Global Policy
Forward View

COP28: Climate Change

Implications for policy and environmental science

December 2023

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COP28: Framework Convention on Climate Change

Implications for policy and environmental science, December 2023

This is a briefing paper on COP28, the UN Framework Convention on Climate Change summit, which took place from 30th November to 12th December 2023 in Dubai. Negotiations faced a significant degree of criticism but were ultimately able to reach a consensus on a global transition away from fossil fuels. Despite this positive progress, further action is still needed to deliver and implement pledges made at COP28 and to keep the world on track to address climate change.

Contents

1. Specialism-specific relevance

Specialisms which may be affected by the subject-matter of the briefing include:

- Air quality
- Built environment
- Climatology
- Conservation & ecology
- Energy
- Forestry & Landscaping
- Marine and coastal
- Sustainability
- Transport
- Waste management
- Water

Ultimately, this subject is likely to affect any professional whose work interacts with climate change, carbon emissions, or the wider promotion of sustainability and environmentally-positive outcomes.

If you want to support the work of the IES, you can join as an affiliate, or if you're a professional in the environmental sector working with science, consider becoming a member of the IES.

2. Key actions for decision makers

1. Encourage a systems approach to the triple crisis: recognise the interlinking nature of climate change, biodiversity loss, and environmental pollution, as well as the need for holistic solutions which address the social and economic drivers of those crises.

2. Push for ambitious action to mitigate emissions: delivering the mitigation commitments needed to meet the Paris Agreement more ambitious 'ratcheting-up' of NDCs between COP28 and the start of COP29. Offsetting should be used as a last resort and the commitment to 'transition away' from" fossil fuels must lead to a just, urgent, and complete 'phase out' of the use of fossil fuels.

3. Advocate for nature based solutions with multiple benefits: utilise scientific insights to maximise the 'ecosystem services' which nature can provide. In particular, support efforts to improve soil health, address land use from the framework level, and integrate oceans in our approach to climate change.

4. Recognise the value and importance of adaptation: we need to scale-up finance for adaptation and to recognise the full range of adaptation needs (such as energy, food, and water security).

5. Promote justice in our approach to climate change: we need to ensure the transition away from unsustainable systems is a 'just transition', and we should also integrate diverse perspectives into discussions, recognising the urgent need to deliver new funding for loss and damage.

Read our Manifesto for Transformative Change and vision for the future of environmental science for more recommendations.

3. How can environmental experts help?

1. Recognise that all communities can benefit from mitigation, adaptation, and just transition.

2. Articulate the risks of climate change and the potential rewards of the climate transition.

3. Start conversations about co-producing society's approach to climate change.

4. Promote climate literacy resources for friends or colleagues worried about climate change or who want to find out more.

If you need more information about any of these recommendations or how to help your community support nature and biodiversity, contact the IES at joseph@the-ies.org.

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4. What was COP28?

COP28 was the 28th Conference of the Parties of the UN Framework Convention on Climate Change (UNFCCC). "COPs" serve as a crucial platform for negotiations between governments, international organisations, and non-governmental organisations, with the goal of increasing global action on climate change.

Beforehand, this Conference was seen as especially important for accelerating the course of action on climate change, raising ambitions to reduce the impact of key drivers of environmental degradation, avoiding regression and securing the delivery of existing commitments.

5. What happened at COP26 and COP27?

COP26 Glasgow

Ahead of COP26 in Glasgow (held in 2021), there was a substantial drive to increase national commitments through the 'ratcheting-up' mechanism of the Paris Agreement. Each signatory country makes such commitments through its nationally-determined contribution (NDC), which sets out the ambition and commitment of each country to mitigate climate change and reduce its own contribution to greenhouse gas emissions.

The result of the COP26 rise in NDC ambitions was significant:

- The projected temperature rise above pre-industrial levels shifted from more than 3 degrees to +2.4 degrees (in Celsius) through policies due to be set in place by 2030.
- Targets beyond 2030 were predicted to lower the projected rise in temperatures to +2.1 degrees.
- Including ambitions which had been stated without plans for delivery decreased that projection even further, potentially lowering expected temperature rises to +1.8 degrees.
- However, note that subsequent analysis has shown less positive progress.

