



COP28: Key outcomes and next steps for the UK

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Dedication

This report is dedicated to the memory of our colleague, friend, and veteran of UN climate negotiations Pete Betts; Pete passed away in October 2023.

Pete spent 35 years as a UK civil servant, serving as Director of International Climate Change at Defra and subsequently DECC and its successor department BEIS for ten years from 2008-2018. During this time he worked closely with the Committee.

From 2010 to 2016 he was the Lead Negotiator for the European Union in the United Nations climate change negotiations. He was a key architect of the 2015 Paris Agreement, building relationships and finding common ground with all countries to enable its successful negotiation. This established the framework and goals for international climate action which we and many around the rest of the world now work to achieve every day.

Following his retirement from the UK Civil Service Pete worked for a number of international and UK organisations. He served as an expert advisor to the Climate Change Committee during 2020-2022, covering the 2021 United Nations COP26 climate negotiations hosted by the UK in Glasgow. His contribution to the Committee's work was immense.

Pete was dedicated to making progress on climate action through dialogue and negotiation. He combined a willingness to listen, understand, and recognise concerns with respectfully challenging positions and asking how more could be done. His passion, energy, and humour are much missed. We extend our deepest sympathies to his family and colleagues in climate across the world.



2023 was the warmest year on record and CO₂ emissions from fossil fuels are at their highest ever level.^{1,2} Against this backdrop, the negotiations at COP28 in Dubai made some important advances in efforts to coordinate and deliver global climate action through the conclusion of the first Global Stocktake, the operationalisation of the Loss and Damage Fund, the new Framework for the Global Goal on Adaptation, and others. Our Committee's report sets out the key outcomes from COP28 and assesses the UK's role and next steps.

- The Global Stocktake undertaken at COP28 marks the first formal assessment of progress of the Paris Agreement process, delivering an inventory of climate action to identify gaps and inform solutions. The results show that, while progress has been made following the Paris Agreement, actions at a global level remain far behind that which is urgently needed across emissions reduction, adaptation, and the finance required to underpin these.
- The Global Stocktake reinforced the growing momentum in renewables and other low-carbon technology deployment. Countries were called upon to support a trebling of renewables globally and to double the rate of energy efficiency improvements by 2030. Alongside this was the crucial brokering of recognition of the need to transition away from all fossil fuels to achieve a Net Zero energy system by 2050 as well as to undertake rapid action to reduce methane emissions.
- The critical role of natural systems in tackling climate change was reinforced through linking to the 2022 Kunming-Montreal Global Biodiversity Framework. This continued to bring international attention to the importance of preserving and restoring ecosystems on land and in the oceans.
- The agreement to operationalise the Loss and Damage Fund created the previous year at COP27 demonstrates that the UN climate negotiations can rapidly work to establish new instruments to help address climate impacts. However, the \$700 million presently pledged to the Fund is well below the expected need.
- The new Framework for the Global Goal on Adaptation is an important step forwards in an area that has received less attention in previous COP negotiations. The framework sets out thematic targets for what global adaptation efforts should be seeking to achieve alongside process targets which should help support improved adaptation policy development. These will be further developed through a new two-year work programme on indicators for measuring progress on adaptation.
- The gap in finance remains a major barrier to accelerating action across all areas. The Global Stocktake recognised the need for multitrillion-dollars of investment globally and lends support to the proposals and ongoing efforts to better leverage a wide range of finance mechanisms to unlock financing at this scale.

- Outside the formal UNFCCC process, various sectoral initiatives started during the UK presidency of COP26 continued to develop. These are becoming an established part of the international climate action landscape; there is a growing need for robust progress monitoring to track how they are delivering against the mitigation, adaptation, and finance goals of the Paris Agreement.

The UK played an important role in facilitating the negotiations at COP28. It pledged financial support for both mitigation and adaptation initiatives and continued its strong backing of key initiatives.

- The UK's commitment to its ambitious 2030 emissions target, progress in decarbonising the power sector, and new low-carbon measures such as the Zero Emissions Vehicle mandate provide a powerful example of transitioning away from fossil fuels. The effectiveness of the UK's underpinning climate governance framework and its strength in climate diplomacy is widely recognised.
- However, the Prime Minister's Net Zero speech in September 2023, was reported widely around the world. Coupled with UK decisions to approve a new coal mine and license new oil and gas production, it contributed to a perception of slowing UK climate ambition among COP28 delegates. Strong, consistent domestic policy and communications on climate that avoid mixed messaging are crucial to be able to robustly advocate for high climate ambition internationally.

The Global Stocktake marks the midway point in the five-year cycle of the Paris Agreement. Focus will now turn, via COP29 in Azerbaijan, towards countries developing their Nationally Determined Contributions (NDC) emissions reduction pledges for 2035. These are due for submission to the UN in early 2025 ahead of COP30 in Brazil. The upcoming round of NDCs will be submitted in the context of a world approaching 1.5°C warming and experiencing worsening climate impacts, but potentially turning the corner to begin reducing greenhouse gas emissions.

The UK can continue to lead by example and support actions elsewhere to accelerate the pace of the low-carbon transition and develop resilience to climate impacts. It must demonstrate delivery towards its ambitious 2030 and 2035 targets on the path to Net Zero, set a clear plan to reduce methane across all sectors this decade, and strengthen the National Adaptation Programme to fully align with the Framework on the Global Goal on Adaptation.

- The CCC's forthcoming UK Seventh Carbon Budget advice, due to be published in early 2025, will also consider the 2035 NDC. The Fourth Independent Assessment of UK Climate Risk, due in 2026, will also support the UK to continue the journey to achieving a resilient Net Zero future.
- The CCC will continue to support and contribute towards the UK's international climate action objectives. Through its membership of the International Climate Councils Network, established at COP26, the CCC works closely with equivalent climate advice organisations around the world to provide support and share learnings on effective approaches to common challenges. The CCC also provides support to international partners in carbon budgets and climate risk and adaptation assessment through the UK Partnering for Accelerated Climate Transitions programme.

1.1 COP28 key outcomes

The annual UN climate change conference (Box 1.1), otherwise known as the COP, took place between 30 November and 14 December 2023 in the United Arab Emirates. COP28 marked the endpoint of the first 'Global Stocktake' (Box 1.2), a process committed to under the 2015 Paris Agreement with the aim of assessing progress to support an increase in global climate ambition. The summit took place against a backdrop of worsening extreme weather events across the world, during a year that has been confirmed as the warmest on record.¹ With extensive flooding in Ethiopia, Kenya, and Somalia displacing more than 700,000 people and record-breaking wildfires in Canada and the USA as just two examples, the need for international action on climate is increasingly urgent.^{3,4}

This section summarises the main outcomes of COP28, both under the official UNFCCC process and additional advances in areas such as shipping, food, and health that occurred outside the formal process. It also highlights actions that the UK and other countries will need to take to translate the negotiated agreements into real-world action.

It is set out in three sub-sections:

- 1.1.1 Outcomes on mitigation
- 1.1.2 Outcomes on adaptation and loss and damage
- 1.1.3 Outcomes on finance

Box 1.1 Background on the UNFCCC

The UNFCCC is an international agreement that commits countries to efforts to stabilise greenhouse gas concentrations to prevent dangerous, human-induced climate change. The 'COP' (Conference of the Parties) is the main decision-making body of the UNFCCC, made up of the countries that are UNFCCC signatories. The annual COPs organise multilateral action to limit climate change and increasingly act as a focal point for actions and commitments by additional actors outside the official UNFCCC process.

COP21 in 2015 created the Paris Agreement, a global treaty that commits countries to mitigation, adaptation, and finance goals:

- Limiting global average temperature to well below 2°C and pursuing efforts to limit temperate increase to 1.5°C.
- Strengthen the ability to adapt to climate change and build resilience.
- Align finance flows with a pathway towards low greenhouse gas emissions and climate-resilient development.

