QUB. Guidance on risk mitigation and mycotoxin management is communicated to members on a regular basis. The scheme is recognised internationally as a world-leading risk management and feed quality assurance scheme and it is recognised as giving a major marketing advantage for the Irish/Northern Irish food industry.</p>

Local Government Adapts

Local government plays a central role in shaping local places and providing essential services. The 11 NI local councils have a range of roles and responsibilities across their geographical areas. Under the reformed two-tier planning system, local councils are responsible for the determination of the majority of planning applications, development planning and enforcement duties. In addition, councils have responsibility for community planning in partnership with other public sector agencies. It is this connection between local and strategic governance, as well as the management of both short-term and long-term development, which makes the work of local councils vital to climate resilience. The following outlines the progress local government has made against the actions in the NICCAP, new adaptation projects are included in Annex A.

Local Government Actions in NICCAP2

No.	Action	Current Reporting partners
1	Work with local councils to embed the adaptation cycle across local council planning with the aim of encouraging councils to complete a minimum of step 1 by 2021 and step 4 by 2024.	NILGA, Climate NI, supported by SOLACE
2	Explore the capacity needs within local councils to enable delivery of Action 1 (above) and develop support mechanisms.	Climate NI, NILGA
3	Develop and pilot a 'monitoring and reporting process' which can be used by local councils to undertake Step 5 of the adaptation cycle.	Climate NI
4	Share learning from C.L.I.M.A.T.E. NPA INTERREG project on adaptation cycle planning with local councils.	Climate NI and DCSDC
5	In bringing forward their Local Development Plans, Councils will take account of climate change adaptation considerations as indicated in the Strategic Planning Policy Statement.	Local councils

The following addresses actions 2, 3 and 4 from the above table.

Sharing Learning from the CLIMATE Project

From 2017 to 2020, the EU INTERREG-funded CLIMATE project enabled partners, including Climate Northern Ireland, to support Derry City and Strabane to develop the first Climate Adaptation Plan in Northern Ireland, as well as develop an adaptation planning cycle tool which could be used as a basis for action in other regions.

“Derry City & Strabane District Council benefitted extensively from the CLIMATE project, including development of the Adaptation Plan and an opportunity to learn from local and international best practice to deliver climate action. Extensive engagement was undertaken across all departments and service areas to create capacity and ownership for adaptation planning and action via meetings, presentations and workshops with both officers and elected representatives. This resulted in a dedicated elected member All Party Climate Working Group and staff working groups to oversee and deliver progress. The CLIMATE project has undoubtedly been the catalyst for greater awareness and climate action across council with adaptation becoming embedded in corporate policy, strategy and procedures.”

Local Government Climate Action Network and NI Adapts Online Planning Toolkit

Recognising the need for adaptation progress in other local councils in NI, Climate Northern Ireland worked in partnership to tailor the CLIMATE project outputs to meet specific resource and evidence needs in Northern Ireland. Reporting partners agreed that the above set of targets should be placed within the NI Climate Change Adaptation Programme to support and focus this work.

Climate Northern Ireland worked collaboratively with NILGA and other partners to explore the capacity needs within local councils which would enable delivery of Action 1 (above) and to understand what support mechanisms would be needed. In late 2019, it worked with a range of partners to establish the Local Government Climate Action Network, which now features representation from every council in Northern Ireland, as well as a range of other agencies, government departments, representative groups and NGOs. In 2020, Climate NI finalised development of the [NI Adapts Planning Toolkit](#), which is the online platform to support councils and organisations on their adaptation planning journey. On this platform, councils can access information on each of the five adaptation steps, as well as guidance and practical resources for running each of the workshops, tailored to the resource and policy landscape in NI. Climate NI provides individual support to councils and companion training through LGCAN to further boost the usefulness of the NI Adapts Toolkit. In 2022, Climate NI held a Monitoring and Evaluation workshop with LGCAN and participants from Adaptation Scotland, Climate Action Regional Offices (ROI), Climate Emergency UK and UK Climate Change Committee. An initial process for monitoring and evaluation was discussed with council representatives in Summer 2022, with a view to joint agreement on shared principles and indicators by the end of the year.

The success of this approach and a sector-specific package of support means that 10 of 11 councils reached the target set by SOLACE in NICCAP2, to begin adaptation planning by 2021, all without any statutory requirement to do so. Every council in the Republic of Ireland has undertaken this

process and councils in Scotland report annually on their adaptation progress, so Northern Ireland is following international best practice. Building a plan is a significant task and requires work from across the organisation. Implementing a plan is an altogether larger task, but it must be a priority, as doing nothing is the worst and most expensive decision councils could make in the face of a changing climate.

Statement from Northern Ireland Local Government Association (NILGA)

“The Northern Ireland Local Government Association views climate action as a priority, demonstrated by the level of importance it is given within our current Corporate Plan. NILGA is an active advocate for robust adaptation planning by our 11 member councils and has been working closely with Climate NI to ensure that local government in Northern Ireland is working collaboratively and productively with relevant partners in government, business and the community, to protect local people and places from the extremes resulting from climate change.

Development and implementation of place-based adaptation plans is key to this, and we commend Climate NI for their design and delivery of the Local Government Climate Action Network (LGCAN) which has been instrumental in ensuring that 10 of our 11 councils have now achieved the 2021 target of completing Step 1 of the Adaptation planning process, with several plans much further developed. NILGA will encourage our member councils to continue on their adaptation journey, towards the stated target of completing step 4 of the process by 2024. We are in no doubt that the support provided through LGCAN, including the NI Adapts platform and monitoring framework is vital to councils for developing consistent baselines for decision-making.”

Statement from SOLACE NI (Council Chief Executive Forum)

Northern Ireland’s Councils are critical to public service provision, shaping local places, providing essential services, social cohesion and solutions to global problems such as climate change. Climate change affects all Council activities, from the buildings we manage, services we deliver, our open spaces and the roles we undertake in emergency planning and response. It also has a wide range of impacts on local businesses and residents, particularly the most vulnerable.

Councils are uniquely positioned to lead at times of crisis, adapting services and supporting local resilience where it is needed most, whilst also effectively planning for a changing climate, ensuring business continuity, safeguarding people and places, protecting and enhancing the natural environment, and contributing to a resilient economy.