For any of those targets to be met, the NDCs and associated pledges would need to be implemented in full. That implementation has not yet taken place, so considerable doubt remains about the world's ability to limit the rise in temperatures to 1.5 degrees above pre-industrial levels. New research indicates that it will be necessary to reach net zero by 2034 to prevent global temperatures crossing that threshold.

COP26 also saw a range of multilateral agreements, such as the Glasgow Leaders' Declaration on Forests and Land Use, the Global Forest Finance Pledge, and the Methane Pledge to cut emissions by 30% by 2030. The summit also launched the Glasgow Financial Alliance for Net Zero, which was designed to align more than 100 trillion USD towards investments in climate action.

Ultimately, the alliance has faced a number of challenges linked to the definitions and taxonomy underpinning those investments, which has somewhat undermined its capacity to achieve its stated impacts.

For more information:

- International Energy Agency: Net Zero Roadmap
- New research: size and uncertainty of remaining carbon budgets
- IPCC Special Report on Global Warming of 1.5°c
- UNEP Emissions Gap Report 2023

COP27 Sharm El-Sheikh

While COP26 raised the possibility of annual increases to NDC commitments, COP27 ultimately failed to continue the momentum of COP26. There was only a limited push by countries to increase NDC ambitions, leading to minimal progress on climate mitigation. However, there were important developments on two significant issues:

1. **Loss and damage**: where meaningful conversations began to take place, with countries agreeing to establish a loss and damage fund. An adequate response to loss and damage is likely to be a prerequisite for future agreements about sustainable development and mitigation, so was an important step towards setting the stage for future negotiations.
2. **Adaptation**: which is still significantly under-resourced and under-appreciated, both compared to the overall adaptation needs, as well as compared to mitigation. COP27 saw an increase in funding and action on adaptation through agreements such as the Sharm-El-Sheikh Adaptation Agenda and the Global Shield Against Climate Risks.

2022 also saw the end of the IPCC's Sixth Assessment cycle, with reports published by the science-policy panel's three working groups, and a final Synthesis Report published in 2023.

The reports cover the physical science basis for climate change, adaptation to the effects of climate change and the need for resilience, and mitigation of climate change, as well as analysis of what works, what doesn't, and how much different options are likely to cost.

For more information:

- IES COP26 Wrap-up
- IES COP27 Wrap-up
- IES UK Climate Commitments Gap Analysis
- IES Analysis on IPCC AR6 Synthesis Report

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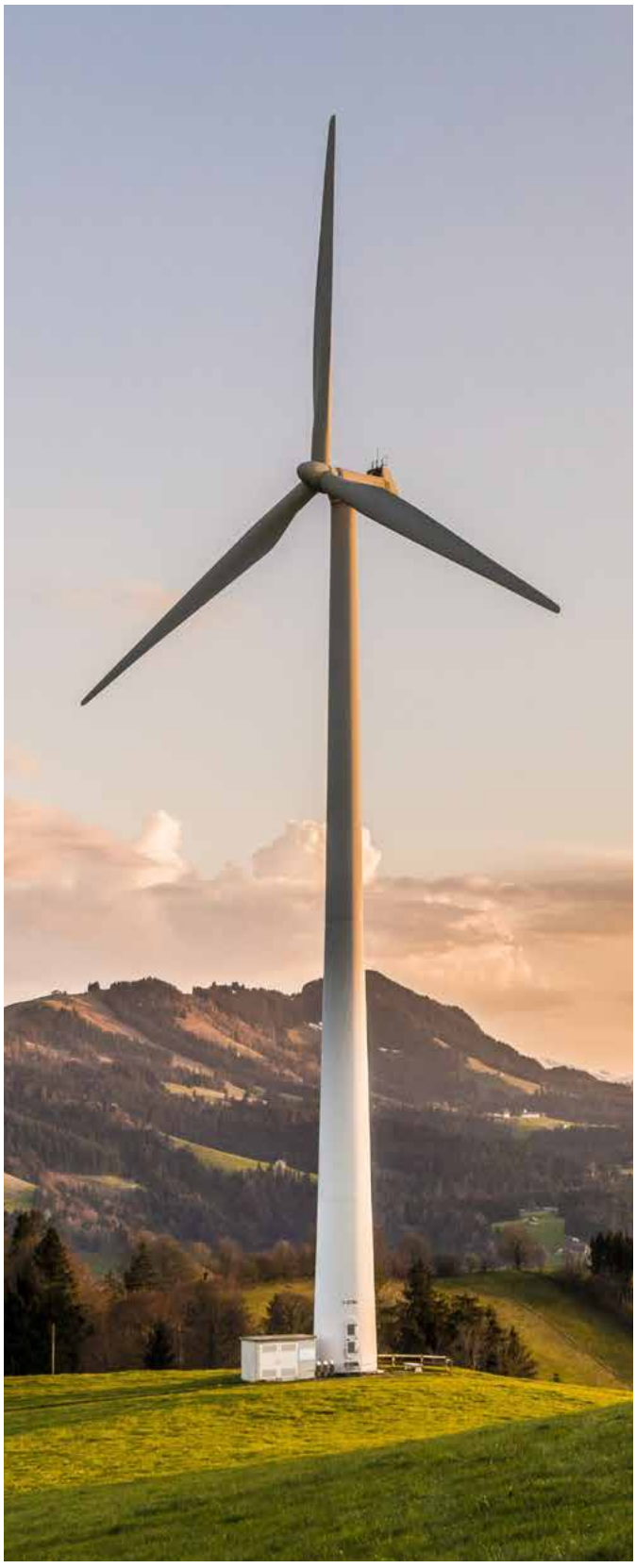
6. What were the outcomes of COP28?