While there is no global definition of loss and damage, it generally concerns the losses and damages that occur at the limits of adaptation, when climate impacts cannot or have not been adapted to. This issue is also discussed at COPs.

Source: UN (1992) United Nations Framework Convention on Climate Change; UNFCCC (2015) Paris Agreement, UNFCCC (2021) CMA.3 Glasgow Climate Pact.

Box 1.2

The first Global Stocktake under the Paris Agreement

The Global Stocktake was set up by the Paris Agreement to monitor and assess collective progress towards the Agreement's long-term goals on mitigation, adaptation, and finance.⁵ This process occurs every five years, with the first Global Stocktake concluding at COP28. It is an essential part of the Paris 'ratchet' mechanism that countries should use to guide decisions on the necessary ambition of future commitments to address climate change.

Led by the UNFCCC secretariat, the two-year 'technical' phase involved consultations with a diverse range of actors including governments, scientists, and civil society. The purpose of this process is to highlight existing gaps on action across mitigation, adaptation, and finance and lead countries to develop solutions to close the gaps. The findings from this phase were published in a synthesis report by the UNFCCC secretariat prior to COP28. This synthesis report concluded that countries were off-track across all long-term goals of the Paris Agreement:

- **Emissions reduction.** Progress has been made since the creation of the Paris Agreement in 2015, with NDCs lowering estimates of expected warming this century. However, 2030 emissions targets are unaligned with global emissions trajectories consistent with limiting warming to well below 2°C and as close to 1.5°C as possible. Time is running out to address gaps in both ambition and implementation. Reaching Net Zero CO₂ and for the sum of all greenhouse gases will require transformations across sectors. Globally, we will need to rapidly scale up renewables, phase out unabated fossil fuels and restore and protect natural ecosystems.
- **Adaptation.** Progress has been made on adaptation planning and implementation (especially in developing countries), but efforts are still fragmented, sector-specific, and unequally distributed across regions. Finance for adaptation and funding for averting, minimising, and addressing loss and damage needs to be rapidly scaled up. Additional focus is required on transparent reporting and consideration of local contexts to improve implementation.
- **Finance.** Though climate finance from developed to developing countries has increased since the Paris Agreement, the volume of finance deployed for mitigation and adaptation needs to be rapidly scaled up and developing and emerging economies' access to finance must be improved. Action is needed to ensure that funds from a variety of sources including public finance, private finance, and domestic spending are made consistent with low-greenhouse gas pathways and climate-resilient development. Barriers to the deployment of new investment must be addressed.

COP28 was tasked with using this information in the 'political' phase of the Global Stocktake to agree solutions that address these gaps and help countries get 'on track' to meeting the goals of the Paris Agreement. Section 1.1 assesses the extent to which the summit succeeded in producing these solutions, both in the negotiations and more widely.

Source: UNFCCC (2023) [Technical Dialogue of the First Global Stocktake: Synthesis report by the co-facilitators of the technical dialogue](#).

Notes: References to 'climate finance' in this document cover both public finance (such as bilateral loans and grants between national governments, climate-related export credits and finance provided by multilateral development banks) and private investment.

1.1.1 Outcomes on mitigation

Efforts to reduce emissions are at the centre of discussions at COPs. Limiting warming to well below 2°C and as close to 1.5°C as possible is needed to secure a safe future for our planet, and the Global Stocktake has reemphasised the fact that current 2030 NDC ambition does not put the world on track to achieve this goal. With global CO₂ emissions expected to have reached their highest ever level in 2023 (Box 1.3), urgent and concerted action is needed in this decade.

The routes to international mitigation progress at the COP are expanding. Actors are increasingly looking to the negotiations for official signposting on key areas for future mitigation action, as well as technical details on how key aspects of the Paris Agreement will operate. In addition, there is growing focus on the parallel process of voluntary commitments and initiatives, with both countries and non-state actors looking to demonstrate that UNFCCC language can be translated into real-world progress by coalitions of the willing. We assess progress in both areas.

Box 1.3

Climate warming and future emission trends

The latest estimates of warming and assessments of global decarbonisation targets and plans show the world remains off track, but that the low-carbon transition is gathering pace. Key assessments are summarised in this box.

The World Meteorological Organization have confirmed that 2023 was the warmest year on record. The Intergovernmental Panel on Climate Change (IPCC) has warned that climate risks and impacts will increase with every increment of warming, with risks becoming increasingly complex and difficult to manage. Efforts must increase and accelerate with the aim of preventing every additional decimal point of warming.

- **Greenhouse gas emissions.** The annual Global Carbon Budget analysis projects CO₂ emissions from fossil fuels to have increased by 1.1% in 2023, reaching their highest levels to date. However, the rate of growth in total CO₂ emissions has slowed due to slower growth in fossil emissions and small but uncertain reductions in CO₂ emissions from land-use change. Initial estimates for 2022 atmospheric methane concentrations also show a continued rise.
- **UNEP Emissions Gap Report.** Current 2030 NDCs represent insufficient ambition and very few additional emissions reduction commitments were made in 2023. The next round of NDCs for 2035 must bring emissions in line with pathways that are compatible with limiting emissions to well below 2°C and as close to 1.5°C as possible and compensate for the ambition gap this decade.
- **IEA World Energy Outlook.** The global energy system was assessed to be on the cusp of shifting away from fossil fuels, with demand for coal, oil and gas all forecast to peak in the coming years under present policies. Though investment in clean energy has grown 40% since 2020, investment in oil and gas today is double the level required by the IEA Net Zero Emissions Scenario in 2030. The separately authored Production Gap report provides further evidence that investment in fossil fuels is not reducing quickly enough, showing that globally aggregating governments' current plans and projections suggests a level of fossil fuel production double the amount deemed consistent with 1.5°C pathways.

Source: World Meteorological Organization (2023) *Provisional State of the Global Climate in 2023*; Friedlingstein et al. (2023) *Global Carbon Budget 2023*, Earth Systems Science Data, 15, 5301 – 5369; NOAA Global Monitoring Laboratory (2024) *Trends in globally-averaged CH₄, N₂O, and SF₆*; United Nations Environment Programme (2023) *Emissions Gap Report 2023: Broken Record – Temperatures hit new highs, yet world fails to cut emissions (again)*; International Energy Agency (2023) *World Energy Outlook 2023*; International Energy Agency (2023) *The Oil and Gas Industry in Net Zero Transitions*; Stockholm Environment Institute, Climate Analytics, E3G, International Institute for Sustainable Development and United Nations Environment Programme (2023) *The Production Gap: Phasing down or phasing up?*; Intergovernmental Panel on Climate Change (2023) *Synthesis Report of the Sixth Assessment Report Cycle (AR6)*.

(i) Global Stocktake outcome on mitigation

The COP28 outcome on the Global Stocktake created a clear signal on a global shift away from fossil fuels and towards clean energy. Ahead of the summit, many countries were advocating for the COP28 outcome on the Global Stocktake to call for a phase-out of fossil fuels. Although this precise wording was not included in the final text, the agreed outcome represented progress on previous COPs. It produced consensus on the need to transition away from fossil fuels in future decarbonised economies and called for countries to contribute to key elements of the energy transition:

- A tripling of global renewable energy capacity and a doubling of the global average annual rate of energy efficiency improvements by 2030.
- Accelerating the phase-down of unabated coal power and transitioning away from fossil fuels, with particular focus on accelerated action this decade.
- Accelerated reductions in non-CO₂ greenhouse gases (GHGs), noting methane goals for 2030.
- Accelerating low and zero-emission technologies including zero-emission vehicles, renewables, nuclear, removals, and carbon capture, utilisation and storage (CCUS) technologies.
- Phasing out inefficient fossil fuel subsidies.