Councils are committed to the adaptation planning process to provide a framework for cohesive action. With support from Climate NI and the Local Government Climate Action Network significant progress has been made, with all councils successfully embarking on the adaptation journey, with 10 of the 11 councils having met Step 1 in the five step process, with several plans much further developed, and one at evaluation and review stage. (Step 5). Councils are committed to participation in the Local Government Climate Action Network which provides an invaluable forum for knowledge and information sharing.



Climate adaptation requires a whole of society approach within which Councils can lead the way. However, it is recognised that certain responsibilities fall outside of Councils and we will therefore continue to work collaboratively to provide leadership and deliver climate adaptation.

Mid-Programme Review on Local Government Progress


Reporting on progress against NICCAP2 Actions 2, 3 and 4 is featured above.



The following information shows the progress on the two key actions for local government in NICCAP2: Development of a Climate Adaptation Plan (Action 1), and accounting for Climate Adaptation within each Local Development Plan (Action).


Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Antrim and Newtownabbey Borough Council	Development of Climate Adaptation Plan.	Work to continue in second half of 2022.		Antrim and Newtownabbey Borough Council completed NI Adapts Steps 1 and 2 and are currently at Step 3. The second part of stage 3 will be completed in late Autumn or early Winter, as the Council now has an internal Climate Change Steering Group that will be overseeing this. Learning from the LGCAN June meeting regarding examples of good adaptation plans in place including Adaptation Scotland and CARO. These best practices plans will be considered during the drafting of our Adaptation Plan. Council is on track to have a published Adaptation Plan within the next year, therefore completing step 4 and 5 of the NI Adapts cycle, preferably ahead of the 2024 deadline. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	2023		The Local Development Plan 2030 is at the public consultation stage at present. This should be published in the next 4-6 months. Sustainable Development is a feature of this plan with attention regarding facilitating adaptation to climate change. Strategy Policy 10 of the draft LDP 2030 is environmental resilience and protection which will address adaptation.


Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Ards and North Down Borough Council	Development of Climate Adaptation Plan.	Ongoing - Aim to be completed by 2024.		Ards and North Council Borough Council is currently at Step 3 of the NI Adapts cycle, following completion of two cross-departmental workshops held in 2021. Meetings with individual service areas are being held to discuss and agree actions specific to each area. The Council has developed an Internal Sustainability Champions and Climate Working Group which includes staff who are actively engaged in the adaptation planning process. The Adaptation Plan will be linked to the Council Corporate Risk Strategy to ensure climate change and extreme weather scenarios are included within future plans, operations and strategies. The Council has also developed a Roadmap to Sustainability which was approved in March 2021 and includes actions on climate change mitigation and adaptation. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	Ongoing		Work continues on the formulation of the draft Plan Strategy. Section 25 of the Northern Ireland (Miscellaneous Provisions) Act 2006 requires that all Councils, in exercising their functions, act in a manner that will contribute to the achievement of sustainable development. This is reinforced by Section 5 of the Planning Act which requires that the Council in exercising its functions in relation to a development plan must do so with the objective of furthering sustainable development and take account of the relevant policy and guidance, such as the Sustainable Development Strategy and the Regional Strategic Planning Policy for Northern Ireland. The draft Plan Strategy will be accompanied by a Sustainability Appraisal.

Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Armagh City, Banbridge and Craigavon Borough Council	Development of Climate Adaptation Plan.	Ongoing		Armagh City, Banbridge and Craigavon Borough Council has completed Step 1 of the NI Adapts Adaptation Planning Toolkit and held the first workshop of Step 2 in Summer 2022. A wide range of staff from across Council service areas are attending this workshop. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	Ongoing		Armagh City, Banbridge and Craigavon Borough Council is currently considering a range of policy issues relating to climate change mitigation and adaptation which will be firmed up in the Draft Plan Strategy consultation document due to be published in the latter part of 2022/2023 business year.
Belfast City Council	Development of Climate Adaptation Plan.	Review and adoption of Adaptation Plan by November 2022.		Belfast City Council has been working with Climate NI on the development of an Adaptation Plan which has been in development since May 2020. The draft plan was produced in September 2021. A Climate Risk Assessment and costed action plan is currently being developed by the Council. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	It is anticipated that Council will adopt the Plan Strategy subject to final agreement with Dfl in Autumn 2022.		The LDP has gone through Independent Examination and Dfl has issued a Direction to Belfast City Council to adopt the draft Plan Strategy with certain modifications. Additional policy and guidance including those relating to adaptation went to public consultation which closed on 7th July 2022. The Belfast LDP draft Plan Strategy includes a number of policies that are directly relevant to climate change and, in particular, climate adaptation. These include policies on Flooding (ENV4), SuDS (ENV5), Green & Blue Infrastructure (GB1) and, more specifically, Adapting to Climate Change (ENV3). There are also many other policies that directly and indirectly relate to climate change mitigation - not least the overall approach to sustainable development.



Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Derry City and Strabane District Council	Development of Climate Adaptation Plan.	Complete		<p>Derry City and Strabane District Council is the first NI Local Authority to develop a Climate Change Adaptation Plan, the plan was ratified by Council in 2020. Initial outcomes include:</p> <ul style="list-style-type: none"> • Climate Adaptation Working Group & Governance arrangements in place; • Climate Adaptation Action Plan ongoing; • Inclusion of climate risk across corporate risk analysis; • Climate Screening Process including climate risk; • Green Infrastructure Plan 2032 includes a climate change theme providing a framework for nature-based solutions; • Climate Change Risk and Opportunities Assessment for infrastructure projects. <p>DCSDC recognises that climate change transcends local boundaries and is working in partnership with Donegal County Council to address the climate emergency. This includes the development of the Regional Energy Strategy, Green Transformation Statement and North West Climate Action Framework with inclusion of adaptation as a core theme. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.</p>
	Account for Climate Adaptation within Local Development Plan (LDP).	Ongoing		<p>Derry City and Strabane District Council Draft Local Development Plan 2032 includes general Development Principles. In relation to climate change it states, developments should demonstrate how they “mitigate against the effects of climate change, adapt to its impacts, and to ensure resilience.” Further policies are included covering flood risk, SuDs, green infrastructure, biodiversity net gain and energy.</p>

Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Fermanagh and Omagh District Council	Development of Climate Adaptation Plan.	Ongoing		Fermanagh and Omagh District Council’s Climate Change and Sustainable Development Strategy was approved in February 2021 and the Action Plan was launched in November 2021. The Action Plan includes climate mitigation and adaptation actions. In developing the Action Plan, workshops were held with staff to identify key roles and responsibilities in the development of the Action Plan. Two ‘Turning the Curve’ workshops were held with Community Planning Partners following the launch of the Action Plan to identify key partners who would lead on actions. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	It is anticipated the draft Plan Strategy will be adopted in Q4 2022/23.		Fermanagh and Omagh District Council has developed the draft Plan Strategy of the LDP. An objective of the draft Plan Strategy is: ‘Follow the principles of sustainability and high quality design in all developments to assist with meeting climate change targets and place making.’ Another environmental objective is tailored to specifically ‘promote positive action on climate change, sustainable management and enhancement of the natural, built and cultural environment.’ The Plan Strategy acknowledges the key role the Council plays in addressing the causes (through mitigation) of climate change and dealing with its effects (through adaptation). A SuDs policy has been introduced for the first time, which states: All development proposals must, where practicable, include proposals for Sustainable Drainage Systems. Moving forward into the Local Policies Plan, climate change is a major factor in shaping how the Council plan for the future. Parts of the district at risk from flooding need to be protected. Policies FLD01 (Development in Floodplains) and FLD02 (Development affected by Surface Water Flooding outside Floodplains) go some way to doing just that.

Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Lisburn and Castlereagh City Council	Development of Climate Adaptation Plan.	Ongoing		Lisburn and Castlereagh City Council has completed Step 1 and 2 of the NI Adapts Adaptation Planning Toolkit and is currently preparing the risk register in advance of Step 3. During Step 1 the Council established a Core Working Group and a Wider Adaptation Working Group who have been engaged in Step 2 workshops. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	Outcomes of the Commission's report - approx. Nov 22.		Lisburn and Castlereagh City Council has formulated and published its draft Plan Strategy. The Plan Strategy is the first of a two stage process to bring forward its LDP, work has commenced on the second stage which is the Local Policies Plan. The Plan Strategy has taken account of climate change adaptation and it has followed the core planning principles set out in the SPPS. The Plan Strategy contains both strategic and operational policies that seek sustainable development which promote climate change adaptation.

Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Mid and East Antrim Borough Council	Development of Climate Adaptation Plan.	Ongoing - aim to publish Adaptation Plan by 2023.		In December 2019 Mid and East Antrim Borough Council committed to completing the NI Adapts Adaptation Planning Cycle, supported by Climate NI, by 2024. The Council has completed Step 1 and 2 and are undertaking Step 3. Initial outcomes include identifying a lead contact for Adaptation Planning, establishing a core working group, and holding workshops with service managers from across all Council services to identify risks from past and future extreme weather events and their consequences on Council services. Council are currently working with service managers to identify and prioritise adaptation actions. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	Outcomes of the Commission's report - approx. Nov 22. Council's Plan Strategy will be adopted by the end of 2023.		The preparation of the Local Development Plan is a two stage process with Council well advanced in the first stage which is the Plan Strategy. Mid and East Antrim's Plan Strategy is based upon the principles of sustainable development and climate adaptation has been considered throughout the policies contained within it. Specific reference to adaptation can be found in: General Policy for All Development; Building Sustainable Communities; Transportation, Infrastructure and Connectivity; Flood Risk and Drainage; Development within Floodplains; and Sustainable Drainage (SuDs). In addition to specific references within the Plan Strategy to climate change and adaptation, the draft Plan strategy has been subject to a Sustainability Appraisal incorporating Strategic Environmental Assessment.

Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Mid Ulster District Council	Development of Climate Adaptation Plan.	Ongoing - plan to publish Adaptation Plan in 2024.		Mid Ulster District Council has completed Step 1 and 2 of the NI Adapts Adaptation Planning Toolkit and is currently on Step 3. A core working group was established within the Environmental Services Department. Workshops held as part of Step 2 included an extended working group with representatives from all Council departments. GIS maps showing Council assets with layers for climate change projections from NI Flood Maps are now available on the Council Intranet for all staff to use. The Council is now at Step 3 and are developing drafts of the risk register in advance of holding Workshop 2 in early 2023. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	Ongoing		Mid Ulster District Council published its Local Development Plan 2030 - Draft Plan Strategy in February 2019. The draft Plan Strategy was submitted to DfI in May 2021. The LDP includes consideration for climate adaptation and one of the objectives is to reduce contributions and vulnerability to climate change and to reduce flood risk and the adverse consequences of flooding. The LDP is compatible with and compliments the Flood Risk Management Plans as adopted in December 2015. It aims to avoid zoning land for habitable development which has been identified as being at risk of flooding, and sets clear limited exceptions for development within the 1 in 100yr flood plain either on the Strategic/Hazard/ Climate Change Flood Maps. It also seeks to ensure that adequate and appropriate measures are employed to mitigate and manage the flood risks for development proposals outside floodplains. It seeks to promote sustainable development through the retention and restoration of natural flood plains and natural watercourses as a form of flood alleviation and an important environmental and social resource and through encouraging the use of sustainable drainage for new development and redevelopment / regeneration schemes.

Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Newry, Mourne and Down District Council	Development of Climate Adaptation Plan.	Ongoing		Newry, Mourne and Down District Council is currently on Step 3 having completed Steps 1 and 2 of the NI Adapts. The Council established the Head of Sustainability as the person responsible for this work. Established a Core Climate Focus Group within Council which is cross-departmental and includes 10 members of staff. A larger Cross Departmental Climate Working Group has also been established to support development of the Adaptation Plan. The Council has held a number of meetings and workshops to date and are now planning one-to-one meetings with service areas across Council on Risk Statements, Risk Register and the Climate Adaptation Plan. Work has continued on finalising the Risk Statements and Risk Register and preparing and drafting the Climate Adaptation Plan. Workshops will resume when the new Head of Sustainability is in post. Climate NI provided accredited Climate Emergency Training to Councillors and Council staff, improving knowledge and understanding of climate mitigation and adaptation.
	Account for Climate Adaptation within Local Development Plan (LDP).	Ongoing		Several meetings have taken place with Senior Planners including the Head of Planning in the Council to inform them of the Climate Adaptation Programme and get buy-in and input into the process, as well as incorporating Climate Adaptation into Planning and the Local Development Plan. Engagement from and with Planners has been positive and a Senior Planner who has responsibility for developing the Local Development Plan has been a member of the Core Working Group on Adaptation as well as taking part in the Workshops and meetings on Risk Assessments/ Statements. The Newry, Mourne and Down Local Development Plan 2030 is in the process of being drafted with extensive consultation being carried out with key stakeholders and the community. Climate change, climate adaptation and related issues are being considered in the process and the Plan is subject to a Sustainability Appraisal, a Habitats Regulation Assessment as well as a possible Strategic Environmental Assessment.



Council	Action	Indicative Timeline	RAG Status	Mid Programme Assessment of Progress
Causeway Coast and Glens Borough Council	Development of Climate Adaptation Plan.		Green	No update provided
	Account for Climate Adaptation within Local Development Plan (LDP).		Green	No update provided.

CHAPTER 7: Next steps and forward look to Governments response to CCRA3.

In line with the legislative requirements of the UK Climate Change Act 2008, the Climate Adaptation Programme follows a five year cycle as outlined in the timeline (Figure 2) below.

The current second Northern Ireland Climate Change Adaptation Programme (NICCAP2) was published in September 2019 in response to the 2nd UK Climate Change Risk Assessment (CCRA2) and covers the five year period to September 2024.

This mid-term progress review, which focusses primarily on monitoring progress against the delivery of the existing actions contained within the NICCAP2 implementation plan, has also provided an opportunity for thirty-six new actions to be added to the implementation plan.

Separately, as outlined in the introduction section, the Department of Agriculture, Environment and Rural Affairs (DAERA) has commissioned the UK Climate Change Committee (CCC) to undertake an independent assessment of the NICCAP2 which is due to be published in the Spring of 2023.

The outputs of that independent assessment and it's recommendations in combination with the latest UK Climate Change Risk Assessment will be used to inform the development of the next Northern Ireland Climate Change Adaptation Programme which is due to be published by September 2024 and will cover the period 2024 - 2029.

As part of that process, on 17 January 2022 the UK Government in line with section 56 of the UK Climate Change Act 2008, laid the 3rd UK Climate Change Risk Assessment (CCRA3) in Parliament. This was following the earlier publication of the CCC's independent assessment of the UK Climate Risk which they published in June 2021 in line with section 57 of the Act.

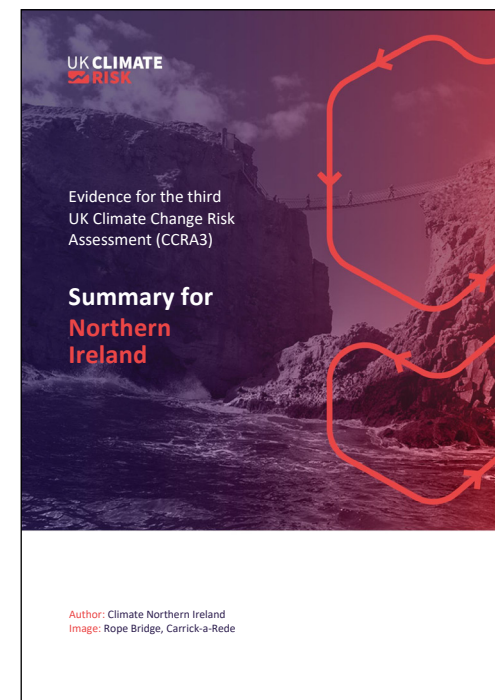
In response to the CCRA3, in line with the requirements of section 60 of the UK Climate Change Act 2008, the Northern Ireland Executive must now develop its next Adaptation Programme in response to the risks and recommendations identified. The risks identified for Northern Ireland can be found at:



CCRA3 - <http://gov.uk/government/publications/uk-climate-change-risk-assessment-2022>



Independent Assessment of UK Climate Risk - <https://www.theccc.org.uk/publication/independent-assessment-of-uk-climate-risk/>



Independent Assessment of UK Climate Risk - Summary for Northern Ireland
<https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA-Evidence-Report-Northern-Ireland-Summary-Final.pdf>

Identified Department risk owners are now considering the risks and the recommended actions from the CCC independent climate risk advice / CCRA3 which in combination with the independent assessment and recommendations of the CCC in relation to the NICCAP2 will be used to develop the NICCAP3 for publication in October 2024. It is intended that a public consultation exercise on the draft NICCAP3 will be undertaken earlier in 2024.

The NICCAP3 will incorporate an end of programme assessment of the NICCAP2 in terms of progress made towards implementing the objectives, proposals and policies set out in the NICCAP2 in line with section 60 of the UK Climate Change Act 2008.

