

Scotland's contribution to the Paris Agreement – an indicative NDC

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Riaghaltas na h-Alba
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Scotland's Indicative Nationally Determined Contribution

Nationally Determined Contributions (NDCs) are at the heart of the Paris Agreement, and set out frameworks, commitments and actions underway to reduce emissions in line with limiting global warming to well below 2°C above pre-industrial levels (with pursuit of efforts to limit it to 1.5 °C) and adapt to the impacts of climate change¹.

The Scottish Government is committed to raising global climate ambition and action at all levels and from all sections of society. As part of our commitment and ahead of COP26 in Glasgow, we are publishing our indicative nationally determined contribution in the spirit of the Paris Agreement² to encourage others to similarly set out their climate change policies and plans and in order to support increased individual and collective ambition and action. The scale, scope and speed of the transformation that is required and to which Scotland is committed brings significant challenges, but anything less would be to fail our people and planet. Our aim is that setting out our framework and commitments on climate mitigation and adaptation in this way can support the learning, openness and working alongside each other we all require, as together we can tackle those challenges and move to a Net Zero, fairer and more sustainable future.

Drawing together Scotland's ambitious policy framework and commitments to climate change action, this iNDC sets out Scotland's approach to tackling climate change, including our distinct framework of statutory emissions reduction targets, and focus on the necessity and opportunities of a just transition to net-zero emissions that creates green jobs, tackles inequalities and nurtures wellbeing. In this, Scotland recognises climate change as a human rights issue and action on climate change to be fundamentally important to the future prosperity of Scotland's people and the planet.

Scotland's indicative nationally determined contribution
A 2030 target to reduce emissions of all major greenhouse gases by at least 75%, compared to a 1990/1995 baseline. This target is legally binding in Scotland's domestic law and was set in direct response to the aims of the Paris Agreement.

Scotland's 2030 emissions reduction target is part of a wider framework of action that will end Scotland's contribution to climate change by 2045 in a just and fair way, while ensuring we are planning and taking action to adapt to the impacts of climate change. This framework includes:

- Legally binding annual emissions reduction targets for every year from now until a net-zero emissions target date of 2045 at the latest. These targets are coupled to a strong commitment, reflected in legislation, on delivering a just transition to net-zero. This means reducing emissions in a way that is fair and creates a better future for everyone – regardless of where they live, what they do, or who they are.
- A comprehensive plan for delivering emissions reductions out to 2032 as part of a green recovery from COVID-19, and including a key role for nature-based solutions to tackle the twin crises of climate change and biodiversity loss. The plan is also supported by a public engagement strategy to encourage and secure ambitious action by people and across all sections of society.

¹ See United Nations Framework Convention on Climate Change (UNFCCC) website for information on NDCs: <https://unfccc.int/>

² As part of the UK, Scotland cannot formally submit a NDC and associated Adaptation Communication to the UNFCCC. A summary of Scotland's approach to tackling climate change was included within the UK-wide NDC and Adaptation Communication submissions made by the UK Government to the UNFCCC on 12 December 2020.

- Support for investment at scale in the transition to net-zero through the establishment of a Scottish National Investment Bank, whose principal mission is to support a just transition to net-zero.
- A people-centred and place-based approach to climate change adaptation in Scotland, which is closely aligned to the UN Sustainable Development Goals.
- Taking a climate justice approach to our international development through the world's first Climate Justice Fund; and working in collaboration with our international partners to deliver global change in a fair and sustainable way, including in Scotland's role as co-chair of the Under2 Coalition, representing 220 regions and governments across the world.

Further information is set out within the remainder of this document, as follows:

- **Part 1:** An overview of Scotland's approach in key areas (pages 4 – 10)
- **Part 2:** Further information to facilitate clarity, transparency and understanding of the mitigation aspects of Scotland's indicative nationally determined contribution target for 2030 (following, as far as possible, the "ICTU" format used for NDCs) (pages 11 – 26)
- **Part 3:** Further information on Scotland's action on adaptation and resilience (following, as far as possible, the Adaptation Communication format) (pages 27 – 36)

Part 1: Overview of Scotland's Approach

Scotland's National Performance Framework (NPF)³ is Scotland's 'wellbeing framework', recognising that societal wellbeing will increase when social outcomes, environmental outcomes, economic outcomes and democratic outcomes are all being delivered and are in balance. Scotland's action on climate change mitigation and adaptation, as summarised below, makes a significant contribution towards achieving many of the NPF National Outcomes and to Scotland's role in delivering the UN Sustainable Development Goals.

Ambitious legally binding targets to reduce greenhouse gas emissions, with a comprehensive delivery plan for meeting them

Scotland's indicative nationally determined contribution reflects the domestic statutory framework of the Climate Change (Scotland) Act 2009⁴, as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.

This statutory framework includes a target of a 75% reduction in economy-wide greenhouse gas (GHG) emissions by 2030, relative to 1990 levels of carbon dioxide, methane and nitrous oxide and 1995 levels of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.

Scotland's statutory framework also includes a net-zero emissions target date of 2045 and further interim targets for reductions of at least 56% by 2020 and 90% by 2040, relative to the 1990/95 baseline. To help ensure delivery of the long-term targets, the framework also includes statutory annual targets for every other year to net-zero.

All of Scotland's statutory targets are economy-wide; including all territorial greenhouse gas emissions and a fair share of those from international aviation and shipping, as well as territorial removals (including from the land use sectors). The statutory framework sets a default position that the targets are to be met through domestic action alone, without any use of international offset credits.

The methods used to measure emissions and removals for the purpose of assessing progress to the targets are based on international carbon reporting practice. An annual report to the Scottish Parliament sets out whether each annual emissions reduction target has been met⁵. If an annual emissions reduction target is missed, Scotland's climate change legislation requires that additional policies are then brought forward to compensate for the excess emissions by outperforming future targets.

Scotland's statutory framework on climate change requires a strategic delivery plan for meeting emissions reduction targets to be published at least every 5 years. Scotland's public bodies are also bound by legislation to, where applicable, report their own targets for emissions reduction to support our national ambitions.

Scotland's current Climate Change Plan covers actions over the period to 2032. This Plan was updated in December 2020 to reflect both the increased ambition of the targets set in response to the Paris Agreement by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and also the context of a green recovery from COVID-19. A green recovery is the Scottish Government's commitment to deliver an economic recovery from COVID-19 in a way that sets

³ <https://nationalperformance.gov.scot/>

⁴ <https://www.legislation.gov.uk/asp/2009/12/contents>

⁵ The report for the 2019 target was published in June 2021: <https://www.gov.scot/publications/scottish-greenhouse-gas-emissions-2018/https://www.gov.scot/publications/scottish-greenhouse-gas-statistics-1990-2019/>

Scotland on a pathway towards net-zero emissions and prioritises economic, social and environmental wellbeing. This approach recognises climate change as a human rights issue and the transition to net zero as an opportunity to tackle inequalities.

The Scottish Government's Climate Change Plan update⁶, which should be read alongside the original 2018 Plan⁷, demonstrates Scotland's pathway to meeting its ambitious emissions reduction targets – including the 75% reduction by 2030 which forms the basis of Scotland's indicative nationally determined contribution.

The following are examples of policies and measures set out in Scotland's current Climate Change Plan:

- phasing out the need for new petrol and diesel cars and vans by 2030; also reducing the number of kilometres travelled by car in Scotland by 20% by 2030;
- plans to help create 1 million zero-emission homes in Scotland by 2030;
- a key role for nature-based solutions to climate change, with additional investment in our natural economy to support nature networks, peatland restoration and woodland creation helping to enhance biodiversity and create good, green jobs;
- supporting the development of Scottish hydrogen and Carbon Capture and Storage industries, and of Negative Emissions Technologies;
- accelerating the decarbonisation of Scotland's bus fleet;
- support for the creation of Active Freeways to provide sustainable transport links between our towns and cities;
- support for transforming vacant and derelict land, ensuring that this land is utilised for maximum environmental and community benefit;
- consulting on a ban on all biodegradable non-municipal waste being sent to landfill.

The Scottish Government reports annually to the Scottish Parliament on progress towards the delivery of Climate Change Plans⁸. The monitoring framework used for this reporting lies at the heart of our 'learning by doing' approach. This approach reflects the lack of absolute certainty on how we deliver the transition over the next 25 years, given many of the solutions rely on further technological innovation, market development and wider take up and adoption as well as action by others. By monitoring, evaluating, updating and adapting this plan over the coming decade we can track our path to meeting our ambitious targets and capture the opportunities of the transition. The independent UK Climate Change Committee (CCC) also publishes independent annual assessments of Scotland's progress in reducing emissions⁹.

More information on Scotland's climate change targets and approaches to meeting them is included in Part 2, which has been prepared in the spirit of an ICTU.