The Global Stocktake outcome on energy represents a significant step forward within the COP process. COP texts are agreed by consensus - they need the backing of all 196 'Parties' to the UN climate agreements to be passed. Conversations on fossil fuels at COPs are affected by diverse economic considerations and development needs as well as the evidence on the impact their use has had and will continue to have on the climate, making this a complex area for reaching consensus.

Fossil fuels were first mentioned in COP decision text only at COP26 in 2021, demonstrating the extent of the challenges of finding consensus. The language agreed at COP28 calling for "transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve Net Zero by 2050 in keeping with the science" is significant and consequential as it covers all fossil fuels without ambiguity around whether they are unabated or abated (through CCS for example) and targets immediate action.

The agreed text has limitations; it includes recognition of the role transitional fuels can play without conditions on the timing and extent of their use and has limited clarity on financial support for developing countries' energy transitions. Nevertheless, the clear direction set out in the COP28 Global Stocktake text combined with international momentum on renewables and the action taken by countries and non-state actors paints a clear message: the role fossil fuel use and production play in our economies must decline and cleaner, safer, and more secure alternatives must expand.

(ii) Wider progress on mitigation

Beyond the Global Stocktake there was limited concrete progress agreed at COP28 on other mitigation-focused negotiation streams. However, there were important additional commitments made outside the formal UNFCCC process (Box 1.4). As the 'twin track' of COP negotiations and sectoral commitments becomes more established, there is a growing need for robust progress monitoring to track whether the rapidly expanding number of international initiatives are delivering against the mitigation, adaptation and finance goals of the Paris Agreement. Examples such as the Glasgow Leaders' Declaration Dashboard, which uses data to track signatories' progress across all elements of the Declaration, demonstrate how advancement can be tracked in a clear, accessible way and sets a strong example for other initiatives.⁶

Box 1.4

COP28 mitigation outcomes beyond the UNFCCC process

Mitigation was a key focus for action outside the formal negotiations.

- **Methane.** Oil companies representing 40% of global production signed the Oil and Gas Decarbonisation Charter, committing to end routine flaring by 2030. This was announced amidst reports of compliance issues with existing voluntary pledges on flaring, suggesting that continued monitoring will be needed to ensure commitments are delivered. Five new countries including Turkmenistan and Kazakhstan signed up to the Global Methane Pledge, meaning that there are now 155 governments that have pledged to contribute to efforts to reduce global methane emissions by 30% on 2020 levels by 2030. The Methane Finance Sprint mobilised over \$1 billion in new grant funding for methane reduction from governments, philanthropies, and the private sector.
- **Fossil fuels.** Nine new countries joined the Powering Past Coal Alliance, including the US. Membership of this Alliance requires a commitment to phase out existing unabated coal generation and a moratorium on any new coal power stations without operational CCS. With coal power making up almost 20% of US electricity generation, this commitment has potential to impact on global emissions. Alongside commitments on flaring, the Oil and Gas Decarbonisation Charter signatories pledged to have Net Zero operations by 2050. Australia and Norway joined the Clean Energy Transition Partnership, thereby committing to end their international financing of fossil fuels within 12 months.
- **Breakthrough Agenda.** This agenda was launched at COP26 and is now supported by 56 countries covering seven sectors. It aims to strengthen international collaboration to make clean technologies and sustainable solutions the most affordable, accessible, and attractive options by 2030. At COP28, the Breakthrough Agenda community helped to deliver the Global Zero Emissions Vehicle (ZEV) Transition Roadmap alongside partnerships on climate finance across industry decarbonisation and hydrogen. The Global ZEV Roadmap sets out how members of the ZEV Transition Council will strengthen the ZEV transition in emerging and developing economies. Breakthroughs were also launched on buildings and cement and concrete.
- **Land and nature.** Progress was demonstrated against the COP27 Forest and Climate Leaders' Partnership, with announcements of new national plans and partnerships to support forest conservation from countries including Colombia, Ghana, Papua New Guinea, and the Democratic Republic of Congo. These initiatives will be supported by funding commitments from public, private, and civil society partners including £466 million additional programme funding from the UK since COP26 and €500 million from France. Brazil proposed a Tropical Forest Forever fund, suggesting that \$250 billion could be mobilised a year to support the maintenance and restoration of tropical forests.

- **Heavy industry.** The UK, US, Canada, and Germany signed the Green Public Procurement Pledge. This commits them to adopting timebound commitments for the public procurement for near-Net Zero steel, cement and concrete and supporting the development of harmonised emissions accounting methodologies for low emissions construction materials. Steel producers and international organisations (including the World Trade Organisation) also launched Steel Standards Principles that call for common methodologies for measuring emissions from the production of iron and steel. These methodologies will become increasingly important as carbon border measures come into operation.
- **Shipping.** COP28 saw more announcements on Green Shipping Corridors. These agreements represent varying levels of ambition and more should be done to track progress as they become operational. A UN High Level Champions-organised Joint Commitment documented an industry target to produce 11 million tonnes of green hydrogen for the shipping sector by 2030, alongside other commitments on fleet decarbonisation strategies and port infrastructure.
- **Aviation.** There was limited progress on aviation at COP28. Aviation sector action is primarily organised outside the UNFCCC through the International Civilian Aviation Organisation.

The UK's role in some of these initiatives is discussed in section 1.2.1.

Source: COP28 Presidency (2023) Oil & Gas Decarbonization Charter launched to accelerate climate action; Global Methane Pledge (2023) Highlights from 2023 Global Methane Pledge Ministerial; US Energy Information Association (2023) U.S. utility-scale electricity generation by source, amount, and share of total in 2022; Powering Past Coal Alliance (2023) COP28 Presidency holder, United Arab Emirates joins a growing coalition of countries committed to coal phase-out; Forests and Climate Leaders' Partnership (2023) World leaders double down on forest and climate action at the start of COP28; Responsible Steel ZEV Transition Council (2023) Roadmap to 2030: Enabling a Global Transition to Zero Emission Vehicles; United Nations Environment Programme (2023) The Buildings Breakthrough: Global push for near-zero emission and resilient buildings by 2030 unveiled at COP28; Clean Energy Transition Partnership (2023) Clean Energy Transition Partnership welcomes Australia and Norway as new signatories at COP28; United Nations Industrial Development Organization (2023) COP28: Governments double down on their commitment to buy green steel, cement and concrete; RMI and Climate Champions (2023) Shipping leaders and green hydrogen producers agree on ambitious uptake targets for 2030 to enable a net zero maritime sector.

(iii) Next steps on mitigation

The hard-won progress from COP28 on fossil fuels and clean energy can only be made concrete through implementation. All governments must take the Global Stocktake language back to their home countries, analyse its significance for future domestic decisions on fossil fuels both at home and abroad, and take timely, appropriate action. The international community must work to break the dissonance between language agreed at the COP and real-world policy and investment decisions. Both governments and non-state actors must show serious commitment to rapid learning from innovative approaches, demonstrate best practice, and hold others to account.

The outcomes of the Global Stocktake must also be translated into concerted effort on NDCs. As well as agreeing actions in specific sectors such as energy, adaptation, and finance, countries have signed up to text that encourages them to adhere to the following conditions for the next NDCs they submit:

- **Economy-wide targets.** Countries having economy-wide targets ensures that emissions from all sectors of the economy are captured, including those that are hard to abate.
- **Coverage of all greenhouse gas emissions.** NDCs that include non-CO₂ gases will help to address all sources of greenhouse gas warming more comprehensively.