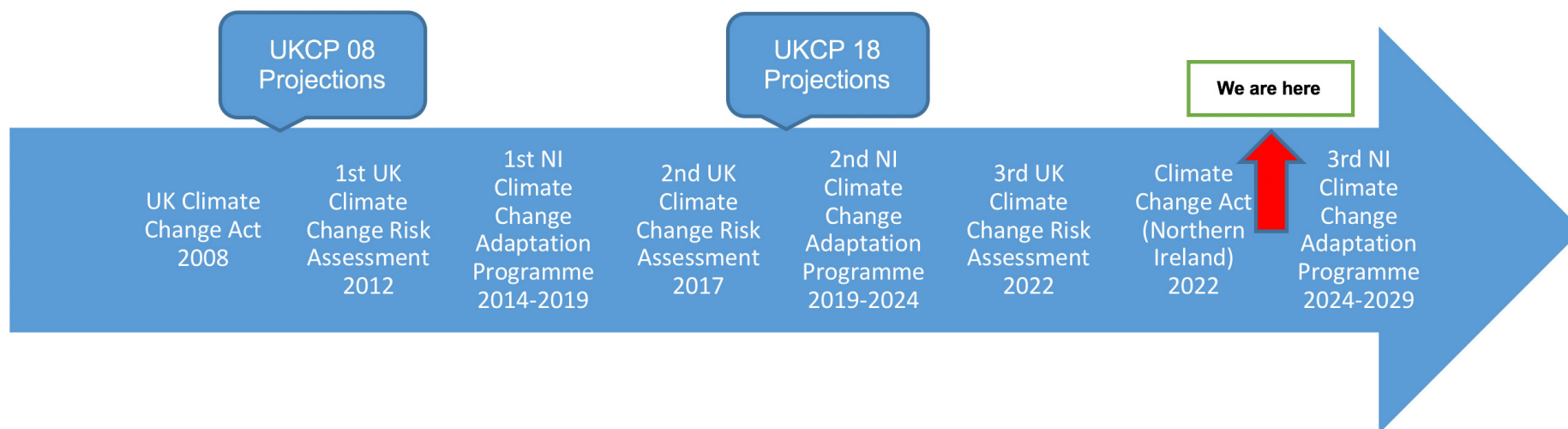


Figure 2: Climate Change Adaptation Programme cycle.

ANNEX A - New Projects from Civil Society and Local Government

New Projects from Civil Society

Stakeholders from across academia, the community and voluntary sector and the private sector were asked to contribute additional projects at the mid-programme review stage. As the NICCAP2 mid-programme review is the first opportunity for local government to report progress on adaptation planning, councils also had the chance to provide additional actions as outlined in the tables for civil society and local government below.

Outcome Objective NC1: We will have species, habitats and water bodies that are resilient to the impacts of climate change.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE5 NE8	<p>Practical Project: Breeding Wader Recovery Project</p> <p>Improve the conservation status of breeding waders in three key sites - Antrim Hills, Lough Neagh, Lough Erne.</p>	<p>RSPB NI</p> <p>NIEA, DAERA, farmers and other landowners.</p>	Ongoing		<p>The project focusses on delivery of conservation action for breeding waders in three areas - Glenwherry in the Antrim Hills, Upper and Lower Lough Erne, and Lough Neagh as these hold the remaining core populations of breeding waders in NI. This project helps protect, manage and restore the wet grasslands and peatland soils on which breeding waders are found, restoring natural ecosystems. In doing so it provides direct biodiversity benefits as well as a range of nature-based solutions to environmental issues - climate and flood mitigation, adaptation to climate change and improved soil and water quality, which in turn provide economic and societal benefits.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE9	<p>Practical Project: Rathlin Acting for Tomorrow</p> <p>Removing invasive non-native ferrets and rats from the Rathlin Island SPA.</p>	<p>RSPB NI</p> <p>Rathlin Development and Community Association, DAERA, Causeway Coast and Glens Heritage Trust.</p>	Ongoing		<p>The main objective of this project is to protect the internationally important assemblage of breeding seabirds that is the primary reason for the existence of the Rathlin Island SPA, while also enabling wider species recovery, by removing invasive non-native rats and ferrets. The project is expected to lead to reversal of the declines that many seabird species have suffered on Rathlin in recent years, recolonisation of the island by seabirds that have gone extinct there, safeguarding of corncrake nesting attempts, and recovery of many other avian and non-avian species e.g. Puffin which is a species at risk of being lost from UK and Ireland due to the impacts of climate change. In addition, it will build the resilience of the seabird assemblage to the impacts of oceanographic change and increasing human activity at sea.</p>



NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE13	Research Project: Marine Plan	Dr Wesley Flannery, Queen's University Belfast	October 2022 - September 2025		Marine Plan will co-develop with stakeholders a Decision Support System (DSS) for ecosystem-based maritime spatial planning (EB-MSP) together with best practice guidance to enhance the effectiveness of spatial conservation and restoration measures for marine biodiversity in European Seas. Guided by an overarching EB-MSP template, each Planning Site will i) identify boundaries, ecological and economic planning objectives, sectoral plans and MSP regulations, and ecosystem services, ii) review knowledge gaps and progress towards EB-MSP; iii) facilitate testing, refining and implementing tools and concepts; iv) develop scenarios and planning options, in the context of climate change and v) identify key action points to achieve EU Biodiversity strategy targets. Overall, the project will equip decision makers with tools and processes to achieve European MSP targets.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE4 NE5 NE8 NE12 NE14	<p>Strategic Project: All-Island Climate and Biodiversity Network</p> <p>Multi-disciplinary research network to help address the climate and biodiversity emergencies.</p>	<p>All-Island Climate and Biodiversity Research Network (AICBRN)</p>	Ongoing		<p>The All-Island Climate and Biodiversity Research Network (AICBRN) is a researcher-led initiative established in 2019 to link multidisciplinary research groups across the island of Ireland and undertake research together to address the climate and biodiversity emergencies. AICBRN recognises that a critical mass of funding and research is needed to achieve the transformative and fair changes needed.</p> <p>The founding principle of the network is that we are stronger together than apart, and the network aims to be fully inclusive to all talent across the island of Ireland, featuring membership from major institutions North and South of the Irish Border.</p> <p>Together, the research we undertake will:</p> <ul style="list-style-type: none"> · Provide the knowledge base required to maintain and enhance the existing services that climate and ecosystems provide Irish society; · Strengthen the capacity of individuals, communities, businesses, civil society and governments across the island of Ireland to mitigate and adapt to the climate and biodiversity crises; and · Ensure Ireland is able to accurately monitor the effects of climate change on biodiversity and the environment and integrate the results into broader European and global models and databases.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
					In 2020, the AICBRN produced a Green Paper entitled: “The All-Island Climate and Biodiversity Research Network Leveraging Ireland’s R&D for Successfully Tackling the Climate and Biodiversity Emergency”. The Green Paper has been used to initiate conversations with government departments North and South regarding an uplift in funding in support of the Climate and Biodiversity based research. The AICBRN made a Strand III submission to the HEA North-South Research call in 2022. The submission is on the HEA’s reserve list and remains unfunded.