The final agreement made at the end of COP28 has been viewed by many as a successful step towards keeping the world on track to address climate change and meet obligations under the Paris Agreement.

In particular, the agreement reached a consensus on the need for a global transition away from fossil fuels, although it does not amount to a commitment to phase out the use of fossil fuels completely. As highlighted by the COP28 President, the true test of the consensus will be whether it is implemented in practice by national governments, prompting a just and urgent transition. Governments also need to continue to accelerate action to keep the world on track to addressing climate change.

Throughout the summit, several key decisions and agreements were made, allowing some progress to take place in the absence of a more ambitious agreement. Some of the most significant outcomes of discussions at COP28 include:

- The conclusion of the first Global Stocktake: a five year process to assess the world's progress towards addressing climate change, with the publication of a 'political outcome' which will directly influence how countries 'ratchet-up' their climate ambitions in the future.
- The Food and Agriculture Organization (FAO)'s Roadmap to 1.5: a global roadmap for achieving zero hunger without breaching the 1.5°c threshold, initiating a multi-year process for decarbonising food systems.
- A joint statement from the COP28 presidency and the presidency of COP15 for the Convention on Biological Diversity, calling for an alignment of national climate and nature strategies.
- The Buildings Breakthrough (as part of the Breakthrough Agenda): a framework to link business, governments, and civil society to support the transition to climate resilient and near-zero emissions buildings as a global norm by 2030.
- The Global Renewables and Energy Efficiency Pledge: a commitment to triple the world's renewable energy generation capacity by 2030, with a series of additional commitments around increased energy efficiency. The Pledge makes no formal commitments on phasing-out fossil fuels and has been signed by around 120 countries, leaving it with significant limitations.
- Negotiations towards an 'Adaptation Playbook' to support the financing and roll-out of the Global Goal on Adaptation, following the Adaptation Gap Report in November. Ultimately, negotiations were unable to reach a final outcome due to disagreements about the responsibilities of different countries to contribute towards global adaptation.



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- The COP28 UAE Declaration on Climate and Health: A statement emphasising the connections between climate change and health, supported by guiding principles for financing climate and health solutions.
- Delivery of an agreement on the Loss and Damage Fund: an agreement to provide supporting finance for the developing countries most vulnerable to historic climate change, with 700million USD of funding committed at COP28.
- Initial steps towards a work programme on delivering a just transition: initial discussions between countries and observers to support a climate transition which is just and equitable for everyone.
- The Global Tipping Points Report: a scientific assessment published during COP28 by researchers from around the world, assessing the risks and opportunities associated with major global tipping points in earth systems and society.
- Further developments, including smaller shifts in how the climate crisis is discussed and addressed, such as the increased recognition of the role of oceans in negotiations and media attention around negotiating language on fossil fuels.

Beyond these key outcomes, the full range of issues linked to climate change were discussed throughout COP28, which provided a platform for countries and observer organisations such as the IES to engage in discussions about the future of climate action.

Discussions around climate adaptation at COP28 have managed to secure a modest increase in finance, though far greater action will be necessary, given the urgent need for resilience.

In particular, the global approach has not yet gone beyond a traditional approach to climate resilience, incorporating greater consideration of food security, energy security, and other risks.