- **Ambitious targets aligned with limiting warming to 1.5°C.** The next round of NDCs must 'ratchet' to reduce existing NDC emission reduction ambition gaps.
- **Alignment with long-term strategies.** Many countries have committed to reaching Net Zero emissions by 2050 but have insufficient ambition in 2030 NDCs to put them 'on track' to meeting these targets. Aligning NDCs with long-term targets makes 2050 targets more credible and can lead to greater emissions reductions over the next decade.
- **A common target date of 2035.** Having all countries set targets for the same date makes it easier to monitor and assess collective progress.

The stocktaking process has also stressed the need for action this decade and that countries should prioritise designing and implementing comprehensive policy packages to meet existing 2030 targets alongside their considerations of future targets. This is explored with reference to the UK context in section 1.2.1.

1.1.2 Outcomes on adaptation and loss and damage

Adaptation is a critical component of the global response to climate change to protect people, livelihoods, and ecosystems. All countries need to adapt to reduce the harmful effects of climate change, even in a world where warming is limited to 1.5°C. Developing countries are often more vulnerable to climate change impacts and therefore face greater adaptation challenges. International agreement on how to adapt to climate change can create a minimum standard of country-level adaptation action, support the development and sharing of best practices across different contexts, and help to identify and quantify the required adaptation investment.

International adaptation efforts face key challenges. The Paris Agreement does not define adaptation targets and monitoring and, globally, adaptation efforts are often underfunded. The 2023 United Nations Environment Programme (UNEP) Adaptation Gap report found the finance requirement for adaptation is likely ten to 18 times more than current finance flows, and 50% higher than previous estimates.⁷

The Global Stocktake highlighted gaps in adaptation progress to date, including issues with capacity, support, and coherence of adaptation efforts. The adoption of the Framework on the Global Goal on Adaptation is a key outcome of COP28 and could help to advance future adaptation action. However, for the framework to be effective, further work is needed to refine it and identify a pragmatic approach to measuring progress. An important next step following COP28 will be the agreement of meaningful finance targets for adaptation.

All countries are increasingly affected by the impacts of climate change today, reinforcing long-standing calls for loss and damage funding. Loss and damage refer to the losses and damages (economic and non-economic) that occur from climate change impacts that cannot be or have not been adapted to. This has become a growing area of focus for the UNFCCC as the financial needs of countries already impacted by climate change are increasing. The operationalisation of a new Loss and Damage Fund is a positive development, although further funding and technical assistance arrangements are urgently required. Adaptation and loss and damage are separate but interconnected: effective adaptation helps to keep loss and damage limited. This section summarises progress made at COP28 on each in turn.

(i) Adaptation

The Paris Agreement established a Global Goal on Adaptation of “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change”. In subsequent years, the Global Goal on Adaptation received little further attention, despite it being a negotiating priority for many climate-vulnerable countries, until a two-year work programme was launched at COP26 to better understand and conceptualise the goal.

The key adaptation outcome at COP28 was the agreement of a new Framework for the Global Goal on Adaptation (Box 1.5). This framework sets out thematic targets for what global adaptation efforts should be seeking to achieve alongside process targets which should help support robust adaptation policy development.

There remains further work to be done around the Framework, including on providing more clarity to the targets and how progress might be measured against them. A new two-year work programme on indicators for measuring progress on adaptation was also agreed, although details on the structure of the programme are yet to be determined.

No new finance target for adaptation was agreed within the text on the Global Goal on Adaptation. A new target is expected to be included in negotiations for the New Collective Quantified Goal on Climate Finance next year.

Other important cross-cutting themes were also included within parts of the adaptation sections of negotiated text:

- The need for resilient, sustainable food systems was recognised, although the text was not precise and only included in the preamble and the section on adaptation, not mitigation.
- The Global Stocktake also includes multiple references to nature, including referencing the Global Biodiversity Framework agreed in 2022, as well as halting and reversing deforestation and forest degradation by 2030, and reference to nature-based solutions for the first time.

Box 1.5 COP28 Adaptation outcomes

COP28 saw agreement on a framework for the Global Goal on Adaptation (GGA) as a conclusion of the two-year Glasgow-Sharm el-Sheikh (GlaSS) work programme. The new framework includes seven global thematic targets to be achieved by 2030 (and beyond).⁸

- **Water.** Significantly reducing climate-induced water scarcity and enhancing climate resilience towards a climate-resilient water supply and sanitation. Access to safe and affordable potable water for all.
- **Food and agriculture.** Attaining climate-resilient food and agricultural production and supply and distribution of food.
- **Health.** Attaining resilience against climate change-related health impacts, promoting climate-resilient health services, and significantly reducing climate-related morbidity and mortality.
- **Nature and biodiversity.** Reducing climate impacts on ecosystems and biodiversity and accelerating the use of ecosystem-based adaptation and nature-based solutions.

- **Infrastructure and settlements.** Increasing the resilience of infrastructure and human settlements to climate change impacts to ensure basic and continuous essential services for all.
- **Livelihoods.** Substantially reducing the adverse effects of climate change on poverty eradication and livelihoods.
- **Cultural heritage.** Protecting cultural heritage from the impacts of climate-related risks.

It also includes four global process targets for adaptation:

- **Impact, vulnerability, and risk assessment.** By 2030, all Parties to conduct assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities and have used the outcomes of these assessments to inform their national adaptation plans, policy instruments and planning processes. By 2027, all Parties to establish multi-hazard early warning systems and climate information services for risk reduction.
- **Planning.** By 2030, all Parties to have in place gender-responsive, participatory, and fully transparent national adaptation plans, policy instruments, and planning processes covering ecosystems, sectors, people, and vulnerable communities, and to have mainstreamed adaptation in relevant strategies and plans.
- **Implementation.** By 2030, all Parties to progress in implementing their national adaptation plans, policies, and strategies.
- **Monitoring, evaluation, and learning.** By 2030, all Parties to design, establish and operationalise a system for monitoring, evaluation and learning for their national adaptation efforts and build institutional capacity to implement the system.

It also urges developed countries to mobilise support, including private finance, for developing countries to help them implement the framework.

Source: UNFCCC (2023) CMA.5 Glasgow-Sharm el-Sheikh work programme on the global goal on adaptation referred to in decision 7/CMA.3.

(ii) Loss and damage

While there is no global definition of loss and damage, it generally refers to the losses and damages that occur at the limits of adaptation, when climate impacts cannot be or have not been adapted to. Loss and damage covers both extreme weather events and slow-onset events. It can result in both economic damages, such as destruction of property, and non-economic damages, such as loss of cultural heritage and traditional knowledge. The Paris Agreement recognised the importance of “averting, minimising and addressing loss and damage associated with the adverse effects of climate change” but did not include any reference to finance for loss and damage.

COP28 made significant steps forward on loss and damage with the operationalisation of a new Loss and Damage Fund (Box 1.6). While estimates for the cost of lost and damage vary considerably, it is clear that they are far in excess of the current capitalisation of this fund.* The fund’s creation and capitalisation are symbolically important but it will need to be followed-up with further funding and technical assistance arrangements to address needs.

* One estimate put losses at \$525 billion already lost due to climate change in the last two decades. Another estimate based on the methodology of the IPCC Fifth Assessment Report suggests that loss and damage costs for developing countries will be around \$400 billion in 2030 and \$1-2 trillion by 2050.

Box 1.6 COP28 loss and damage outcomes

COP28 started with a historic agreement to operationalise new funding arrangements for loss and damage.