A people-centric and place-based approach to climate change adaptation

As well as reducing our emissions to net-zero by 2045, Scotland is also preparing for the climate changes which are already locked in. Our second 5-yearly statutory Climate Change Adaptation Programme¹⁰ sets out how we are responding to the main climate risks for Scotland in a way that is

⁶ <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

⁷ <https://www.gov.scot/publications/scottish-governments-climate-change-plan-third-report-proposals-policies-2018/>

⁸ The most recent set of monitoring reports was published in May 2021: <https://www.gov.scot/publications/climate-change-plan-monitoring-reports-2021-compendium/>

⁹ Available on the CCC website at: <https://www.theccc.org.uk/>

¹⁰ <https://www.gov.scot/publications/climate-ready-scotland-second-scottish-climate-change-adaptation-programme-2019-2024/pages/1/>

closely aligned with the UN Sustainable Development Goals. The Scottish Government champions climate justice, and promotes a people-centred, human-rights approach to adaptation.

More information on Scotland's approach to adaptation is included in Part 3, which has been prepared in the spirit of an Adaptation Communication.

A transition to net-zero that is just and fair for all

A just transition is central to Scotland's green recovery from COVID-19, is embedded in Scotland's climate change legislation¹¹, and runs throughout the updated Climate Change Plan. The Plan sets out how fairness will be at the heart of our climate action, ensuring that individuals and communities are not left behind in the transition to net-zero.

A just transition puts people, communities and places at the heart of our approach to climate change action. It ensures we work together in order to capture opportunities, tackle existing inequalities and exclusion, whilst anticipating and mitigating risks to those worst impacted so no one is left behind. As the pace of the transformation increases, the need for a collaborative just transition becomes ever more important. This approach is at the heart of Scotland's ambitions to move to a wellbeing economy that prioritises society's wellbeing as the core aim of our economy.

In Scotland we have taken a broad approach to just transition, looking across the economy and the whole of Scotland. This recognises that the scale of the net-zero transition will impact everyone, but not equally. We need a plan to ensure that the decisions we are making take into account different circumstances and enable everyone to access and benefit from the opportunities of net-zero whilst supporting those potentially at risk from an unmanaged shift away from fossil fuels.

We established an independent Just Transition Commission¹² in 2018 to advise us on how we can maximise the economic and social opportunities of the transition, while managing the risks. We will maintain the Commission over the life of the current Parliament (up until 2026), ensuring this important source of advice and guidance remains in place.

Championing Climate Justice

Scotland's climate change legislation places the principle of climate justice, and the achievement of the UN Sustainable Development Goals, at the heart of the process for developing future Climate Change Plans. Simply put, our action on climate justice recognises that those who are amongst the most affected by climate change often have done the least to contribute to it and are the least equipped to adapt to its effects. In this, Scotland recognises that it has prospered as a result of greenhouse gas emissions and so contributed to past, present and future climate change impacts. As such Scotland understands it has a moral responsibility to secure climate justice, including through its support for those impoverished by, risking and experiencing the worst effects of climate change and by seeking a fairer distribution of the responsibilities, risks and opportunities of climate change and its actions at a global level.

Since 2012 the Scottish Government has placed a climate justice approach at the core of its international climate work through our Climate Justice Fund, as well as support for young people to become climate leaders and women from least developed countries attend and engage in the UN climate summits. Our approach recognises that an effective response must explicitly tackle existing

¹¹ Just transition principles are defined by section 35C of the Climate Change (Scotland) Act 2009: <https://www.legislation.gov.uk/asp/2009/12/contents>

¹² <https://www.gov.scot/groups/just-transition-commission/>

inequalities such as wealth disparity and discrimination based upon gender, age, disability or indigenous status.

Scotland established the world's first and only government led international Climate Justice Fund (CJF) in 2012. The CJF is distinct from, and additional to, Scotland's International Development Fund, and acknowledges Scotland's commitment to international climate finance and recognition of its common but differentiated responsibilities in addressing the global impacts of climate change. The Fund reflects the ambition to respond to the priorities of impacted communities, and seeks to acknowledge and address climate injustice in three of the Scottish Government's International Development Partner nations; Malawi, Rwanda and Zambia. The CJF helps communities adapt and build resilience to climate change as well as empowering them to be at the forefront of tackling social injustices and the promotion of human rights. In recognition of the need for increased climate finance globally, the Scottish Government has committed to double the Fund over the next four years.

Public engagement at the heart of the national approach

In Scotland, we are committed to people being at the heart of all we do to tackle climate change and empowering people to be active in the decisions and actions that surround them. Scotland's climate change Public Engagement Strategy¹³ sets out our approach to involving the Scottish people in our transition to net-zero and a more climate resilient society, and marks a step change towards supporting a society-wide transformation.

Placing people at the centre of climate action requires innovation in citizen engagement and decision making. The Scottish Government supports citizen-engagement in policy-making through an independently convened Citizens' Assembly on climate change¹⁴. Grounded in the Climate Change (Scotland) Act 2009, Scotland's Climate Assembly brought together over one hundred people, broadly representative of the Scottish population, to advise on, "How should Scotland change to tackle the climate emergency in an effective and fair way?" Their recommendations are embedded in the Parliamentary process, with their report (published June 2021) being laid in the Scottish Parliament and Ministers required to issue a comprehensive and cross-Government response in line with the requirements of the Act.

Nature-based solutions to tackle the twin crises of climate change and biodiversity loss

Scotland recognises the twin crises of climate and nature and the need to take an integrated approach. Nature-based solutions form a key part of the Scottish Government's overall approach to action on climate change by bringing together infrastructure, planning, land use, marine and economic strategies to promote and enhance new opportunities for generating multiple benefits from future land management and land use change. The alignment of strategies across government is also supported by significant investment in positive action through nature based solutions to support our net zero goals. The group of senior Environmental Champions to be appointed by the Scottish government before COP26 will help inform, advise and guide Scottish action to addressing the twin crises of biodiversity and climate.

Scotland's Environment Strategy¹⁵ set out the overarching framework for the Scottish Government's strategies and plans on the environment and climate change. It sets out a 2045 vision for restoring

¹³ <https://www.gov.scot/publications/net-zero-nation-draft-public-engagement-strategy-climate-change/>

¹⁴ <https://www.climateassembly.scot/>

¹⁵ <https://www.gov.scot/publications/environment-strategy-scotland-vision-outcomes/>

Scotland's natural environment and playing our full part in tackling the global climate and biodiversity crises. It also highlights the wider benefits this will create for Scotland's wellbeing, economy and global citizenship.

In February 2021, in publishing our new five-year Infrastructure Investment Plan¹⁶ the Scottish Government changed its definition of infrastructure to include natural infrastructure - creating a more holistic view of the entirety of Scotland's infrastructure assets and recognising the wider contribution natural capital can have towards creating sustainable, attractive places to live and improve wellbeing; generating economic growth and also reducing carbon emissions. In preparation for the 15th meeting of the Conference of the Parties to the Convention on Biological Diversity, Scotland has played a leadership role in leading the Edinburgh Process and publishing the Edinburgh Declaration¹⁷, calling for increased global and local action to protect biodiversity.

We know that both public and private investment in Scotland's natural capital will be essential to deliver on Scotland's emissions reduction targets, and we are working in partnership with NatureScot, Forestry and Land Scotland, Scottish Forestry and others to explore opportunities for increasing private investment in Scotland's natural capital. This includes development of existing voluntary carbon markets and considering potential new mechanisms, such as a Scottish Carbon Fund and carbon price floor mechanism. This should bring additional finance to add to the £250 million over 10 years which has been committed by Scottish Government to peatland restoration.

The Scottish Government recognises the important role of our ocean in mitigating and adapting to climate change. Blue carbon habitats are particularly important for biodiversity and climate adaptation, such as protection against coastal erosion and flooding. Scottish Government officials are working with UK government colleagues on developing the evidence base to support the inclusion of two blue carbon habitats (saltmarsh and seagrass) within the UK Greenhouse Gas emissions inventory as soon as it is appropriate to do so.

Financing a just transition to net-zero

Reaching net-zero will require significant upfront investment - in modernised infrastructure, capital projects, preserving and restoring Scotland's natural capital, and modernising our building stock. Since setting our new emissions targets in the Climate Change (Emissions Reduction) (Scotland) Act 2019, the Scottish Government has made a series of major spending commitments for net-zero initiatives, especially accounting for the fiscal challenges posed by COVID-19, but the investment required cannot and should not be funded by the public purse alone. The Scottish Government is committed to using public policies and investments to create an environment where new industries, markets and innovations can thrive, and where private investment is key to driving a just transition to net-zero by 2045.