In the future, it will be critical to embed holistic approaches to adaptation while also recognising the potential for systemic risk vulnerability or embedded risks caused by the over-reliance on electrification and associated 'single points of failure'.

For more information:

- COP28's summary of global climate action during the summit
- Kunming-Montreal Global Biodiversity Framework
- Transforming the planet: Our vision for the future of environmental science
- IES COP26 Discussion on Adaptation & Resilience
- IES COP26 Summary Video on Adaptation

7. In the UK: the latest developments on climate change

UK Net Zero Strategy

The UK Net Zero Strategy is the primary strategic roadmap for the UK's approach to climate change, bringing together all policies and proposals for UK decarbonisation commitments.

On 18th July 2022, the High Court ruled that the UK's Net Zero Strategy was unlawful. The High Court determined that further details were required to meet the UK's obligations under the Climate Change Act, as the Strategy lacked sufficient evidence of the measures which would limit UK emissions to the levels set out in the UK's Sixth Carbon Budget.

In addition, a 5% shortfall was identified in the Strategy's reductions, so the Court also required the Government to give an explanation of the policies which would fill that gap.

These gaps had previously been identified in March 2022 by the IES and in June 2022 by the UK Climate Change Committee. The Government was ordered to provide further plans, which were produced in an update to the Strategy in March 2023.

Subsequent updates to the Strategy

In 2022, the independent 'Net Zero Review' run by Chris Skidmore MP was commissioned with a specific mandate to determine whether the Government's approach to net zero is sufficiently pro-growth and pro-business.

The Review reported back in January 2023, identifying net zero as "the economic opportunity of the 21st century". It set out 10 long-term missions to be completed by 2035 and 25 immediate actions to be completed by 2025, with a view to creating infrastructure and facilitating action by businesses and local government. Many of the recommendations were reflected in the March update to the Government's climate commitments.

That update to the Strategy included a number of measures focused on delivery and energy policy, somewhat addressing the requirements of the Sixth Carbon Budget but not completely filling the gap. Further measures are expected, but these are not likely to come before the next general election.

New announcements include:

- Carbon Budget Delivery Plan (quantifying expectations for delivery against the carbon budgets as a result of specific decarbonisation measures, as well as risks and timescales for delivery; the quantifications are based on a significant number of assumptions, including around the confidence of delivery in certain sectors, and do not amount to the full reductions required to meet the Sixth Carbon Budget);

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- Strategic Framework for International Climate and Nature Action (identifying the need to address climate change and nature together and outlining the Government's existing measures and commitments);
- Finance Strategies for International Climate Finance and Green Finance, as well as a framework for scaling up private investment on nature and sustainable farming;
- Powering Up Britain, a delivery plan for Government policies on energy security and net zero;
- Energy Security Plan, including policies on gas, wind, nuclear, hydrogen, infrastructure, and CCUS;
- Net Zero Growth Plan (providing responses to the Net Zero Review and the Climate Change Committee's Progress Report, outlining other policy measures, and highlighting the economic opportunities associated with the transition to net zero);
- UK Net Zero Research & Innovation Framework Delivery Plan (setting out the Government's rationale for funding, along with priorities for funding areas);
- Responses to the Net Zero Review, the consultation on sustainable aviation fuel (ahead of a second consultation), the consultation on the Energy Company Obligation, the consultation on power BioEnergy with Carbon Capture and Storage, and the consultation on consumer experience at public chargepoints;
- Consultations on a regulations for new cars and vans, carbon leakage, clean heat standards, hydrogen production & industrial carbon capture, emissions from aviation fuel (following the first consultation in 2021), the regulatory regime for ESG ratings providers, and community benefits for Electricity Network Transmission Infrastructure;
- Other specific policy instruments as indicated in the announcements above.

Amendments to previously announced policies

In September 2023, the Government provided a further update to its approach to reaching net zero, altering a number of commitments.

Many organisations, including the IES, expressed concerns that the new plans could amount to regression on climate commitments, creating uncertainty and reducing the likelihood of businesses and other countries taking the necessary actions to address climate change.

The new policy announcements included a delay to the ban of the sale of new petrol and diesel vehicles from 2030 to 2035, a reduced commitment on the phase-out of gas boilers, and an increased reliance on carbon capture, usage and storage (CCUS) without new details of how capacity will be sufficiently scaled-up. The possibility of further policy reversals on climate change ahead of a general election in 2024 remains significant.