- **Objectives.** The purpose of the Fund is to assist developing, climate-vulnerable countries in responding to economic and non-economic loss and damage from climate change. This can include funding for humanitarian actions immediately after an extreme weather event; intermediate or long-term recovery, reconstruction, or rehabilitation; and actions to address slow onset events. The funding arrangements are not intended to create liability or to constitute compensation.
- **Governance.** Countries accepted the recommendations of the Transitional Committee on operationalising the funding arrangements for loss and damage and agreed that the Fund will be supported by a new, independent secretariat. In the meantime, for an interim of four years, the World Bank will host the Fund. All developing countries will be allowed to access resource from the Fund, including through subnational and regional entities. Further governance arrangements of the Fund are expected to be approved at COP29.⁹
- **Funding contributions.** The text "invites" financial contributions by developed countries but does not set a target or require specific funding levels. Several countries pledged contributions, including Germany, EU, UK, USA, Japan, Denmark, Ireland, Norway, and Canada. In total, approximately \$700 million was pledged to the fund.¹⁰

Alongside this new Fund, further progress on Loss and Damage was made, building on the outcomes of COP27.

- **Operationalisation of the Santiago Network.** COP28 saw agreement for the United Nations Office for Disaster Risk Reduction (UNDRR) and United Nations Office for Project Services (UNOPS) to host the secretariat of the Santiago Network on loss and damage. The Santiago Network facilitates technical assistance for developing countries in averting, minimising, and addressing loss and damage from climate change.

Source: UNFCCC (2023) CMA.5 Operationalization of the new funding arrangements, including a fund, for responding to loss and damage referred to in paragraphs 2–3 of decisions 2/CP.27 and 2/CMA.4; NRDC (2023) COP28 Climate Funds Pledge Tracker.

1.1.3 Outcomes on finance

Despite the urgent need for increased efforts on mitigation and adaptation across the world, valuable opportunities to adapt and reduce emissions are not being taken forward due to financial barriers and impediments in the real economy. The barriers can take many forms, from the need for additional financial support to issues with the cost of capital, debt, and countries' capacities to manage complex financing requirements. Structural reforms in specific sectors can also be required to overcome investment impediments and unlock access to finance. Moreover, countries' abilities to finance climate action are limited by climate impacts themselves, as climate change continues to negatively impact development and economic growth.

The Paris Agreement stipulates that developed countries will provide financial resources to assist developing countries' mitigation and adaptation efforts and take the lead in mobilising funds from a wide variety of sources and instruments. While significant focus has rightfully been placed on the delivery of developed countries' commitment to mobilise \$100 billion a year from 2020 to 2025, the volume of investment needed to transition to a low-carbon, resilient society exceeds this amount by some magnitude. For example, the IEA has estimated that global clean energy investment must reach \$4.5 trillion per year by the early 2030s

to limit warming to 1.5°C. For adaptation, UNEP has estimated the financing needs of developing countries to be \$215 – 387 billion per year up to 2030.¹¹ These figures demonstrate the importance of looking across a wide range of sources to address gaps in climate finance;* the Independent High Level Expert Group on Finance has published recommendations that address the crucial roles of domestic spending, private finance, multilateral development banks and concessional finance in unlocking investment at scale.¹¹

Box 1.7 COP28 finance outcomes

COP28 made some measured progress on finance, but additional action will be needed in the run up to COP29. The main areas of progress within the official COP process were:

- **\$100 Billion Goal.** OECD analysis released ahead of COP28 suggested that the \$100 Billion Goal for developed countries was likely to be met in 2023 and could have been met in 2022 (this will not be confirmed until 2024/2025 due to time lags in receiving definite data). This goal was due to be met in 2020 and delivered in full every year between 2020 and 2025.
- **New Collective Quantified Goal.** Discussions on the post-2025 finance goal continued, ahead of required decisions on key elements at COP29. Decision text produced timelines for future discussions and provides for a shift from technical discussions to producing draft language for an agreement at COP29.
- **Adaptation Finance.** The Global Stocktake outcome acknowledged the need for scaling-up of adaptation finance beyond the doubling agreed at COP26 and urged developed countries to produce a report on progress against the doubling target to be considered at COP29.
- **Loss and Damage Fund.** As set out in Section 1.1.3, COP28 saw the operationalisation of a Loss and Damage Fund agreed at COP27 and initial pledges made by contributing countries, representing rapid work by the UNFCCC and signatory countries.
- **Green Climate Fund.** There was a successful replenishment round for the Green Climate Fund in 2023, with current contributions standing at a record \$12.8 billion.
- **Adaptation Fund.** Fewer commitments were made to the Adaptation Fund, with new pledges of \$192 million falling short of the Fund's 2023 mobilisation target of \$300 million.

Some progress on finance was also made outside of the formal COP process:

- **Multilateral Development Bank reform.** Following the Bridgetown Agenda's calls for reform of the international financial architecture, the Annual meetings of the World Bank and International Monetary Fund saw agreement on reforms that could expand low-cost borrowing.
- **Just Energy Transition Partnerships.** Viet Nam launched their Resource Mobilisation Plan at COP28, building on the Just Energy Transition Partnership agreed at COP27. The Plan identifies priority investments and reforms needed to enable Viet Nam's energy transition and provides an update on how Partnership funds will be channelled.
- **Climate resilient debt clauses.** The UK, France and international financial institutions including the World Bank, the African Development Bank and the European Bank of Reconstruction and Development made new commitments to include climate resilient debt clauses in their lending. These clauses allow for pauses in debt repayments in the face of climate shocks, helping to avoid the exacerbation of debt stress faced by countries in the aftermath of climate-related extreme weather events.

* References to 'climate finance' in this document cover both public finance (such as bilateral loans and grants between national governments, climate-related export credits and finance provided by multilateral development banks) and private investment.

- **Net Zero Export Credit Agencies Alliance.** Building on the work of the Glasgow Financial Alliance for Net Zero (GFANZ), an alliance for export credit agencies committed to support net zero economies by 2050 or sooner with transparent interim targets was launched.

Source: OECD (2023) Growth accelerated in the climate finance provided and mobilised in 2021 but developed countries remain short and must continue scaling up to reach the USD 100 billion goal; UNFCCC (2023) CMA.5 Outcome of the first global stocktake; Green Climate Fund (2023) COP28: Green Climate Fund reaches record funding level; Adaptation Fund (2023) Adaptation Fund Mobilizes Over US\$ 192 Million in New Pledges at COP28 for the Most Climate-Vulnerable; UK Government (2023) Viet Nam Just Energy Transition Partnership: joint statement; African Development Bank Group (2023) COP28: African Development Bank, international partners commit to Climate Resilient Debt Clauses; UNEP (2023) Net Zero Export Credit Agencies Alliance.

While the Loss and Damage Fund and GCF replenishment round represented some positive movements on public finance, major challenges remain ahead of the agreement on a new post-2025 finance goal at COP29. There are outstanding questions on the volume of finance for the goal, what it targets (across areas including mitigation, adaptation, and loss and damage), how it will be delivered (across different financial instruments and public and private finance), and who will contribute. It is important that countries learn from the experience of the \$100 Billion Goal; contributing countries should come up with collective plans to ensure goals are met on time to avoid further damage to trust within the system and all actors should ensure transparent accounting methodologies are in place.

1.2 UK leadership on international climate

The UK has a strong domestic record of role modelling climate ambition, for instance through setting the UK's Net Zero target in 2019. UK domestic action remains world-leading in some respects, and there was some progress in UK climate policy in 2023. However, the Committee's assessment is that the UK Government has not brought enough policy forward to meet the UK's 2030 NDC and Sixth Carbon Budget and recent domestic policy decisions have sent mixed signals to the international community.

Bolstered by a generally positive domestic record, the UK has historically had a strong international reputation and visible role in advocating for global ambition. The UK is still in the process of defining its post-EU, post-COP Presidency role in UNFCCC negotiations (Box 1.8) and its present actions and choices have large potential to shape its future international standing. At COP28, the first cycle of the Paris Agreement ratchet mechanism concluded and the international community now looks to set new 2035 NDCs in advance of COP30 in 2025. The UK has the opportunity to use the experience gained from hosting COP26 to continue to set ambitious domestic goals, follow through with domestic delivery, and support the international community to do the same.