The Scottish National Investment Bank has been established with a primary mission to support a just transition to net-zero by 2045. The Bank will play a key role in developing new net-zero markets, and will work with public, private and third sector partners to channel and crowd in additional investment. The Bank will actively seek to develop and deploy mechanisms to leverage its available capital and catalyse even greater investment in the Scottish economy.

In addition, the Scottish Government's Inward Investment Plan¹⁸ is aimed at attracting company investment from overseas and other parts of the UK and we have identified Energy Transition and

¹⁶ <https://www.gov.scot/publications/national-mission-local-impact-draft-infrastructure-investment-plan-scotland-202122-202526/>

¹⁷ <https://www.gov.scot/publications/edinburgh-declaration-on-post-2020-biodiversity-framework/>

¹⁸ <https://www.gov.scot/publications/shaping-scotlands-economy-scotlands-inward-investment-plan/>

Decarbonisation of Transport as priority areas for attracting the businesses and technologies that will help us drive progress towards our climate change targets and a just transition to net zero. The Capital Investment Plan will take a systematic approach to turning our sectoral ambitions into investable projects that can attract finance and deliver net-zero across Scotland.

The Green Growth Accelerator, launched in June 2020, is an innovative funding model demonstrating the Scottish Government's ambitious and integrated approach with local authorities. The programme will unlock an additional investment for emissions-reducing infrastructure to support our transition, with outcomes focussed on carbon emissions reductions, unlocking net zero and just transition, while targeting growth in green jobs.

Whilst financial disclosures made by private sector organisations are not within the control of Scottish Government, in line with Scottish Government's commitment to positive action on climate change, the Scottish Government is beginning work with local government through the scheme advisory board to explore an appropriate approach to financial disclosures that focuses on managing climate related financial risks.

Trade as a lever to increase progress towards net-zero globally

In 2021, the Scottish Government published Scotland's Vision for Trade¹⁹ where we set out the principles and values for the trading relationships we want our country to have, now and in the future. One of our five key principles is that trade policy should be used to progress towards our target to reduce Scotland's emissions to net-zero by 2045.

We will also use our trade levers to support the transition from fossil fuels to low-carbon energy, by ending all Scottish Government overseas trade support and promotion activities solely focused on fossil fuel goods and services by COP26, and instead refocus this support towards sustainable energy transition activities.

Working in collaboration with our international partners to deliver global change

We recognise that global cooperation is integral in responding to the climate crisis and to support delivery of the Paris Agreement. As European Co-Chair and an active member of the Under2 Coalition²⁰, one of our objectives is to increase climate ambition and action within the coalition ahead of COP26, demonstrating the important role states and regions have to play in reaching net zero and working towards increased visibility and influence of states and regions in the international climate process. This includes building on the Scottish government funded Net Zero Futures Initiative²¹ launched in March 2021. The initiative is open to all states and regions including those not members of the Under2 and aims to build capacity of, and equip states and regions with the best available knowledge, science and international expertise on net zero target setting and pathways towards net zero emissions.

The Scottish Government's network of eight overseas offices promotes Scotland's unique contribution to combating climate change by building connections and sharing our knowledge, skills and technical expertise with our international partners.

The Scottish Government's Hydro Nation strategy recognises Scotland must reach out to the world to share knowledge and expertise and invite collaboration that aligns with key commitments including

¹⁹ <https://www.gov.scot/publications/scottish-government-vision-trade/>

²⁰ [A group of more than 220 governments representing over 1.3 billion people and 43% of the global economy.](#)

²¹ <https://www.theclimategroup.org/net-zero-futures>

supporting delivery of the Sustainable Development Goals and the Net Zero agenda. Hydro Nation works closely with the Government of Malawi to help make Sustainable Development Goal 6 in respect of water and wastewater provision a reality through a joint programme focussed on water resource management, governance and legislation. Achievements to date include the mapping of all of Malawi's rural water points and related sanitation points to create for the first time a homogenous dataset from which evidence-based SDG6 and water resources planning can be implemented by the Government of Malawi. Peer-to-peer knowledge sharing on key issues historically informed the development of water legislation introduced by both countries, and ongoing dialogue on locally-assessed needs will inform the next phase of Scottish Government Hydro Nation support that is expected to identify further opportunities for joint working focussed on governance as we continue to support the establishment and development of Malawi's National Water Resources Authority and Environment Protection Agency.

Scotland is the world's northernmost non-Arctic nation. Combined with other environmental threats - such as pollution, sea level rise and erosion - climate change is having a devastating impact on the High North. A rapidly warming Arctic has direct consequences for the Scottish ecosystems. Our Arctic policy framework²² encourages policy and knowledge exchange between Scotland and its Arctic neighbours to develop joint solutions to shared climate challenges and to increase the resilience of local communities. Scotland is home to Europe's largest glaciology group SURGE (Scottish University Research in Glacial Environments), attracting world-renowned researchers who carry out regular studies on the Greenland ice sheet and the glaciers of Svalbard. In addition, organisations such as Scottish Natural Heritage, Marine Scotland Science, the Scottish Association for Marine Science (SAMS) and the Environmental Research Institute have long collated evidence that is being used to monitor the environmental changes occurring in the Arctic. In addition, the policy framework appeals to the wider international community to increase collective action, accelerate decarbonisation and jointly build a sustainable future for all.

The Scottish Government is a founding member of the Wellbeing Economy Governments (WEGo) network, alongside New Zealand, Iceland, Wales, and Finland. The group collaborates in pursuit of innovative policy approaches aimed at enhancing wellbeing and addressing the pressing economic, social and environmental challenges of our time. The discussions through regular Policy Labs have inspired and strengthened our measuring and analytical frameworks in the area of wellbeing economy. The most recent Policy Lab in 2021 focused on Climate Change and integrating environmental considerations into economic policy.

Scotland's Energy Strategy recognises the importance of working with international partners to better understand the transition to a net zero economy, and commits Scottish Government to support internationalisation efforts in relation to energy.

We will continue to develop and strengthen our collaborations with international partners to support a global transition to net-zero that is fair and just, and leaves no-one behind. Scotland can play an active role in promoting innovation in sustainable energy use throughout Europe, and beyond, and we want to develop collaborations with a range of partners to tackle common challenges. As we continue to work towards our emissions reduction targets, opportunities for global growth in new innovations and emerging technologies, like the development of a hydrogen economy, must also be maximised.

²² <https://www.gov.scot/publications/arctic-connections-scotlands-arctic-policy-framework/>

PART 2: INFORMATION TO FACILITATE CLARITY, TRANSPARENCY AND UNDERSTANDING OF SCOTLAND'S INDICATIVE NATIONALLY DETERMINED CONTRIBUTION²³

1. Quantifiable information on the reference point (including, as appropriate, a base year)		
<i>Section</i>	<i>Nature of information</i>	<i>As applicable to Scotland's indicative nationally determined contribution of a 2030 target of 75% emissions reduction</i>
A	Reference year(s), base year(s), reference period(s) or other starting point(s)	<p>For carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), the reference year is 1990.</p> <p>For hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃) the reference year is 1995.</p> <p>These reference years are consistent with those used for all of Scotland's domestic emissions reduction targets set under the Climate Change (Scotland) Act 2009, as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.</p>
B	Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year	Progress against the indicative nationally determined contribution target for 2030 will be based on the same method as used for all of Scotland's statutory domestic emissions reduction targets, namely the percentage by which the net Scottish emissions account ²⁴ for the target year is lower than the baseline. Methods used for measuring emissions and removals for this purpose will be based on international carbon reporting practice

²³ Section references are within the established ICTU format for NDC's submitted by Parties to the UNFCCC. Where a section is not applicable or relevant to Scotland's indicative nationally determined contribution, it is omitted entirely. This is also the case if an entry would otherwise contain information that is entirely duplicative of other rows. For some section entries, the 'nature of information' description has been adjusted to reflect the indicative status of this document, where this is the case it has been noted in the first column.

²⁴ The net Scottish emissions account is defined by section 13 of the Climate Change (Scotland) Act 2009: <https://www.legislation.gov.uk/asp/2009/12/contents>

		(as reflected in the UK national emissions inventory reported to the UNFCCC) ²⁵ . Annual GHG inventory updates, including technical revisions to the historic data in line with updates to international carbon reporting practice, are published on the Scottish Government website ²⁶ . Based on the Scottish GHG inventory for 1990-2019, reference year and expected 2030 target year emissions are estimated to be 85.1 MtCO _{2e} and 21.3 MtCO _{2e} respectively. Reference year and target year emissions for the purpose of determining whether the 2030 target has been met will be based on the 1990-2030 Scottish GHG Inventory, which is due to be published in 2032.
D	Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction	An economy-wide net reduction in Scottish GHG emissions of at least 75% by 2030, compared to 1990/95 reference year levels.
2. Time frames and/or periods for implementation		
A (adjusted from ICTU)	Time frame and/or period for implementation, including start and end date	Time frame: 1 January 2021- 31 December 2030.