How could the Government fill the gaps in its Net Zero Strategy?

The Net Zero Strategy will play an important role in supporting the UK's transition towards sustainability. Further plans must also be in place to implement those recommendations and to address the gap in the Strategy's commitments. However, implementing isolated policies on its own is not likely to achieve the level of change required to meet the UK's climate commitments.

The Government should seek to achieve transformative change by addressing the unsustainable systems which embed pressure on the climate. 'Circular economy' principles (including those identified in the Net Zero Review) are part of wider economic transformations required. Similarly, we must address the ways we use land and energy on the systemic level, by ensuring the forthcoming Land Use Framework properly addresses planning, agriculture, nature, and other land use considerations.

For more information on the Government's Net Zero Strategy and climate policy in the UK, read the IES Manifesto for Transformative Change and Gap Analysis on the 2021 version of the Strategy, as well as our vision for the future of environmental science.

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8. Answering frequently asked questions on climate change

How certain is the science behind climate change?

The IPCC Working Group I Report outlines the physical science underpinning climate change (and includes a Summary for Policymakers and Frequently Asked Questions). The IPCC reports directly speak to the confidence behind each scientific claim.

A more general environmental perspective which addresses the need for transformative change is provided in the UN Environment Programme's 6th Global Environment Outlook.

The role of human-induced climate change in increased vulnerability and risk is covered in IPCC Working Group II's Report, and the extent of our mitigation against climate change is covered in IPCC Working Group III's Report, both of which express the confidence behind each scientific claim.

Is there a trade-off between the economy and climate action?

It is possible to address climate change while securing sustainable development and multiple social and economic benefits, as indicated by both the Imperial Grantham Institute's analysis on climate change and the economy, and New Climate Economy's report on accelerating climate action for inclusive economic growth.

The World Bank's Climate Change Action Plan acknowledges that "trade-offs … including transition costs … can be reduced" but that "The cost of not addressing climate change is already immense and will only get more expensive."

By comparison, Swiss Re reports on the costs to the global economy of inaction on climate change. The 2006 Stern Review on the Economics of Climate Change also provides useful context, though note that the situation and our understanding has significantly developed over the past 15 years.

What could the future look like?

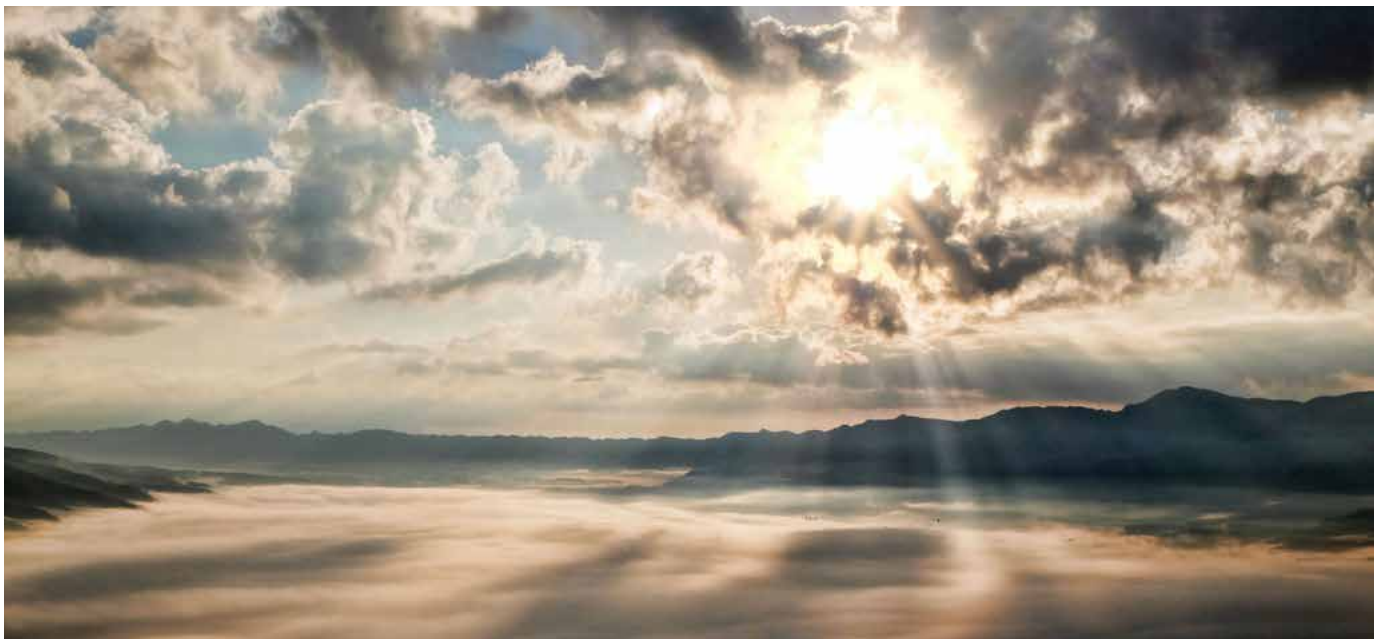
Presenting a positive vision of the future is essential to addressing the concerns of those who are worried about climate change. The IPPR think tank has created a summary of case studies on 'just transition' and an analysis of the opportunities for communities. More information on the risks if we do not act to address climate change is available in the Climate Change Committee's 2022 Climate Change Risk Assessment.