This section reviews the UK's contribution to COP28 and recommends how the UK should contribute to global climate action at the domestic and international levels. It is set out as follows:

- 1.2.1 Summary of UK progress at COP28
- 1.2.2 Next steps for the UK

Box 1.8 UK negotiations alliances

At COPs, countries are members of blocs that create shared negotiation positions. In 2023, the UK Government joined the Umbrella Group, a loose coalition of non-EU developed countries including the US and Australia and middle-income countries including Kazakhstan and Ukraine. The Group's statement at the end of COP28 welcomed the negotiated outcome on issues including the Loss and Damage Fund and 2035 NDCs, and offered praise for the agreed language on fossil fuels in energy systems alongside suggestions that it could have gone further. The statement also looked forward to COP29 discussions on new finance goals; it suggested that countries' responsibilities for delivering finance and support to developing countries should be reassessed, with many countries' economies having changed substantially since these responsibilities were first assigned in 1992.

The UK is also a member of the Cartagena Dialogue, a group of developed and developing countries committed to ambitious climate action. It has previously been involved in the High Ambition Coalition, a group of countries coordinated by the Marshall Islands that advocate for faster and deeper emissions cuts, but it has not been cited as a signatory to recent Coalition public statements.

Source: Australian Ministry of Climate Change, Energy, the Environment and Water (2023) COP28 Umbrella Group Closing Statement.

1.2.1 Summary of UK progress at COP28

The UK Government had a strong presence at COP28, with the UK co-leading consultations on the Global Stocktake negotiations. However, the broader picture on UK international climate action and its interaction with COP28 is not straightforward. The Prime Minister's Net Zero speech in September 2023, and decisions to approve a new coal mine and license new oil and gas production have contributed to a perception of slowing UK climate ambition by members of the international community. This is despite subsequent positive policy announcements, including the Zero Emissions Vehicle mandate, increasing the support for the Boiler Upgrade Scheme, and the commitment to a Carbon Border Adjustment Mechanism.

To be able to advocate for high climate ambition as effectively as possible, the UK should continue to have an active and visible presence at COPs, and ensure it accompanies strong domestic climate policy with communications outputs that acknowledge this progress.

Internationally, through UNFCCC processes and initiatives outside of the negotiations, the UK continues to provide leadership in areas such as:

- **Leading negotiation agendas.** The UK co-led Global Stocktake negotiations with Singapore, one of the COP28 priority agenda items, which produced ambitious text as outlined in Section 1.1.1.
- **Climate finance.** The UK Government announced a package of ICF support, such as the \$2 billion pledge to the Green Climate Fund. It is also progressing new and innovative funding arrangements, such as climate resilient debt clauses to support countries' economic resilience after climate crises.^{12,13}
 - **Loss and damage funding.** £60 million was pledged to loss and damage, including £40 million for the Loss and Damage Fund and £20 million for funding arrangements, a positive demonstration of the UK's support for loss and damage action.¹⁴
 - **Coalition of Ambition on Adaptation Finance.** Developed through the Climate and Development Ministerial and co-hosted by the COP28 Presidency, Malawi, the UK and Vanuatu, the Coalition will enhance country-owned programme financing, easing access to adaptation finance and scaling all sources of adaptation.¹⁵
- **Sectoral initiatives.** Following on from the UK's COP26 Presidency and the launch of many sector initiatives, the UK Government is taking a leading role in driving forward delivery of international climate commitments through sectoral initiatives. These include the Breakthrough Agenda, Powering Past Coal Alliance, Clean Energy Transition Partnership, the ZEV Transition Council and Accelerating to Zero Coalition, and the £500 million pledged to the Investment in Forests and Sustainable Land use programme (see Box 1.2).
- **Food and water.** The UK will provide £10 million to scale up a partnership with the World Bank to boost climate-resilient farming practices around the world.¹⁶
- **Viet Nam Just Energy Transition Partnership.** Co-led by the UK and EU, the International Partners Group to Vietnam's Just Energy Transition Partnership

is supporting Viet Nam to deliver its 2050 Net Zero goal. As referenced in Section 1.1.3, Viet Nam announced the Resource Mobilisation Plan, which will help implement the Just Energy Transition Partnership through assessing priority investments and projects.¹⁷

1.2.2 Next steps for the UK

The UK Government has an opportunity to build on its history of positive climate leadership and leverage its strong climate governance arrangements to deliver against the outcomes of the Global Stocktake, demonstrate global best practice and support transition in emerging and developing countries. These opportunities span both domestic and international policy:

- **Domestic opportunities for climate leadership.** Despite its status as a relatively small major economy, the UK has had disproportionate ability to influence global climate progress through demonstrating best practice. The following areas offer leadership opportunities for the UK following COP28.
 - **Energy.** Box 1.8 assesses the UK's historic progress and current targets against key elements of the energy package in the Global Stocktake: the tripling of renewable energy capacity, doubling rates of energy efficiency by 2030, and the call to transition away from fossil fuels in energy systems. The following actions will be important for ensuring domestic action is consistent with the language the UK signed up to at COP28:
 - **Delivering rapid deployment of renewables.** There is delivery uncertainty around the Government's renewables deployment timescales, although the government is taking steps to address this. Solar and onshore wind are progressing too slowly due to barriers around planning and consenting, and access to network connections, despite being the cheapest forms of generation. The 2023 Contracts for Difference (CfD) auction round also failed to procure any new offshore wind capacity. However, the Government has recently published a Connections Action Plan and Transmission Acceleration Action Plan to speed up the delivery of energy infrastructure and their implementation should be a priority.^{18,19} The Government has also increased the price ceilings for all technologies in the next CfD auction round in 2024, including a 66% increase to the offshore wind price ceiling.²⁰ A solar deployment roadmap expected in 2024 and recent changes to planning rules for onshore wind also have potential to bring deployment trajectories back on track.
 - **Limit expansion of future fossil fuel production.** UK policy on future oil and gas production should be aligned with Global Stocktake calls to accelerate the transition away from fossil fuels. The Committee recognises UK fossil fuel production is declining and that new fossil fuel development within UK borders has minimal impact on UK carbon budgets. However, were all countries with fossil fuel reserves to increase future fossil fuel production, there would be an oversupply that would pose a risk to the aims of the Paris Agreement. As a developed country with a binding commitment to transition to Net Zero, the UK should reassess whether further exploration for new sources of fossil fuels is aligned with the UNFCCC principle of Common but Differentiated Responsibility and the Global Stocktake.

- **Adaptation.** The requirements under the new Framework for the Global Goal on Adaptation go beyond the UK's current National Adaptation Programme (NAP3) which is not explicitly gender-responsive, did not go through consultation, and does not include additional commitments for public engagement on adaptation planning or actions. The current NAP3 does not yet include a monitoring and evaluation system, which is also now required by the Framework. The UK Government should deliver on these new commitments from COP28 by updating NAP3 within the current policy cycle to ensure it fulfils the targets within the Framework on the GGA.
- **Tree planting and peatland restoration.** The UK is advocating for ambitious international afforestation and reforestation and providing funding towards these efforts. However, the rates of domestic tree planting and peatland restoration have been too slow and urgently require scaling up to meet UK emissions reduction targets.
- **Methane.** The UK is falling behind on introducing an all-sector methane target. UK methane emissions predominantly come from agriculture and waste, with smaller contributions from fuel supply and land use. The UK must commit to a 30% reduction in methane emissions by 2030 against a 2020 baseline. Domestic policy should be brought forward, such as introducing a target to capture a proportion of landfill methane emissions, shifting to low-carbon agricultural practices and lowering ruminant livestock numbers, and strengthening targets for methane flaring and venting.
- **2030 NDC.** In 2024, the UK must continue to focus on addressing delivery gaps to the 2030 NDC, whilst also determining the level of ambition for its 2035 NDC. The 2023 Progress Report found that, if the UK is to achieve its 2030 NDC, the rate of emissions reduction outside electricity supply must almost quadruple from 1.2% annual reductions to 4.7%. Addressing these gaps and demonstrating best practice on timely, transparent policy implementation to meet emissions reduction targets remains one of the most important avenues for the UK to show climate leadership.
- **2035 NDC.** The CCC will offer its recommendations on the 2035 NDC as part of its Seventh Carbon Budget advice, taking into account the levels of emissions reduction implied in the Sixth Carbon Budget and considering how emissions from International Aviation and Shipping can be incorporated into the target.
- **Transparency.** The UK should continue to demonstrate leadership through transparently communicating and reporting on UK domestic climate action to the UNFCCC. Key opportunities include demonstrating best practice compliance with the Paris Agreement's Enhanced Transparency Framework and submitting a timely Biennial Transparency Report in 2024.