Outcome Objective NC2: We have coastal communities, habitats, landforms and infrastructure that are resilient to impacts of climate change.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE5 NE13	Strategic Project: Getting Northern Ireland ‘Restoration Ready’ Provide evidence base to identify blue carbon restoration priorities.	Ulster Wildlife National Oceanography Centre University of Hull	December 2020-March 2022		The Getting Northern Ireland ‘Restoration Ready’ project is now complete. It produced the following outputs: 1) predictive habitat models for blue carbon habitats (seagrass, saltmarsh, kelp, native oysters, and blue mussels) to inform prioritisation of sites for restoration. 2) recommended field methodologies to estimate blue carbon values for these habitats. 3) modelled coastal protection provided by kelp along the Outer Ards Peninsula.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE1 NE5 NE13	<p>Practical Project: Restoration of dune habitats at the Umbra Nature Reserve</p> <p>Ensure Magilligan SAC features are in favourable condition and support resilience to.</p>	<p>Ulster Wildlife NIEA, Geological Survey Northern Ireland (GSNI), British Geological Survey (BGS)</p>	Ongoing		<p>Site management included removal of 6000 Corsican pine trees and ongoing management and removal of invasive sea buckthorn to increase the groundwater levels and improve groundwater chemistry, thereby improving the conditions for the sensitive and protected flora and fauna that are found only at Magilligan SAC (of which the Umbra is part). Groundwater levels and condition is monitored by GSNI and BGS and results to date show that groundwater levels have increased and that the way that groundwater is recharged at the site has also changed, which will improve habitat conditions and make the site more resilient to changing weather patterns predicted under climate change as well as possible saltwater intrusion as sea levels rise.</p>

Outcome Objective NC3: We have soils and woodland that are resilient to the impacts of climate change.

NE3 NE4 NE5 NE8	<p>Research Project: Sensor Application to Peatland Hydrology in Remote Environments (SAPHIRE)</p>	<p>Dr Raymond Flynn, Queen's University Belfast</p>	June 2022 - June 2025		<p>This project will evaluate the utility of sensor networks on peatlands to quantify hydrological processes, including the impacts of projected climate change on peatland hydrology and peatland degradation.</p>
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NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE4 NE5	Practical Project: Keeran Moss - Peat Restoration Project	Mid and East Antrim Borough Council and RSPB	January 2022 - 2023		Phase 1 works completed January to March 2022 including drain blocking, rush control, conifer removal, hedgerow restoration, spoil removal. Ecological surveys and Natural Capital baseline report completed prior to restoration works. Initial species surveys indicate a range of amber and red listed birds - snipe, grasshopper warbler, willow warbler, common redpoll, reed bunting. Restoration to encourage hen harrier, curlew, lapwing, and dragonfly. Large colony of newts found on site. Site recognized as Best Practice site and used as case study at COP26. Funding for phase 2 has been submitted.
NE3 NE10	Practical Project: MEA4Trees - Planting 58,000 trees in Mid and East Antrim Borough Council area.	Mid and East Antrim Borough Council and Woodland Trust	2019 - 2022		The Council has committed to planing 58,000 native trees this accounts for one tree for each household in the Borough. The 58,000th tree was planted in April 2022. As well as encouraging practical engagement in tree planting activities the programme educates residents on why trees are good for people and the environment by improving air quality by producing oxygen, storing carbon; moderating the effects of sun, wind and rain; and cleaning the air by trapping dust, pollen and other pollutants. Trees also provide food and shelter for wildlife such as birds, squirrels and invertebrates, as well as helping people to relax by lowering heart rates and reducing stress.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE3 NE10	Strategic Project: Preparation of an iTree Eco Report for Belfast	Belfast City Council Treeconomics	Ongoing		The strategy will focus on the maintenance and development of the natural environment. It will provide robust and objective justification for future tree provision across Belfast. Through engaging with local residents and key stakeholders the plan will set out a ten-year strategy that will identify how trees can be developed and maintained as part of the ecosystem services of the city. The Strategy will reflect existing programmes such as the Belfast One Million Trees, the LDP and the Belfast Agenda to help tackle air pollution, provide flood resilience, improve health and wellbeing and delivery inclusive and sustainable growth that will create a Belfast that is resilient and adaptable to climate change in the future.
NE3 NE10	Practical Project: Woodland Expansion and Lagan Corridor Project	Lisburn and Castlereagh City Council and Woodland Trust	Ongoing		The vision of the Lagan Corridor project is a Green Flag accredited park which offers a thriving diverse and valued riverside heritage that welcomes exploration, learning and enjoyment whilst ensuring a sustainable environment for all. This project will establish areas of new native broadleaved woodland in appropriate areas within the Council area. Climate adaptation has been considered in this project as tree planting on sites along with river Lagan will support flood alleviation with sites cross-references with NI Flood Maps. It will also connect 16 fragmented habitats along the Lagan Valley Regional Park AONB.