The IES has set out an evidence-informed vision for the future of environmental science, supporting the transformation towards a sustainable society.

Where are we not meeting our goals and where do we need to go further?

The report from IPCC Working Group III evaluates mitigation efforts so far. The CCC Progress Report also identifies gaps in current UK climate plans.

The Institution of Environmental Sciences' Manifesto for Transformative Change sets out clear recommendations for action, and our report 'Transforming the Planet' sets out a vision for what still needs to happen to achieve a sustainable future for humanity.



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9. Key concepts

Mitigation

Action to slow, reduce, stop, prevent, or reverse climate change. Typically mitigation involves addressing the sources of climate change, including by reducing carbon emissions.

Find out more about climate mitigation.

Adaptation

Action to prepare for the effects of climate change, such as increased resilience against consequences of climate change including flood risk, food security, energy security, and the potential effects of other climate vulnerabilities.

Find out more about climate adaptation.

Vulnerability

The extent of exposure to the risks created by climate change. For example, a community is likely to be vulnerable to water stress created by climate change if it has limited access to water, or if it has poor resilience against the consequences of water stress.

Loss and damage

'Loss and damage' is a phrase used to refer to the harms caused by human-caused climate change, many of which have already taken place or can no longer be prevented.

These can include loss of lives, livelihoods, territory, ecosystem services, social and cultural identity, or any other financial or non-financial losses caused by the impacts of climate change.

Questions remains about the proper response to loss and damage, including the extent to which the historically most-polluting nations are responsible for reparations or financial restitution.

UNFCCC

The UN Framework Convention on Climate Change (UNFCCC) is an international agreement which commits signatory governments to reducing greenhouse gas emissions to address climate change (and is also the body of the United Nations responsible for enacting the Convention).

With the support of the COP presidency governments, the UNFCCC is responsible for organising COP28 and similar climate summits.

COP

Conferences of the Parties (COPs) are annual meetings of the UNFCCC held to support negotiations between parties to the Convention and coordinate ongoing international action on climate change.

IPCC

The Intergovernmental Panel on Climate Change (IPCC) is a body of the United Nations which brings together expertise from around the world to provide objective and comprehensive information about climate change.

The IPCC's sixth assessment report, published this year, comprises reports from three working groups on:

1. The science behind the current state of the climate;
2. Adaptation and vulnerability; and
3. Mitigation.

CCC

The Climate Change Committee (CCC) is the UK's independent body responsible for advising the UK on climate change and emissions reduction targets. It was established by the Climate Change Act and reports to Parliament on climate mitigation and adaptation.