Box 1.9

Applying Global Stocktake energy outcomes to a UK context

This box examines three areas for energy action from the Global Stocktake outcome in a UK context: the tripling of renewable energy capacity by 2030, the doubling of the rate of energy efficiency by 2030, and the transition away from fossil fuels in energy systems.

Tripling of renewable energy capacity by 2030

The COP28 text that calls on countries to contribute efforts to triple global renewable energy capacity by 2030 does not specify a baseline for this target or include a definition for what constitutes renewable energy. In assessing the compatibility of UK renewables deployment targets with a 2030 tripling of capacity, we assume a 2022 baseline (the most recent year with full data available) and focus on offshore wind, onshore wind, and solar PV.

The UK Government only has renewables deployment targets for offshore wind (aiming for up to 50 GW by 2030) and solar PV (aiming for up to 70 GW by 2035). Figure B1.9 contrasts the level of deployment implied by a tripling on 2022 levels with UK targets. For offshore wind deployment, the 2030 target of 50 GW represents more than a tripling on 2022 levels. For solar PV, the UK Government has a 2035 target which makes a direct comparison difficult. However, if we assume that UK solar PV deployment grows linearly from 2022 to meet the 2035 target, 2030 solar capacity will be more than triple 2022 levels (almost 49 GW compared to a tripling to 44 GW). There is no UK Government target for future onshore wind deployment.

To summarise, UK targets for offshore wind and solar PV are broadly consistent with COP28 calls to triple renewable energy capacity by 2030. However, a tripling of total renewable energy capacity (on 2022 levels) would also require growth in onshore wind.

The 2023 Progress Report showed that the Government is currently off-track to meeting its renewables targets, particularly for solar PV deployment. To support the ambitions agreed on by countries including the UK in the COP28 text and to meet the target of a decarbonised electricity supply by 2035, the Government must increase efforts to deliver against its existing targets on time.

Doubling of rates of energy efficiency by 2030

The Global Stocktake text on doubling of rates of energy efficiency by 2030 also lacks an agreed baseline. However, the UK is unlikely to double its rate of energy efficiency by 2030 against any recent past baseline. This is because the UK is relatively advanced in its decarbonisation journey and has been delivering energy efficiency improvements across the economy at an average rate of 3.5% a year since 1990. Much of the low-hanging fruit is gone (such as coal-to-renewables switching which avoids losing energy to heat) and further increases are expected to come from the electrification of end-uses of energy, such as transport and heat.

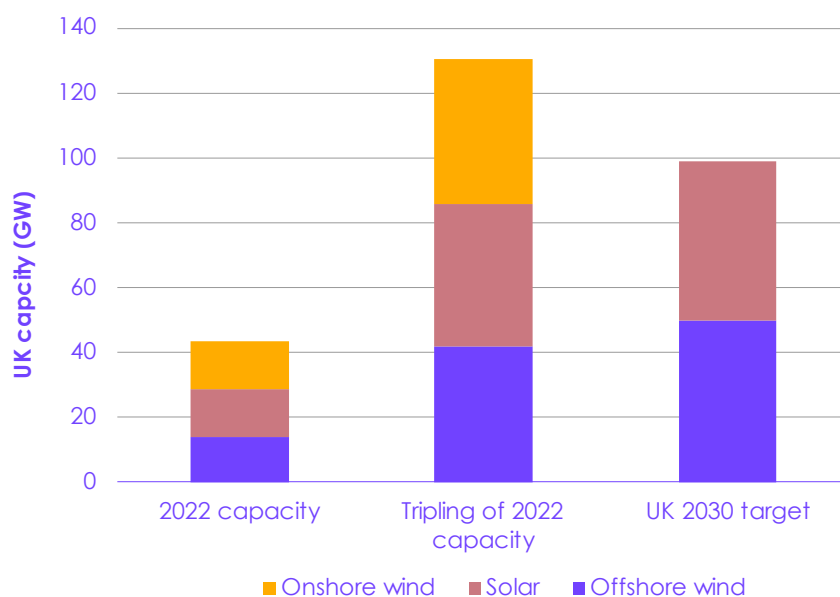
It is possible, given the energy efficiency improvements already made, that rates of improvement may start to fall in future years. Further analysis will be required if this occurs, but this would not necessarily signify a backwards step for the UK and may simply reflect how much has already been done. However, there are further opportunities to ensure energy is being used efficiently in the UK economy by reducing energy use, particularly in the buildings sector.

Transitioning away from fossil fuels in energy systems

The Global Stocktake calls on countries to transition away from fossil fuels in energy systems. The UK Government's overarching commitment to decarbonise the electricity system by 2035 (with the interim ambition of a 95% low-carbon grid by 2030) is in keeping with the Global Stocktake language.

However, the language agreed at COP28 does call into question recent UK Government decisions on the production of fossil fuels. The implications for UK fossil fuel production are explored further in the main text of section 1.2.2.

Figure B1.9 Tripling of renewable energy capacity in a UK context



Source: DESNZ (2023) *Digest of UK Energy Statistics (DUKES)*; CCC analysis.

Notes: 2022 renewable energy capacity were taken from DUKES figures on capacity by renewable energy type at the end of 2022. The central bar shows an indicative tripling of 2022 levels for each of the three renewable generation types. Hydropower and bioenergy are not included. The implied 2030 target for solar has been calculated by assuming that solar PV capacity increases linearly from 2022 levels to the UK Government's 2035 70 GW target. There is no UK target for future onshore wind deployment.

Source: Climate Change Committee (2023) *Progress in reducing emissions: 2023 Report to Parliament*; UK Government (2020) *British energy security strategy*.

- **International opportunities for climate leadership.** The 2023 Strategic Framework set out impressive aims for the UK's international climate efforts and the UK can build on its achievements at COP28 in the following areas to ensure that these aims are translated into action:
 - **Finance.** The UK Government has valuable expertise in providing effective climate finance and its funding announcements at COP28 showed considerable breadth. Going forwards, the UK should strive to demonstrate best practice, ensuring that the recent International Climate Finance accounting changes do not result in a de facto decrease in ambition regarding the £11.6 billion target and transparently reporting against its commitment to triple adaptation financing by 2025.* In 2024, the UK Government should carefully consider what it can bring to the table for post-2025 climate finance and continue to use its influence as a World Bank shareholder and its international convening power to advance discussions on financial architecture reform.

* In 2023 the UK Government announced changes in the way they account for International Climate Finance (the part of Official Development Assistance aid that is spent on climate). These accounting changes mean that International Climate Finance figures will now include climate-relevant contributions to multilateral development banks, risking double-counting when climate finance figures are globally aggregated. This change is not expected to be seen as a breach of the rules by the OECD Development Assistance Committee.