²⁵ The annual Scottish GHG Inventory is used to report progress against all emissions reduction targets under the Climate Change (Scotland) Act 2009. It is a regional disaggregation of the UK Greenhouse Gas Inventory submitted annually by the UK Government to the UNFCCC. The methods used to compile the Scottish Inventory are consistent with international reporting and are therefore comparable to the greenhouse gas emission estimates reported by EU Member States and other Annex 1 parties to the UNFCCC. The compilation of the inventory is governed by a rigorous quality assurance process and is subject to third party scrutiny. The full detail of how revisions to the inventory are reflected in reporting on progress to statutory domestic targets (upon which this indicative nationally determined contribution is based) is set out in sections 19 and 33 of the Climate Change (Scotland) Act 2009. For current methodology, see section C of 'Scottish Greenhouse Gas Emissions 2019': <https://www.gov.scot/publications/scottish-greenhouse-gas-statistics-1990-2019/>

²⁶ See 'Scottish Greenhouse Gas Emissions 2019' for the 1990-2019 data: <https://www.gov.scot/publications/scottish-greenhouse-gas-statistics-1990-2019/>

B	Whether it is a single-year or multi-year target, as applicable	<p>Single-year target in 2030.</p> <p>However, Scotland's climate change legislation also includes legally binding annual emissions targets for every year until the net-zero emissions target year of 2045. A full list of all of these targets can be found on the Scottish Government website²⁷.</p>
3. Scope and coverage		
A	General description of the target	<p>A 75% reduction in net Scottish GHG emissions by 2030, compared to 1990/95 reference year levels.</p> <p>All of Scotland's statutory emissions reduction targets, including this 2030 target, are economy-wide and include a fair share of emissions from international aviation and shipping. Scotland's climate change legislation sets a default position that these targets will be met through domestic action alone, without the use of international offset credits.</p>
B (adjusted from ICTU)	Sectors, gases, categories and pools covered by the indicative nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines	<p>The sectors, gases, categories and pools covered by Scotland's indicative nationally determined contribution are based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, the 2013 IPCC Kyoto Protocol Supplement and the 2013 IPCC Wetlands Supplement. The IPCC's 4th Assessment Report on the Global Warming Potentials for a 100-year time horizon are currently used to calculate CO2 equivalents of GHG emissions. We expect to replace AR4 GWPs with AR5 equivalents in the future, in line with international guidance.</p> <p>Sectors covered</p> <p>Energy (including transport); Industrial Processes and Product Use (IPPU); Agriculture; Land-use, Land-Use Change and Forestry (LULUCF); and Waste management.</p> <p>Gases covered</p>

²⁷ <https://www.gov.scot/policies/climate-change/>

		<p>CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃.</p> <p>Pools covered</p> <p>All LULUCF pools are included: above ground biomass, below ground biomass, litter, deadwood soil organic carbon and stocks of harvested wood products.</p> <p>Emissions factors not provided for by IPCC guidelines</p> <p>Scotland's climate change legislation requires that the calculation of a fair share of international aviation emissions attributable to Scotland includes a multiplier, or radiative force factor, to reflect the direct and indirect non-carbon dioxide impacts of emissions at altitude from international aviation. In line with advice from the UK Climate Change Committee, the multiplier is currently set at 1 (i.e. having the same effect as other emissions)²⁸.</p>
C (adjusted from ICTU)	How Scotland has taken into consideration the need to strive to include all categories of anthropogenic emissions or removals in their nationally determined contributions and, once a source, sink or activity is included, continue to include it.	<p>The measurement of Scotland's statutory emissions targets is required by domestic law to keep track with international carbon reporting practice, thereby ensuring that a comprehensive set of emissions and removals is considered. In practice this is achieved through the Scottish GHG inventory being a disaggregation of the UK national emissions inventory, which reflects up-to-date IPCC guidelines and is subject to regular scientific review from the UNFCCC.</p> <p>Scotland's statutory domestic emissions reduction targets also include a fair share of emissions from international aviation and shipping activity.</p>
4. Planning processes		
A (adjusted)	<i>Information on the planning processes that Scotland undertook to prepare its indicative nationally determined contribution and, if available, on Scotland's implementation plans, including, as appropriate:</i>	

²⁸ The Climate Change (International Aviation and Shipping) (Scotland) Order 2010: <https://www.legislation.gov.uk/ssi/2010/218/contents/made>

<p>from ICTU)</p>		
<p>a(i)</p>	<p>Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner</p>	<p><u>Domestic institutional arrangements</u></p> <p>The Scottish Government is the devolved government for Scotland and has a range of responsibilities, including climate change policy. The Scottish Parliament passes laws on devolved matters.</p> <p>Some powers that will be vital to Scotland’s achievement of its indicative nationally determined contribution and longer term net-zero transition, including fiscal and pricing elements of emissions trading, decisions on the future of the gas grid, investment in electricity network infrastructure, regulation on energy networks, vehicle standards and regulation of renewable energy investment, remain reserved to the UK Government. As such, UK Government action, in parallel to the decisions of the Scottish Government, is essential if Scotland is to meet its emissions reduction targets. The Scottish Government regularly communicates with the UK Government on areas where action is required, and works with the UK Government and devolved administrations of Wales and Northern Ireland to share best practice and research on climate change.</p> <p>Delivering Scotland’s climate change commitments, including this indicative nationally determined contribution, is a cross-ministerial effort led by the Cabinet Secretary for Net Zero, Energy and Transport, with the Minister for Just Transition, Employment and Fair Work, who is directly responsible for Just Transition planning and delivery, including the work of the Just Transition Commission. Key decisions on climate action are taken by the Scottish Cabinet²⁹.</p>

²⁹ <https://www.gov.scot/about/who-runs-government/cabinet-and-ministers/>

		<p>Scotland’s approach to tackling climate change is guided by independent expert advisers, including the UK Climate Change Committee³⁰ and the Scottish Just Transition Commission³¹.</p> <p><u>Domestic Legislation</u></p> <p>Scotland has its’ own distinct framework of statutory climate change targets set under the Climate Change (Scotland) Act 2009, as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. This legislation includes targets for Scotland to reach net-zero GHG emissions by 2045 and interim targets of 56%, 75% and 90% reductions in emissions by 2020, 2030 and 2040 respectively, relative to a 1990/1995 baseline. Progress towards these targets also contributes to achievement of UK-wide targets.</p> <p><u>Policy Measures</u></p> <p>Scotland’s transition to net-zero emissions sits at the heart of Scotland’s National Performance Framework³², Programme for Government³³, and Scottish Budget³⁴.</p> <p>In addition, Scotland’s climate change legislation requires regular climate change plans setting out specific policies and proposals as a delivery plan for meeting the targets.</p> <p>Scotland’s current Climate Change Plan was first published in 2018 and updated in December 2020 to reflect the targets set in the Climate Change (Scotland) Act 2009, as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, as part of a green recovery from the impacts of COVID-19.</p>
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³⁰ <https://www.theccc.org.uk/>

³¹ <https://www.gov.scot/groups/just-transition-commission/>

³² <https://nationalperformance.gov.scot/>

³³ <https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/>

³⁴ <https://www.gov.scot/budget/>

		<p>Focussed on the period up to 2032, the updated Plan includes more than 100 new policies and proposals, and also increases the ambition of more than 40 other policies, to cut greenhouse gas emissions across all sectors of the Scottish economy.</p> <p><u>Public participation and engagement</u></p> <p>The transformation of Scotland’s society and economy to net-zero emissions can by no means be delivered by Government alone. Meeting Scotland’s emissions reduction targets will only be possible as a shared national endeavour.</p> <p>In Scotland, we have taken a people-centred approach to policy making for a number of years and are building on this with our new Public Engagement Strategy for climate change. Through research³⁵ we have seen that public concern for climate change has risen over recent years and we are now looking to build on this by putting people and communities at the heart of our approach to a just transition to net-zero emissions.</p> <p>The scale of change necessary to meet Scotland’s emissions reduction targets will impact on the lives of all of Scotland’s people. Scotland’s independent Climate Assembly gave over one hundred people, from across Scotland, with different views and life experiences, a voice in deciding how this should happen. The citizens’ assembly was tasked to consider how to prevent or minimise, or remedy or mitigate the effects of climate change; and make recommendations on measures proposed to achieve the emissions reduction targets. Assembly members ranged in age from 16 to 82 and children’s voices were integrated in the assembly through work with the Children’s Parliament.</p> <p><u>Role of public bodies</u></p> <p>The Climate Change (Scotland) Act 2009 placed public bodies under a duty to contribute to the delivery of Scotland’s national emissions reduction</p>
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³⁵ <https://www.climatechange.org.uk/research/projects/understanding-and-engaging-the-public-on-climate-change/>