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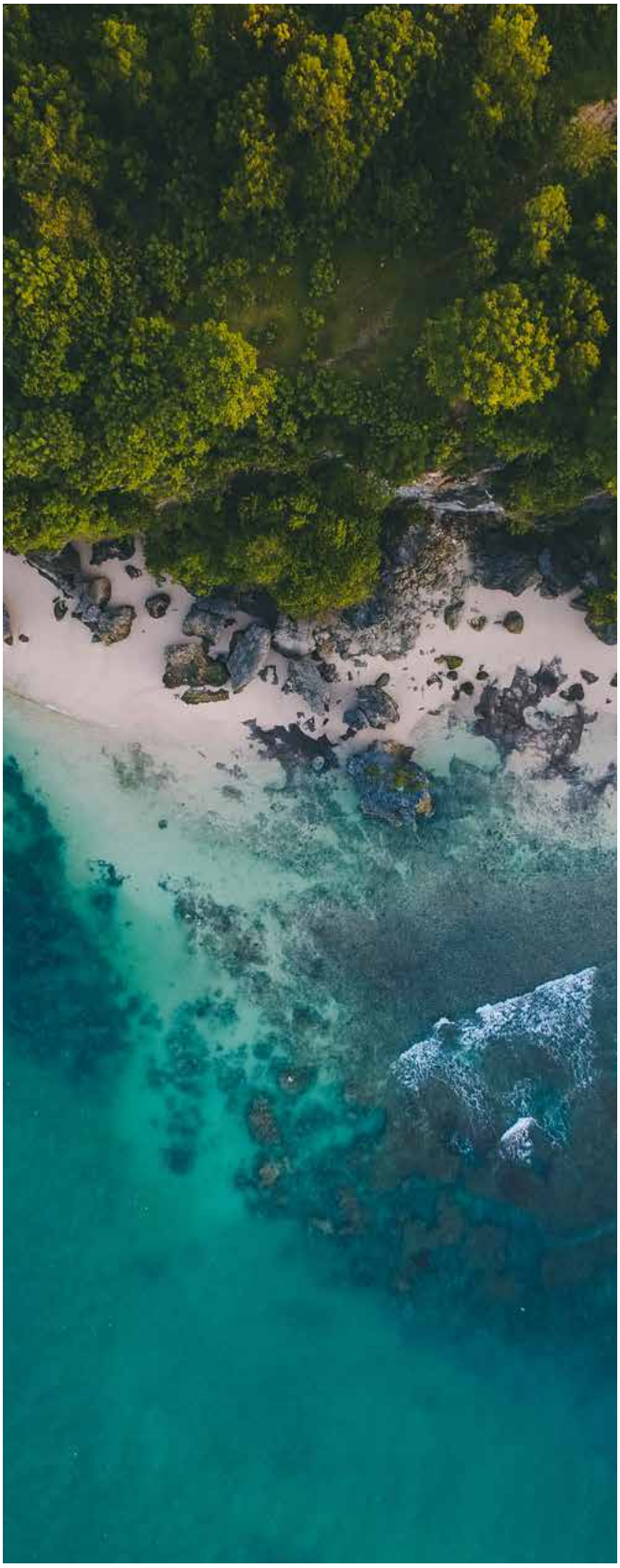

10. Find out more about influencing Government decisions

Our member briefing note: 'Influencing the UK Parliament', first published in 2011 and most recently re-issued in 2022, provides an overview of some of the ways that environmental professionals can influence Parliament and legislation.

The IES also runs training to help environmental professionals learn more about policy, how it affects them, and how they can influence policy decisions. Regular training sessions are available for sign-ups on the IES website.

In the UK, many issues of environmental policy are devolved to national administrations. If you live in Scotland, you can contact your Member of Scottish Parliament or learn more about influencing Scottish legislation.

If you live in Wales, you can contact your Member of Senedd Cymru or learn more about the business of the Senedd.

If you live in Northern Ireland, you can contact your local Member of the Legislative Assembly or learn more about the Assembly's work.

11. Other relevant links & resources

Find out more about existing legislation on this topic:

- Kunming-Montreal Global Biodiversity Framework
- Environmental Improvement Plan
- UN Framework Convention on Climate Change
- UN Sustainable Development Goals
- Climate Change Act 2008
- UK Net Zero Strategy
- UK Carbon Budgets

Read other relevant resources from the IES:

- A Manifesto for Transformative Change
- Transforming the planet: Our vision for the future of environmental science
- Climate Action Community
- Environmental Policy Implementation Community
- 'From Climate Ambition to Action' -: Environmental SCIENTIST journal
- IES Climate Videos Playlist

Is there a policy-related topic which you would like to see covered by the IES? Get in touch with Joseph Lewis (IES Policy Lead) at joseph@the-ies.org to let us know your thoughts on potential topics for future briefings, or with your suggestions for other content.

If you want to support the work of the IES, you can join as an affiliate, or if you're a professional in the environmental sector working with science, consider becoming a member of the IES.

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