- **Pledges and initiatives.** The UK has continued to contribute to efforts on pledges and initiatives launched at COP26, drawing on its officials and collaborating with other countries to ensure that progress is made. However, reporting of this progress remains piecemeal and difficult to track, with external analyses (by organisations such as the IEA and the Energy Transitions Commission) providing the only collective assessments of what has been done. The UK Government must do more to summarise progress made against UK-led and aided initiatives in an accessible, transparent way.
- **COPs.** The UK Government should continue to have an active and visible presence at COPs. Key priorities for future summits include having a strong ministerial complement, highlighting UK collaboration with developing and emerging economies (through UK Pavilion events and elsewhere), and enacting impactful coordination on high-ambition outcomes both inside and outside the UNFCCC negotiations.

1.2.3 The Committee

The Climate Change Act (2008) requires the CCC and UK Government to consider international and scientific circumstances in relation to UK climate goals, in recognition of the importance of global action to avoid dangerous levels of climate change. The Committee sees the consideration of international climate progress as an important tool in providing enriched advice on UK climate action. We look at the international factors that affect domestic climate progress, including the latest climate trends and developments in scientific understanding, global technology progress and policy shifts in other countries, and analyse the UK's contributions to global efforts to limit warming. The Committee assesses UK international climate action twice a year: first through a focused look at UK action at the COP in the COP key outcomes briefings, and secondly through a wider assessment in the Progress Reports to Parliament. Across these documents, we look to highlight UK progress, identify gaps and priority actions, and translate international commitments into trackable UK actions.

These assessments of UK international climate action are also informed by our programme of international engagement. Funded by DESNZ and the UK Partnering for Accelerated Climate Transitions Programme, the CCC works with national governments, climate councils and research organisations in over 30 countries to share experiences in producing target advice, developing carbon budgets and pathways, assessing climate risk and monitoring progress. The CCC is also part of the International Climate Councils Network (Box 1.10) which acts as a valuable forum for supporting and amplifying the role climate councils play in robust national climate governance. Several members of the Committee attend the COP conferences and it presents an annual opportunity to come together in person with members of the International Climate Councils Network. We also use the opportunities at COP to develop relationships with a wide range of governments, research organisations, NGOs and businesses that inform and support the Committee's domestic and international analysis.

A key part of the Committee's role is to provide advice to Government on the level of UK carbon budgets and climate risks. CCC advice on the Seventh Carbon Budget in early 2025 will account for the Paris Agreement principles for countries' efforts to reflect their highest possible ambition and capabilities. It will consider the latest scientific evidence on climate change and international climate progress and developments in key low-carbon technologies.

The CCC's Independent Assessment of Climate Risk for the Fourth Climate Change Risk Assessment (due in 2026) will consider future changes in the climate consistent with the IPCC Sixth Assessment Report global warming levels. It will also consider climate risks to the UK from hazards and climate impacts overseas, including indirect stressors which may contribute to or compound UK climate risks.

Box 1.10

International Climate Councils Network

The International Climate Councils Network was launched at COP26 in 2021 by 20 Climate Councils, including the UK Climate Change Committee. Climate councils are independent advisory bodies that have a role in advising Governments on climate change action. The International Climate Council Network's mission is to foster collaboration between existing Climate Councils and act as a focal point for other governments interested in strengthening their national climate governance through the introduction of expert and independent advisors.

At COP28, the International Climate Councils Network announced that it is working in partnership with climate change organisation E3G to establish a secretariat. This partnership was made possible through the generous support of the European Climate Foundation and contributions from members of the Network. The new secretariat is part of the next phase of development for the Network, facilitating deeper and more diverse collaboration between members and coordinating efforts to share expertise with new and potential climate councils.

Source: E3G (2023) [Announcement of new ICCN Secretariat to be hosted by E3G](#).

Endnotes

- ¹ World Meteorological Organisation (2023) *2023 warmest year on record*, <https://wmo.int/news/media-centre/2023-shatters-climate-records-major-impacts>.
- ² Global Carbon Budget (2023) *Fossil CO₂ emissions at record high in 2023*, <https://globalcarbonbudget.org/fossil-co2-emissions-at-record-high-in-2023/>.
- ³ NASA Earth Observatory (2023) *Devastating flooding in East Africa*, <https://earthobservatory.nasa.gov/images/152108/devastating-flooding-in-east-africa>.
- ⁴ BBC (2023) *Canada wildfire season is now the worst on record*, <https://www.bbc.co.uk/news/world-us-canada-65816466>.
- ⁵ United Nations Framework Convention on Climate Change (2015) *Adoption of the Paris Agreement*. https://unfccc.int/sites/default/files/english_paris_agreement.pdf
- ⁶ Forest Declaration Assessment and WRI Systems Change Lab (2023) *Glasgow Leaders' Declaration Dashboard*, <https://dashboard.forestdeclaration.org/>
- ⁷ United Nations Environment Programme (2023) *Adaptation Gap Report 2023: Underfinanced. Underprepared*. Nairobi, <https://doi.org/10.59117/20.500.11822/43796>
- ⁸ UNFCCC (2023) *CMA.5 Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation referred to in decision 7/CMA.3*. <https://unfccc.int/documents/624436>
- ⁹ UNFCCC (2023) *CMA.5 Operationalization of the new funding arrangements, including a fund, for responding to loss and damage referred to in paragraphs 2–3 of decisions 2/CP.27 and 2/CMA.4*. <https://unfccc.int/documents/636618>
- ¹⁰ NRDC (2023) *COP28 Climate Funds Pledge Tracker*, <https://www.nrdc.org/bio/joe-thwaites/cop-28-climate-fund-pledge-tracker>
- ¹¹ Independent High-Level Expert Group on Finance (2023) *A climate finance framework: decisive action to deliver on the Paris Agreement*. <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/11/A-Climate-Finance-Framework-IHLEG-Report-2-SUMMARY.pdf>
- ¹² UK Government (2023) *Prime Minister announces record climate aid commitment as G20 in India concludes*, <https://www.gov.uk/government/news/prime-minister-announces-record-climate-aid-commitment-as-g20-in-india-concludes>
- ¹³ UK Government (2023) *UK generates billions in climate finance and first CRDC in Africa*, <https://www.gov.uk/government/news/uk-generates-billions-in-climate-finance-and-first-crdc-in-africa>.
- ¹⁴ UK Government (2023) *PM to call for 'era of action' at COP28 climate summit*, <https://www.gov.uk/government/news/pm-to-call-for-era-of-action-at-cop28-climate-summit>.
- ¹⁵ UK Government (2023) *Climate and Development Ministerial, 29 October 2023: overview* <https://www.gov.uk/government/publications/climate-and-development-ministerial-29-october-2023-overview>.
- ¹⁶ UK Government (2023) *UK backs work to protect global water and food supplies at COP28*, <https://www.gov.uk/government/news/uk-backs-work-to-protect-global-water-and-food-supplies-at-cop28>.
- ¹⁷ UK Government (2023) *Viet Nam Just Energy Transition Partnership: joint statement*, <https://www.gov.uk/government/news/viet-nam-just-energy-transition-partnership-joint-statement>.

- ¹⁸ Department for Energy Security and Net Zero and Ofgem (2023) *Connections Action Plan*, <https://www.gov.uk/government/publications/electricity-networks-connections-action-plan>.
- ¹⁹ Department for Energy Security and Net Zero (2023) *Transmission Acceleration Action Plan*, <https://www.gov.uk/government/publications/electricity-networks-transmission-acceleration-action-plan>.
- ²⁰ Department for Energy Security and Net Zero (2023) *Contracts for Difference (CfD) Allocation Round 6: core parameters*, <https://www.gov.uk/government/publications/contracts-for-difference-cfd-allocation-round-6-core-parameters>.

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