Outcome Objective P1: We have people, homes, buildings and communities that are resilient to the impacts of flooding & extremes of weather.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB1 PB4 PB9 PB10	Strategic Project: Met Office Developing a Heat Service for Belfast.	Met Office Belfast City Council, Climate NI, UK Research and Innovation.	Pilot completed. Now measuring impact of work.		This project focused on the co-development of urban climate services for Belfast City Council, as part of the UKRI-funded UK Climate Resilience Programme. Phase 1 focused on development of a Belfast Heat Pack (factsheets) to provide information on how extreme heat events in Belfast may change this century due to climate change, the impacts, and how to build resilience to extreme heat. Phase 2 was the creation of a Heat Vulnerability Index, which provides a relative vulnerability score for electoral wards based on vulnerability to heat using indicators such as population age and housing type. This was presented as an ArcGIS Storymap, and the project team is now working to expand and measure the impact of the prototype with local decision-makers.
PB1 PB5 PB6	Strategic Project: Regional Community Resilience Group	Regional Community Resilience Group	Ongoing		The Regional Community Resilience Group (RCRG) was formed in 2013 to help local communities prepare for and respond to weather related emergencies. Chaired by DfI Rivers and Local Government, the group brings together multiagency partners from government, utilities and the voluntary sector to proactively engage with the 30 Community Resilience Groups across NI to prepare for a crisis, such as flooding, and enhance community resilience.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
NE12 PB8	Strategic Project: Climate Change Adaptation Plan for Mount Stewart	National Trust	Ongoing		<p>The Mount Stewart estate has been identified as a site in need of monitoring and protection from current climate change related impacts and future risks. In conjunction with DfC, the National Trust held a two-day workshop to explore how organisations can work together to identify, understand, and build consensus around an appropriate framework for climate change adaptation decision making in historic environment assets in NI and the UK, using Mount Stewart’s specific circumstances to understand the impacts of such decision making. Further monitoring and temporary measures will be carried out at Mount Stewart over the next few months, based on the initial learnings from the workshop.</p> <p>The National Trust will now roll out the workshop at other National Trust sites, including the Giant’s Causeway and in Fermanagh, to refine the process, before beginning work on adaptation plans, starting with Mount Stewart.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB5 PB7 PB14	<p>Strategic Project: NI Housing Executive (NIHE)</p> <p>Developing a Climate Adaptation Plan for NIHE.</p>	<p>NI Housing Executive</p> <p>Northern Ireland Environment Link (Climate NI).</p>	By 2024		<p>NI Housing Executive (NIHE) is developing its first internal Climate Change Adaptation Plan, which should be used by all parts of the NIHE to provide information on, and to guide actions in response to climate change impacts. This work will compliment other strategies being developed within the NIHE to reduce the impact of the Climate Emergency, and the work of other public bodies.</p> <p>Key aims of the project include:</p> <ul style="list-style-type: none"> • Develop a multi-year Climate Adaptation Plan, with dedicated resource and staff ownership for delivery, which reduces exposure to climate risk; • NIHE staff build climate change and adaptation knowledge, leading to decision making through a climate lens; • Identify areas for further priority work on data gaps and reduction of risk levels for vulnerable communities in social housing; • Ensure NIHE is ready for reporting on adaptation actions and can share best practice with the public sector.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB1 NE3 NE6	<p>Research Project: Once Upon a Time in a Heatwave</p> <p>UKRI funded embedded research placement using inter-disciplinary methods including storytelling to develop resilience to summer heat extremes in rural and agricultural communities.</p>	<p>Dr Alan Kennedy- Asser, University of Bristol University of Bristol (embedded in Climate NI)</p>	<p>Ongoing (funded November 2021 - 2022)</p>		<p>Outputs from the Once Upon a Time in a Heatwave project include an online app showing impacts of heat extremes on agriculture (grass growth, dairy and poultry) with examples of adaptations agricultural communities can make to reduce impacts; a case study of adaptation by care providers in Castleberg to recent temperature extremes to showcase rural community resilience; and a walking tour of Belfast for emergency planners, health and built environment professionals to highlight how different communities and building types can be more at risk than others.</p>
PB1 PB3 PB5 PB6	<p>Strategic Project: Climate Clever Communities</p> <p>Creating Community Climate Action Plans in 10 locations.</p>	<p>Keep Northern Ireland Beautiful (KNIB)</p>	<p>January 2022 - August 2022</p>		<p>As part of the Climate Clever Communities project, Keep Northern Ireland Beautiful facilitated creation of community climate action plans in 10 communities across NI, which included staff expertise and facilitation time, as well as £5000 seed funding. The plans included mitigation and adaptation considerations, with a focus on community ownership and were developed using a process created by partners in Keep Scotland Beautiful. The aim of the project was to turn ambition into collective climate action over the short and longer-term, by producing a climate plan unique to each community. A final conference was held in the Waterfront Hall in June 2022 to showcase the results.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB1 PB5 PB7 PB8	<p>Research Project: The Moveable Nexus (M-NEX)</p> <p>Design-led Urban Food, Water and Energy Management Innovation in New Boundary Conditions of Change.</p>	<p>Professor Greg Keeffe and Dr Sean Cullen, Queen's University Belfast</p>	<p>April 2018 - March 2022</p>	<p style="background-color: green; color: white; text-align: center;">On Track</p>	<p>The project developed methods, processes and designs for the implementation of Food, Energy, Water research in urban design practice through a series of international design workshops that build expertise and experience across the international team. Each partner city (Belfast, Amsterdam, Tokyo, Groningen, Sydney, Doha and Detroit) ran a series of week-long, design-led workshops with local stakeholders and communities to consider the challenges of varying contexts in addition to generating ideas, new tools and projects that feed into local living labs. Each living lab had design propositions for the city, neighbourhood or buildings to adapt the spatial environment for future climate scenarios. The team utilised long-term climate projections to inform design interventions. The design solutions for the project aim to engage residents of cities with the solutions required to adapt our spaces, infrastructures and lifestyles to expected climate futures.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB1 PB5 PB6 PB8	<p>Research Project: Transboundary Adaptation Learning Exchange (TalX)</p> <p>Learning network to progress adaptation measurement and action across boundaries.</p>	<p>University College Cork</p> <p>Northern Ireland Environment Link (Climate NI), SNIFFER (Scotland)</p>	Ongoing		<p>The TalX project is an Irish Environmental Protection Agency funded research project that aims to establish an innovative learning network to enable a cohesive approach for measuring and acting on climate change adaptation across boundaries. It seeks to develop best practice for processes which empower national, sectoral and local decision makers on a transboundary scale. The TalX research aims to support and progress adaptation action in Britain and Ireland. To do this, the project will:</p> <ol style="list-style-type: none"> 1. Develop an Adaptation Capability and Maturity Model (CMM) through a co-creation process with adaptation practitioners and policy-makers 2. Establish communities of practise for adaptation practitioners <p>Provide an assessment of national adaptation policy across the five jurisdictions areas (England, Northern Ireland, Scotland, Wales and Ireland).</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB1 PB5 PB6	<p>Research Project: RESiL RISK</p> <p>Exploring public perception of climate risk and resilience in NI.</p>	<p>Cardiff University & Northern Ireland Environment Link (Climate NI)</p>	<p>Phase 1 completed. Funding awarded for a repeat survey to take place in 2023.</p>		<p>RESiL RISK Northern Ireland provides up-to-date insights into public perceptions of climate risks and support for adaptation strategies in Northern Ireland to help decision-makers understand the context of knowledge and support for action on climate risk and resilience.</p> <p>The sample size was 999 people, and results published in 2022 show that “despite currently prioritising other issues above climate change, a clear majority of people see the need for high levels of urgency for climate action.” Funding for a subsequent survey (including a rural focus) as part of an award from the Place-based Climate Action Network will be completed before October 2023, which will build on understanding public perceptions of climate change in NI.</p>
PB1 PB5 PB7 PB8	<p>Strategic Project: RSUA Climate Emergency Position Paper</p>	<p>Royal Society of Ulster Architects (RSUA)</p>	<p>Ongoing</p>		<p>The Royal Society of Ulster Architects (RSUA) Sustainability Committee was re-focused as the Climate Emergency Committee in May 2019 with the aim of defining an RSUA position on the Climate Emergency facing the Built Environment; how members should respond to reduce our built environment’s contribution to Climate change and prepare for the impacts of climate change.</p> <p>The Committee developed a position paper setting out many of the actions that Architects could take now and influence going forward.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
					<p>These were broken down into 6 main areas:</p> <ol style="list-style-type: none"> 1. Existing Buildings 2. New Buildings 3. Travel 4. Green 5. Building Materials 6. Heat and Power.
PB1 PB5 PB6 PB9	<p>Strategic Project: Integrated Community Resilience Pilot Helping communities to identify local needs and opportunities, and to reduce vulnerabilities.</p>	<p>Mid and East Antrim District Council (MEABC) Derry City and Strabane District Council (DCSDC)</p>	Ongoing		Progress Community Resilience in an integrated manner in DCSDC and MEABC areas by building community capacity to tackle the cause of risk, identify local needs, reduce vulnerabilities and implement relevant mitigation measures to be ready. The three strands are: i) working with established Community Resilience Groups to identify localised risks and co-design a Community Resilience Plan and Activation Protocol; ii) working with relevant partners across Local Government and the community and voluntary sector, to embed Community Resilience in alignment with existing work streams; and iii) aligning with the National Consortium for Societal Resilience’s six steps to move towards societal resilience.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB1 PB5 PB7 PB8	Strategic Project: Preparation of a Climate Change Risk Assessment, Action Plan and Investment Framework for Belfast City Council	Belfast City Council Climate NI, Department for Infrastructure	June 2022 - November 2022		This project assesses climate risk for the Council's assets and operations by carrying out a risk assessment of the where the vulnerabilities lie for the Council. From this is will develop a fully costed action plan to map investment to increase the Council's resilience to climate change.
PB1 PB5 PB7 PB8	Strategic Project: UPSURGE Research, co-create, measure and digitalise nature-based solutions in unused Belfast sites.	Belfast City Council EU Partners	2022 - 2024		UPSURGE is an EU partnership project which aims to research, co-create, comparatively test, measure and digitalise nature-based solutions and their effects in different European cities. It will test and implement nature-based solutions on a main site and 5 satellite sites in Belfast and elsewhere to provide learning on how an agroecological approach may be adopted in the partner cities as part of informing the European Regenerative Urban Lighthouse.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
PB1 PB5 PB6 PB8	<p>Strategic Project: Roadmap to Sustainability</p> <p>Formalising Ards and North Down Borough Council's commitment to becoming more sustainable.</p>	<p>Ards and North Down Borough Council</p>	2021 - 2028		<p>The Roadmap to Sustainability has been developed to formalise the Council's commitment to becoming more sustainable in terms of its own operations, but also in terms of the wider Borough as a whole. Particular projects relating to climate adaptation include: Development of a Sustainable Food Strategy; The Tree and Woodland Strategy; development of a Local Biodiversity Action Plan; development of Sustainable Construction Guidance; and development of a Climate Adaptation Plan. Many of the projects aim to reduce the Council's carbon footprint and reduce the impact of climate change in the area.</p>