		<p>targets and adaptation programme, and to act sustainably. Under secondary legislation in 2015, around 180 listed bodies are required to report annually on compliance with these duties. These reporting bodies include local authorities, NHS bodies, Further and Higher Education Institutes, national devolved public bodies, and the Scottish Ministers which includes the Scottish Government and executive agencies. The 2015 Order was strengthened in November 2020 requiring the listed public bodies to report on, where applicable:</p> <ul style="list-style-type: none"> • the body’s target date for achieving zero direct emissions of greenhouse gases, or such other targets that demonstrate how the body is contributing to Scotland achieving its emissions reduction targets; and • targets for reducing indirect emissions of greenhouse gases. <p><u>Budgets</u> For each year's Scottish Budget, the Scottish Government publish an accompanying high-level carbon assessment which estimates how government spending plans will impact on emissions³⁶.</p>
<i>a(ii)</i>	<i>Contextual matters, including, inter alia, as appropriate:</i>	
a(ii)a	National circumstances, such as geography, climate, economy, sustainable development and poverty eradication	Scotland is part of the United Kingdom and occupies the northern third of Great Britain. It is home to almost 800 small islands ³⁷ . Summaries of Scotland’s regional climate are available on the Met Office website ³⁸ . Scotland’s population in 2019 was 5.4 million ³⁹ . Statistical publications relating to Scotland's economy are available on the Scottish Government website ⁴⁰ .

³⁶ Further information on the Scottish Budget and associated documents is available on the Scottish Government website: <https://www.gov.scot/budget/>

³⁷ <https://www.scotland.org/>

³⁸ <https://www.metoffice.gov.uk/research/climate/maps-and-data/regional-climates/index>

³⁹ From the Mid-2019 population estimates Scotland publication available at: <https://www.nrscotland.gov.uk/statistics-and-data/statistics/scotlands-facts/population-of-scotland>

⁴⁰ <https://www.gov.scot/collections/economy-statistics/>

		<p>Scotland's National Performance Framework (NPF)⁴¹ is Scotland's 'wellbeing framework', recognising that societal wellbeing will increase when social outcomes, environmental outcomes, economic outcomes and democratic outcomes are all being delivered and are in balance. The Scottish Government has published an assessment of the impact of COVID-19 on Scotland's wellbeing⁴².</p> <p><u>Sustainable development and poverty eradication</u></p> <p>The Scottish Government has committed to achieving the UN Sustainable Development Goals (SDGs). Scotland's National Performance Framework (NPF) is our main vehicle to deliver and localise the SDGs. The NPF shares the same aspiration for social, environmental and economic improvements, defining the country's success as more than just growth in GDP. The Scottish Government contributed to the UK Government's Voluntary National Review on the SDGs published in June 2019⁴³. In collaboration with the SDG Network Scotland and COSLA, the Scottish Government published a report in 2019 which brings together evidence, actions and stories of how we are making progress to meet the SDGs in Scotland⁴⁴.</p> <p>Scotland's statutory climate change adaptation programme is closely aligned with the UN SDGs (see Part 3), and Scotland's climate change legislation also places the Goals at the heart of the process for developing future Climate Change Plans.</p> <p>Sustainable development is at the heart of the planning system in Scotland. National Planning Framework is a spatial strategy for Scotland's long term development and the Planning (Scotland) Act 2019</p>
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⁴¹ <https://nationalperformance.gov.scot/>

⁴² <https://nationalperformance.gov.scot/scotlands-wellbeing-impact-covid-19>

⁴³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/816887/UK-Voluntary-National-Review-2019.pdf

⁴⁴ <https://nationalperformance.gov.scot/index.php/sustainable-development-goals>

		sets out six outcomes that the National Planning Framework should contribute towards, including: meeting greenhouse gas emissions reduction targets; and improving equality and eliminating discrimination. Preparation of the National Planning Framework must also have regard to the Scottish Climate Change Adaptation Strategy. As of September 2021, the National Planning Framework is under review and more information is available from www.transformingplanning.scot .
a(ii)b (adjusted from ICTU)	Best practices and experience related to the preparation of Scotland's indicative nationally determined contribution	<p>The legislative proposals for Scotland's emissions reduction targets were informed by advice from the Scottish Government's statutory independent expert advisers, the UK Climate Change Committee and were subject to public consultation⁴⁵ and extensive Parliamentary scrutiny⁴⁶.</p> <p>Whenever Scotland's statutory targets are reviewed (the Act requires this to occur at least every 5 years), this is done with reference to a set of defined criteria – one of which is the goal of not exceeding the “fair and safe” Scottish emissions budget for total emissions over the period 2010 to 2050. The level of this budget is set directly from the independent expert advice of the UK Climate Change Committee, in line with the principles set out in article 3 of the United Nations Framework Convention on Climate Change, contributing appropriately to the holding of the increase in global average temperature to well below 2°C above pre-industrial levels, and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.</p>
a(ii)c (adjusted from ICTU)	Other contextual aspirations and priorities acknowledged in context of the Paris Agreement	<p><u>Food security and policy</u></p> <p>The Scottish Government has committed to achieving the UN SDGs, including Goal 2 on ending hunger, achieving food security and improved nutrition and promoting sustainable agriculture. The SDGs are incorporated in Scotland's National Performance Framework, ensuring</p>

⁴⁵ <https://consult.gov.scot/energy-and-climate-change-directorate/climate-change-bill/>

⁴⁶ <https://beta.parliament.scot/bills-and-laws/bills/climate-change-emissions-reduction-target-scotland-bill>

		<p>that these objectives are increasingly located at the centre of policy-making and delivery.</p> <p><u>Ocean and marine environment</u></p> <p>The second Scottish Climate Change Adaptation Programme⁴⁷ responds to the main climate risks for Scotland (see Part 3). One of seven outcomes relates to the marine environment and sets out actions aimed at achieving the long-term outcome that our coastal and marine environment is valued, enjoyed, protected and enhanced, and has increased resilience to climate change.</p> <p><u>Terrestrial biodiversity</u></p> <p>The Scottish Government is committed to delivering improved and enduring benefits to the natural environment through the Environment Strategy for Scotland⁴⁸. Sitting beneath this, a new Scottish Biodiversity Strategy⁴⁹ will be prepared to take account of the new global biodiversity framework and targets to deliver the Convention on Biological Diversity's 2050 vision. The Scottish Biodiversity Programme⁵⁰ has been created to coordinate all activity on biodiversity including the development of a future strategic framework for biodiversity in Scotland.</p> <p><u>Education and skills</u></p> <p>The Scottish Government's Climate Emergency Skills Action Plan⁵¹ sets out short and long term actions to support the skills needed for a green recovery and just transition to net-zero. Actions include establishing a new Green Jobs Workforce Academy to support existing employees, and those who are facing redundancy, to assess their existing skills and</p>
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⁴⁷ <https://www.gov.scot/publications/climate-ready-scotland-second-scottish-climate-change-adaptation-programme-2019-2024/>

⁴⁸ <https://www.gov.scot/publications/environment-strategy-scotland-vision-outcomes/>

⁴⁹ <https://www.gov.scot/policies/biodiversity/scottish-biodiversity-strategy/>

⁵⁰ <https://www.nature.scot/scottish-biodiversity-programme-overview>

⁵¹ <https://www.skillsdevelopmentscotland.co.uk/media/47336/climate-emergency-skills-action-plan-2020-2025.pdf>

		<p>undertake the necessary upskilling and reskilling they need to secure green job opportunities as they emerge. In addition, Scotland’s Curriculum for Excellence⁵², incorporates an emphasis on the cross-cutting theme of Learning for Sustainability – a term that brings together sustainable development education, global citizenship and outdoor learning. The Learning for Sustainability Action Plan⁵³ will help to ensure that all children and young people in Scotland have the opportunity to experience this vital area of education.</p> <p><u>Sustainable lifestyles and sustainable patterns of consumption and production</u></p> <p>The Scottish Government recognises the transition to net-zero will require significant lifestyle changes. Scotland’s Heat in Buildings Strategy⁵⁴ sets out the pathway to achieving net-zero emissions from Scotland’s buildings, and making them warmer, greener and more efficient, by 2045. Scotland’s National Transport Strategy⁵⁵ sets out the commitment to implement a sustainable travel hierarchy, which encourages people to make active travel and public transport choices that minimise the long term impacts on the climate and improve the lives of future generations by promoting health and wellbeing. Scotland’s Making Things Last strategy⁵⁶ sets out priorities to moving towards a more circular economy – where products and materials are kept in high value use for as long as possible.</p> <p><u>Health and air pollution</u></p>
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⁵² <https://scotlandscurriculum.scot/>

⁵³ <https://www.gov.scot/publications/learning-for-sustainability-vision-2030-action-plan/>

⁵⁴ <https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings-consultation/>

⁵⁵ <https://www.transport.gov.scot/our-approach/national-transport-strategy/>

⁵⁶ <https://www.gov.scot/publications/making-things-last-circular-economy-strategy-scotland/>

		<p>The Scottish Government published its Cleaner Air for Scotland strategy⁵⁷ in 2015 setting out a series of actions for improving air quality across a wide range of policy areas, including co-ordinated action for delivering co-benefits for both air pollutant and GHG reductions. Following an independent review of the strategy in 2019, which made recommendations for additional action on air pollution over the period 2021-2025⁵⁸, a consultation on a draft new air quality strategy for Scotland took place between October 2020 and January 2021⁵⁹. The final strategy –‘Cleaner Air for Scotland 2- Towards a Better Place for Everyone’⁶⁰– was published in July 2021, setting out the air quality policy framework for the period 2021 to 2026 with a continued focus on delivery co-benefits for air pollutant and greenhouse gas reductions.</p> <p><u>Support for developing countries</u></p> <p>Since 2012 we have supported communities in three of our international development partner countries (Malawi, Zambia, and Rwanda) build more resilient and equitable communities through our Climate Justice Fund. The Fund adheres to Scottish Government’s wider International Development Principles⁶¹, where embedded into the principle of ‘Innovate, adapting and sustainable’ is the understanding that the transition to net-zero must be just and must support increasing resilience to climate change. The International Development Principles have been adopted in other policy areas such as Health, Trade and Education, ensuring climate change is incorporated across Scotland’s international work.</p>
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⁵⁷ <https://www.gov.scot/publications/cleaner-air-scotland-road-healthier-future/>

⁵⁸ <https://www.gov.scot/publications/cleaner-air-scotland-strategy-independent-review/>

⁵⁹ <https://consult.gov.scot/environmental-quality/cleaner-air-for-scotland-2>

⁶⁰ <https://www.gov.scot/publications/cleaner-air-scotland-2-towards-better-place-everyone/>

⁶¹ <https://www.gov.scot/publications/coronavirus-covid-19-international-development-review-principles/>

C (adjusted from ICTU)	How Scotland's preparation of its indicative nationally determined contribution has been informed by the outcomes of the global stocktake, referred to in Article 4, paragraph 9, of the Paris Agreement	<p>The Scottish Government published its' response to the Talanoa Dialogue⁶² in November 2018. Since then, Scotland has raised the ambition of our national emissions targets through the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.</p> <p>Scotland's end target of net-zero emissions of all greenhouse gases by 2045 is based on what the UK Climate Change Committee advises to be in line with the 'highest possible ambition' as called for by the Paris Agreement. Scotland's 2030 target of a 75% reduction, which forms the basis of this indicative nationally determined contribution, goes beyond what the Intergovernmental Panel on Climate Change says is needed globally to prevent warming of more than 1.5°C⁶³.</p>
6. How Scotland considers that its indicative NDC is fair and ambitious in the light of its national circumstances		
A (adjusted from ICTU)	How Scotland considers that its indicative nationally determined contribution is fair and ambitious in the light of its national circumstances	Scotland's 2030 target of a 75% reduction goes beyond what the Intergovernmental Panel on Climate Change says is needed globally to prevent warming of more than 1.5°C.
B	Fairness considerations, including reflecting on equity	Scotland's climate change legislation places the principles of climate justice, just transition ⁶⁴ , and the achievement of the UN Sustainable Development Goals, at the heart of the process for developing future Climate Change Plans. The legislation also sets, based solely on independent expert advice, a fair and safe emissions budget for the total level of national emissions over the period from 2010 to 2050.

⁶² <https://unfccc.int/documents/184020>

⁶³ <https://www.ipcc.ch/sr15/>

⁶⁴ The climate justice, and just transition, principles are defined respectively by sections 35(23) and 35C of the Climate Change (Scotland) Act 2009: <https://www.legislation.gov.uk/asp/2009/12/contents>

C (adjusted from ICTU)	How Scotland's target reflects Article 4, paragraph 3, of the Paris Agreement ⁶⁵	The level of Scotland's statutory 2030 emissions target, which forms the basis of this indicative nationally determined contribution, was raised through the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 beyond the equivalent level previously committed to in domestic legislation. The bringing forward of the new legislation by the Scottish Government was directly in response to the Paris Agreement.
D (adjusted from ICTU)	How Scotland's target reflects Article 4, paragraph 4, of the Paris Agreement ⁶⁶	Scotland's indicative nationally determined contribution for 2030 is an economy-wide absolute emissions reduction target, consistent with Article 4.4 of the Paris Agreement.
7. How the indicative nationally determined contribution is consistent with efforts to achieving the objective set out in Article 2 of the UNFCCC		
A (adjusted from ICTU)	How Scotland's indicative nationally determined contribution is consistent with efforts to achieving the objective of Article 2 of the UNFCCC ⁶⁷	Scotland's statutory emissions reduction targets, including the 75% target for 2030 which forms the basis of this indicative nationally determined contribution and the net-zero target date of 2045 at the latest, represents Scotland's contribution to the international objective of stabilising GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Scotland's climate change legislation also sets, based solely on independent expert advice, a fair and safe emissions budget for the total level of national emissions over the period from 2010 to 2050.
B (adjusted from ICTU)	How Scotland's indicative nationally determined contribution is consistent with Article 2, paragraph 1(a), and	The 75% level of Scotland's statutory emissions reduction target for 2030, which forms the basis of this indicatively determined contribution, goes beyond what the Intergovernmental Panel on Climate Change says is needed globally to prevent warming of more than 1.5°C.

⁶⁵ The Paris Agreement is available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

⁶⁶ Ibid

⁶⁷ The United Nations Framework Convention on Climate Change is available at: <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>

	Article 4, paragraph 1, of the Paris Agreement ⁶⁸	On the basis used for reporting progress to statutory targets, Scotland is already well past peak emissions. Scotland has set a statutory target to reach net-zero emissions by 2045 at the latest.
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⁶⁸ The Paris Agreement is available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

PART 3: FURTHER INFORMATION ON SCOTLAND'S ACTION ON ADAPTATION AND RESILIENCE⁶⁹

(a) National circumstances, institutional arrangements and legal frameworks;

The Climate Change (Scotland) Act 2009 sets the statutory framework for Scotland to adapt to climate change. The legislation requires a programme for climate change adaptation to be set out every 5 years. This must address risks identified in the statutory UK Climate Change Risk Assessments (UKCCRA), which are also updated every five years, based on independent expert advice.

Annual reports are required on progress towards achieving the goals of the Adaptation Programme⁷⁰. Regular independent assessments of how well Scotland is preparing for climate change are also published by the UK Committee on Climate Change⁷¹.

The Scottish Government also funds the Adaptation Scotland programme⁷² to support capacity building and action on adaptation by the public sector, businesses and communities in Scotland. This includes developing Scotland's pioneering place-based approach to climate change adaptation. The programme also supports public bodies to develop adaptation capabilities that enable them to take adaptation action at the right time and in an effective way through their award-winning Adaptation Capability Framework.

(b) Impacts, risks and vulnerabilities, as appropriate;

Climate projections from the UK Met Office provide key information about recent climate trends in Scotland, and projections on how these changes are likely to continue and intensify in coming decades. These find that Scotland will experience warmer, wetter winters with more intense rainfall events, hotter drier summers with greater extremes, and that sea levels will continue to rise⁷³.

The most recent complete (2017) UKCCRA then draws from these projections to identify the priority climate risks specific to Scotland⁷⁴. The risks are categorised by whether more action is needed immediately, whether the evidence base needs improving, whether current action is sufficient or whether the risks should be kept under a watching brief. The risks cover the natural environment, infrastructure, people and the built environment, business and industry, international and issues which cut across these themes. The evidence reports for the next (2022) update of the UKCCRA were published by the UK Climate Change Committee in June 2021⁷⁵.

⁶⁹ Headings in Part 3 are from UNFCCC guidance on what an adaptation communication may include (for further information on adaptation communications see the UNFCCC website at <https://unfccc.int/>). Where a heading is not applicable or relevant to Scotland, it has been omitted.

⁷⁰ Annual progress reports are available at: <https://www.gov.scot/policies/climate-change/climate-change-adaptation/> and for 2021: <https://www.gov.scot/publications/scottish-climate-change-adaptation-programme-progress-report-2021/>

⁷¹ <https://www.theccc.org.uk/>

⁷² <https://www.adaptationscotland.org.uk/>

⁷³ <https://www.adaptationscotland.org.uk/why-adapt/climate-trends-and-projections>

⁷⁴ A national summary for Scotland: <https://www.theccc.org.uk/uk-climate-change-risk-assessment-2017/national-summaries/scotland/>

⁷⁵ The Climate Change Committee's evidence reports are available at: <https://www.ukclimaterisk.org/>

(c) National adaptation priorities, strategies, policies, plans, goals and actions;

The statutory 2019 Scottish Climate Change Adaptation Programme (“the Programme”) sets out around 170 policies and proposals to respond to the risks to Scotland published in the 2017 UK Climate Change Risk Assessment over the period to 2024⁷⁶.