Outcome Objective I1: We have a food system that is resilient to impacts of climate change.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
It1 It3	<p>Practical Project: FAR Environmental Training</p> <p>Training feed advisors on environmental issues, including climate change, equipping them with the tools to help reduce greenhouse gas emissions and nutrient losses on farm.</p>	<p>Northern Ireland Grain Trade Association (NIGTA)</p>	Ongoing		<p>The majority of ruminant feed advisers have now completed the NI Feed Advisor Register (FAR) environmental training module covering issues such as climate change, ammonia and water quality. Further training is planned for the monogastric sector. The training will require an update to focus more specifically on the risks and adaptation options related to climate change as the future NI policy develops.</p>

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
It1 It3 It7	Strategic Project: Belfast Sustainable Food Places Framework and Action Plan	Belfast City Council Social Farms and Gardens, Food Ethics Council, Ulster University, Nourish NI	April 2022 - September 2022		This project delivers on the NI Food Strategy Framework and develops a local plan for Belfast to deliver on its ambitions to create a sustainable food system which is economically sustainable, beneficial to society and has a positive impact on the natural environment. The work will help transition Belfast towards a more sustainable food system for the City and help the city continue to meet its requirements for SFP Awards that are centred on taking a strategic and collaborative approach to good food governance, build public awareness, active food citizenship and a local good food movement, tackle poverty and diet related ill-health and increase access to affordable healthy food, create a vibrant, prosperous and diverse sustainable food economy, transform catering and procurement and revitalise local food supply chains, and tackle the climate and nature emergency through sustainable food and farming and an end to food waste.

NI Evidence Report Risk(s)/ Opportunity(-ties) to be addressed	Action	Responsibility	NICCAP2 Implementation Timeline	RAG Status	Mid Programme Assessment of Progress
It1 It3 It7	<p>Practical Project: Acorn Farm</p> <p>Creating a sustainable urban food system which reduces greenhouse gas emissions and is resilient to the effects of climate change.</p>	<p>Derry City and Strabane District Council</p> <p>Community Foundation Northern Ireland Conservation Volunteers</p>	Ongoing		<p>The Acorn Farm project is developing a sustainable urban food hub in St Columb's Park Derry in 2024. This will include construction of low carbon growing spaces and buildings including a geodesic dome, glasshouses and centre for learning and development. The project is supported by a Lottery funded Acorn I Can Grow Project which has seen over 250 local families grow their own food, in addition extensive research into the local food system and a local Food Network will see the development of a local Sustainable Food Policy. Acorn Farm will be a hub of innovation showcasing sustainable food growing practices through the principles of permaculture. This project will ensure a more resilient and locally sourced food system for the city and district thereby reduce the risks of global shocks and climate impacts on food supply.</p>

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