The Programme takes an outcomes-based and people-centric approach to climate change adaptation in Scotland. This cross-cutting approach promotes co-benefits and integrates adaptation into wider Scottish Government policy development and service delivery. The seven high level outcomes – closely aligned to the UN Sustainable Development Goals (see diagram 1 on following page) – are as follows:

- Outcome 1: Our communities are inclusive, empowered, resilient and safe in response to the changing climate
- Outcome 2: The people in Scotland who are most vulnerable to climate change are able to adapt and climate justice is embedded in climate change adaptation policy
- Outcome 3: Our inclusive and sustainable economy is flexible, adaptable and responsible to the changing climate
- Outcome 4: Our society’s supporting systems are resilient to climate change
- Outcome 5: Our natural environment is valued, enjoyed, protected and enhanced and had increased resilience to climate change
- Outcome 6: Our coastal and marine environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change
- Outcome 7: Our international networks are adaptable to climate change

⁷⁶ A national summary for Scotland: <https://www.theccc.org.uk/uk-climate-change-risk-assessment-2017/national-summaries/scotland/>

Diagram 1: SCCAP2 Outcomes integrated with NPF and UN SDGs



Among the policies, frameworks and linked strategies to deliver these outcomes are⁷⁷.

- SEPA's second National Flood Risk Assessment⁷⁸, which gives a clear picture of flood risk in Scotland. The Scottish Government is also accelerating investment in flood risk and coastal change adaptation as part of a green and resilient recovery from the impacts of COVID-19.
- The Scottish Government's Land Use Strategy^[1] has a place-based focus and sets out our long term vision for sustainable land use in Scotland, our objective and key-policies for delivery. Climate change adaptation is integrated

⁷⁷ For further policies, please see Part 3 e(i)) of this document.

⁷⁸ <https://www.sepa.org.uk/data-visualisation/nfra2018/>

throughout the Strategy as is the positive role that both nature based solutions and wider green and blue infrastructure can have in helping Scotland to achieve its various national targets and priorities.

- A package of Community Adaptation Action resources⁷⁹ which describe 20 practical actions that communities can take to increase resilience and adapt to changes in the climate.
- Scottish Water's 25-year strategic plan – Our Future Together⁸⁰ – outlines the impact of the changing climate and how the organisation will reduce emissions to become net-zero by 2040. The plan highlights how future investment in vital infrastructure and assets, must combine with innovative and sustainable ways of dealing with climate change and supporting economic growth.
- NatureScot has developed eight Adaptation Principles⁸¹ which contribute to natural environment climate change adaptation work and uses these principles in land management and advice on the effects of climate change on species and habitats.
- Scotland's Forestry Strategy⁸² aims to improve the resilience of Scotland's forests and woodlands, and increase their contribution to a healthy and high quality environment.
- The Marine Climate Change Impacts Partnership (MCCIP)⁸³, brings together scientists, policy makers, government agencies and NGOs to provide coordinated advice on climate change impacts and adaptation in the seas around the coast.

The Programme also includes a comprehensive research programme which aims to address evidence gaps around adaptation in Scotland and inform research-led policy making. Recent areas of focus include building the evidence around soil health and its vulnerability to climate change and the impacts of climate change on delivery of social care services.

(d) Implementation and support needs of, and provision of support to, developing country Parties;

The Scottish Government recognises that climate change adaptation requires international cooperation and also, as part our commitment to championing climate justice, that those who experience the greatest impacts may need more support to adapt. In recognition of the need for increased climate finance globally, the Scottish Government has committed to double our Climate Justice Fund over the next four years.

The Climate Justice Fund embodies the practical action the Scottish Government is taking to support developing countries. Through the Climate Justice Fund's programmes of the Climate Challenge Programme Malawi (CCPM) and the Climate Justice Innovation Fund (CJIF), we have supported some of the most vulnerable communities in Malawi, Zambia and Rwanda to address their respective climate

⁷⁹https://www.adaptationscotland.org.uk/application/files/5014/9303/8415/Community_Adaptation_Actions_Report_Updated_2017.pdf

⁸⁰<https://www.scottishwater.co.uk/about-us/what-we-do/our-future-together>

⁸¹<https://www.nature.scot/climate-change/helping-nature-adapt>

⁸²<https://www.gov.scot/publications/scotlands-forestry-strategy-20192029/>

⁸³<http://www.mccip.org.uk/>

challenges. Our gender responsive approach recognises that women are disproportionately impacted by climate change, yet systematically excluded from decision-making and access to climate finance. The Fund supports projects that increase women's meaningful participation.

In Malawi the CCPM takes a collaborative approach, helping communities to design and implement their own solutions. For example, addressing agricultural resilience through new irrigation schemes and training farmers in climate-resilient agricultural practices. The CCPM centres the voices of vulnerable rural dwellers, especially those not normally in leadership positions like women, in regional government discussions on climate action. Meanwhile the CJIF focuses on innovative solutions that empower women, youth and other vulnerable groups. Projects have included resilient coffee growing, biogas for sustainable energy for schools, artesian well capping or support for communities to hold NGOs and other service providers to account for water provision.

(e) Implementation of adaptation actions and plans, including:

(i) Progress and results achieved;

Progress is being made towards the implementation of the policies detailed in the current Scottish Climate Change Adaptation Programme. For example, since September 2019:

- The 2020-21 Programme for Government⁸⁴ is investing in our resilience to climate change as part of a green recovery from COVID-19, with additional support for flood risk management and coastal change adaptation. The Scottish Government has also launched its new Living with Flooding Action Plan⁸⁵ to promote the benefits of flood resilient properties.
- Dynamic Coast: Scotland's National Coastal Change Assessment⁸⁶ provides the evidence base of past and anticipated coastal changes on Scotland's erodible coast, to support better resilience and adaptation planning. The second phase, Dynamic Coast 2, considers how sea level rise could further accelerate erosion rates. This helps us to improve our coastline planning, ensuring that we protect the natural defences that are protecting Scotland's communities and assets from the sea.
- A key outcome of the Programme is ensuring that our society's supporting systems are resilient to climate change. With this goal in mind, the Scottish Government's Infrastructure Investment Plan⁸⁷ supports environmental sustainability and the transition to net-zero emissions.
- The Scottish Place Standard tool (PST)⁸⁸ is a simple and award-winning tool that can be used by communities and professionals to evaluate the

⁸⁴ <https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/>

⁸⁵ <https://www.gov.scot/publications/living-flooding-action-plan-delivering-property-flood-resilience-scotland>

⁸⁶ <http://dynamiccoast.com/>

⁸⁷ <https://www.gov.scot/publications/national-mission-local-impact-draft-infrastructure-investment-plan-scotland-202122-202526/>

⁸⁸ <https://www.placestandard.scot/>

physical, social and economic aspects of places with a view to identifying areas for improvement, A new version to be launched by the PST implementation partners⁸⁹ will incorporate enhanced prompts within relevant themes to strengthen the contribution of the tool towards informing place-based action around climate change adaptation (and mitigation). This will build on the existing strengths of the tool to deliver co-benefits around health and wellbeing, environment and tackling inequality as part of a just transition.

- The Planning (Scotland) Act 2019 has strengthened the role of climate change adaptation considerations in the planning process by requiring Ministers to have regard to statutory adaptation programmes when preparing future iterations of the National Planning Framework. The Act's provisions relating to the National Planning Framework were among the first to be commenced, in November 2019, enabling work to begin on Scotland's fourth National Planning Framework⁹⁰.
- Historic Environment Scotland has published a Guide to Climate Change Impacts on Scotland's Historic Environment⁹¹.
- The Scottish Fire and Rescue Service has published its Climate Change Response Plan to 2045⁹².
Further details on the progress of the implementation of the Scottish Climate Change Adaptation Programme is available in the second annual progress report to the Scottish Parliament (published May 2021)⁹³.

(iii) Cooperation on enhancing adaptation at the national, regional and international level, as appropriate;

Regional and National

The Scottish Government funds the Adaptation Scotland programme⁹⁴ to support capacity building and action on adaptation by the public sector, businesses and communities in Scotland, in support of the outcomes in the national Climate Change Adaptation Programme (see above).

Adaptation Scotland supports the development and expansion of regional initiatives within Scotland such as Climate Ready Clyde, Aberdeen Adapts, Edinburgh Adapts and Highland Adapts which are driving effective adaptation action across cities, regions, islands and localities, aligned with the interests and needs of communities. The programme also convenes expert working groups that enable cooperation and address challenges such as adaptation finance, climate justice and use of climate information.

International

⁸⁹ Scottish Government, Public Health Scotland, Architecture & Design Scotland, Glasgow City Council

⁹⁰ Further information on the Planning Reform work packages and National Planning Framework can be found at: www.transformingplanning.scot

⁹¹ <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=843d0c97-d3f4-4510-acd3-aadf0118bf82>

⁹² <https://www.fireScotland.gov.uk/media/2190438/climatechangeresponseplan2045.pdf>

⁹³ <https://www.gov.scot/publications/scottish-climate-change-adaptation-programme-progress-report-2021/>

⁹⁴ <https://adaptationscotland.org.uk/>

The Scottish Government recognises that climate change adaptation requires international cooperation and that, in line with our commitment to championing climate justice, those who experience the greatest impacts may need more support to adapt. As part of our commitment to international cooperation on adaptation, the Scottish Government signed an Adhesion Declaration to join the global RegionsAdapt initiative in October 2019. RegionsAdapt was created alongside the 2015 Paris Climate Conference (COP21) as a framework for regional governments' action, collaboration and reporting on climate change adaptation.

The Scottish Government also continues to engage on adaptation with the British and Irish governments as well as the governments of other Devolved Administrations through the British-Irish Council.

(iv) Barriers, challenges and gaps related to the implementation of adaptation;

The Scottish Government recognises that the COVID-19 pandemic has been a significant challenge to the implementation of adaptation policy. However, we are firmly committed to the delivery of a green, sustainable and inclusive recovery from the pandemic and recognise that a key part of this will be building greater resilience to the impacts of climate change as part of a just transition that prioritises fairness in our climate action. The pandemic impacts every area of society and emphasises the importance of systems that can be resilient to both immediate and longer-term challenges.

We also recognise that there are important ongoing knowledge gaps around adaptation and resilience. The 25 research outcomes set out in SCCAP2 aim to help fill these gaps. The global climate and nature emergencies are key drivers of evidence building and research across Scottish Government, as set out in the draft strategy for Environment, Natural Resources and Agriculture research for 2022-2027⁹⁵. Bodies such as ClimateXChange and the Centre of Expertise for Waters (CREW) play an important role in building this evidence base in Scotland.

(v) Good practices, lessons learned and information-sharing;

The Scottish Government recognises that sharing of good practices across the adaptation policy space is crucial to good collaboration. Adaptation Scotland has developed an Adaptation Capability Framework⁹⁶ which is being implemented across Scotland to encourage a change in the way that organisations adapt to climate change. It recognises that risk-based approaches cannot account for the complex processes required to bring about change in organisations and provides a holistic approach which matures over time and is used by the public sector, businesses and communities. In September 2020, Adaptation Scotland was awarded an IEMA Sustainability Impact Award for the Adaptation Capability Framework.

⁹⁵ <https://www.gov.scot/publications/draft-strategy-environment-natural-resources-agriculture-research-consultation/pages/5/>

⁹⁶ <https://www.adaptationscotland.org.uk/how-adapt/your-sector/public-sector/framework>

NatureScot has developed eight Adaptation Principles⁹⁷ to help nature adapt to climate change and to ensure we can continue to benefit from the ecosystem services such as clean water, flood risk management, biodiversity and carbon storage. These principles are tested, refined and demonstrated on our National Nature Reserves and monitored to see which adaptation methods work best in which situations. Case studies are published, so that others can benefit from this knowledge. To help track progress, they have also developed a set of adaptation indicators⁹⁸ with ClimateXChange. These can be used to assess how well Scotland's natural environment is adjusting to climate change.

(vi) Monitoring and evaluation;

The Climate Change (Scotland) Act 2009 includes a statutory framework for monitoring progress on adaptation. Under this framework, the Scottish Government reports annually to the Scottish Parliament on progress to the national Scottish Climate Change Adaptation Programme. Statutory independent assessments of these Programmes are also undertaken by the UK Climate Change Committee on a regular basis⁹⁹.

(f) Adaptation actions and/or economic diversification plans, including those that result in mitigation co-benefits;

The Scottish Government is implementing a number of initiatives which deliver co-benefits for both adapting to climate change and reaching net-zero. A key focus is Nature Based Solutions (see Part 1), but examples of these and other initiatives are detailed below:

- Increasing the adaptability and resilience of forests and woodlands is a priority within Scotland's Forestry Strategy 2019-2029 which also delivers co-benefits with mitigation efforts¹⁰⁰. The Strategy aims to increase forest and woodland cover to 21% of the total area of Scotland by 2032 as set out in Scottish Government's Climate Change Plan update¹⁰¹. Increasing forest area helps mitigate the impact of climate change through absorbing carbon from the atmosphere while contributing to natural flood management, providing shelter for livestock and improving biodiversity.
- The Scottish Government is investing in peatland restoration which delivers co-benefits through carbon sequestration and adaptation for natural habitats and flood risk management. This support demonstrates Scotland's commitment to nature-based solutions to the climate crisis and will enable large-scale restoration projects to be developed, enhancing biodiversity in some of the most important habitats in Europe and securing jobs in the rural economy.

⁹⁷ <https://www.nature.scot/climate-change/helping-nature-adapt>

⁹⁸ <https://www.climatexchange.org.uk/research/indicators-and-trends/>

⁹⁹ The 2019 Assessment is available at: <https://www.theccc.org.uk/publication/final-assessment-of-scotlands-first-climate-change-adaptation-programme/>

¹⁰⁰ <https://www.gov.scot/publications/scotlands-forestry-strategy-20192029/>

¹⁰¹ <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

- The Scottish Government is investing in active travel initiatives, which both reduces emissions and encourages individual adaptive action through providing alternative options when public transport and road infrastructure may be affected by extreme weather.

(g) How adaptation actions contribute to other international frameworks and/or conventions;

At a global level, Scotland supports the UN Paris Agreement on climate change, which puts a strong emphasis on adaptation and resilience, as well as the urgent need to reach net-zero global emissions of greenhouse gases. Scotland's adaptation actions are closely aligned with the UN SDGs (see Diagram 1 above). These form the structure of SCCAP2 and ensure that human rights and equity are central in guiding Scotland's policy approach to adaptation and resilience.

Scotland's adaptation actions on biodiversity, strengthening the resilience of the natural environment, contributes to achieving the UN Convention on Biological Diversity's (CBD) vision to 2050. Since biodiversity is fully devolved in Scotland, the Scottish Government has committed to reporting direct to the CBD on its performance against the twenty international targets agreed in 2010 in Aichi, Japan, alongside the UK Government's national report. We were the first country in the world to do so in 2015 and reported in 2021 on data to 2019. Our record against the international Aichi targets compares favourably with the global picture.

(h) Gender-responsive adaptation action and traditional knowledge, knowledge of indigenous peoples and local knowledge systems related to adaptation, where appropriate;

The Scottish Government takes a climate justice approach to tackling climate change both domestically and internationally, recognising that it is those least responsible for climate change who are suffering first and worst from its effects. Details of how our climate justice fund utilised a gender-responsive approach to adaptation that includes traditional and local knowledge is outlined in section (d).

One of the key outcomes of the current Scottish Climate Change Adaptation Programme is to ensure that the people in Scotland who are most vulnerable to climate change are able to adapt and that climate justice is embedded in climate change adaptation policy. Associated actions include involving vulnerable groups in climate action to engage and empower communities, and ensuring that our health and social care systems are resilient to climate change. This is exemplified in policies such as the Climate Emergency Skills Action Plan which embeds the principles of Fair Work (respect, opportunity, security, fulfilment and effective voice) in skills policies by actively targeting interventions at underrepresented groups, including, for example, targets for equal representation across apprenticeships to increase diversity.

Since 2017 the Scottish Government has supported The Women's Environment & Development Organization (WEDO) implement capacity building and training programmes for women - from Least Developed Countries (LDCs) and Small Island Developing States (SIDs) - to engage in UNFCCC international talks and supported

them to integrate gender considerations into the negotiation outcomes. Beyond providing travel and support, WEDO facilitates Night Schools on “UNFCCC Negotiations Skills & Technical Language Training”. While the curriculum of these events provides benefits, these night schools also provide a key opportunity for women delegates to connect and collaborate, with WEDO facilitating professional in-person networking events and mentoring. Scotland’s contribution has directly supported delegates from Bhutan, Mozambique, Djibouti, Bangladesh and Malawi attend climate conferences. WEDO also provide the skills and the knowledge needed to change the financial system and secure funding for gender-just, community-based climate solutions.



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Any enquiries regarding this publication should be sent to us at

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