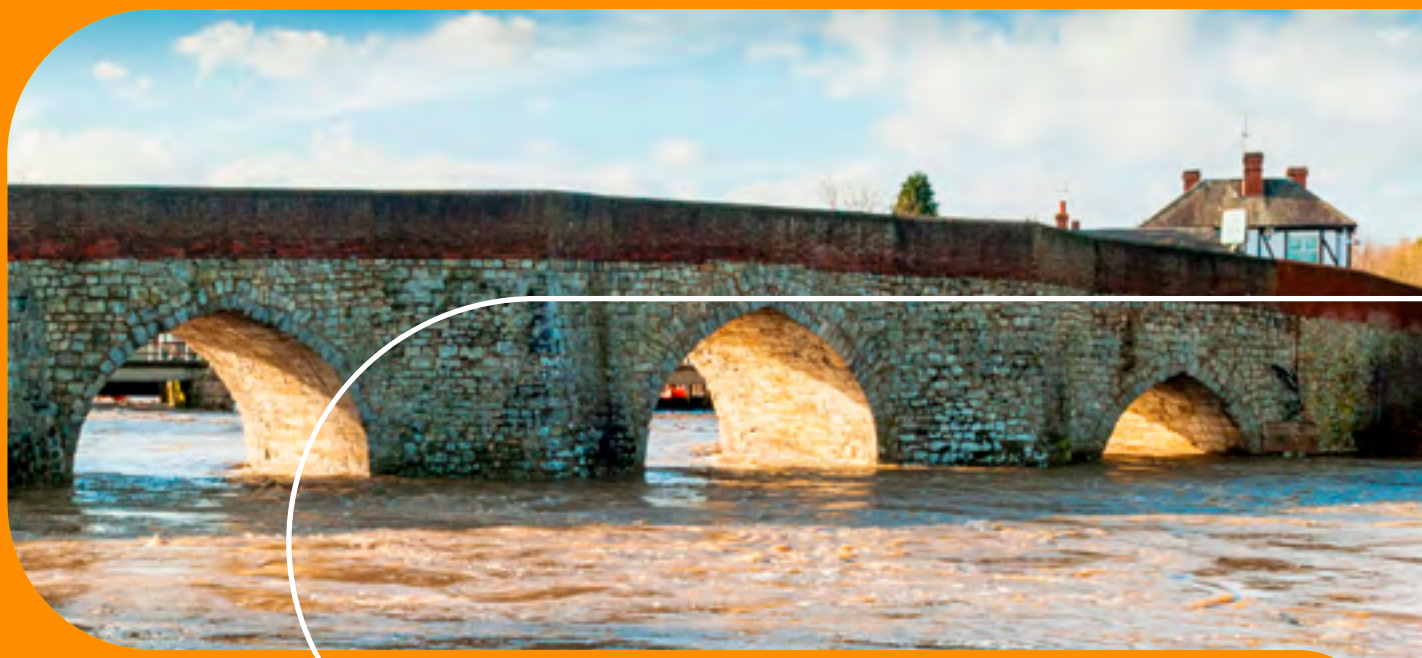
COP29: Climate change

Implications for policy & environmental science

December 2024



The Institution of Environmental Sciences

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Acknowledgements

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About the Institution of Environmental Sciences

The Institution of Environmental Sciences (the IES) is at the forefront of uniting the environmental sciences around a shared goal: to work with speed, vision and expertise to solve the world's most pressing environmental challenges, together.

As the global professional membership body for environmental scientists, we support a diverse network of professionals all over the world – and at every stage of their education and careers – to connect, develop, progress and inspire.

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About the Climate Action Community

The Climate Action Community is an IES Challenge-Led Community focused on championing the work of professionals in the environmental sciences in climate action, promoting the work of experts and evidence around climate change and driving change to ensure adaptation and mitigation measures are accurate, ambitious and achievable.

The Community champions interdisciplinary working and a systems approach to the interlinked crises of climate change, biodiversity loss and pollution.

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.

Background

COP29 was the 29th Conference of the Parties of the UN Framework Convention on Climate Change (UNFCCC), held in Baku, Azerbaijan.

It served 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 particularly important, needing to accelerate the course of action on climate change, raise ambitions to reduce the impact of key drivers of environmental degradation, and avoid regression.

COP29's key priority was to secure delivery of existing commitments, particularly through increased finance mechanisms.

COP30 in 2025 is expected to be especially important, so COP29 had additional pressure to set the groundwork for next year's pivotal summit.

The response to COP29 has been critical, with most commentary highlighting concerns about the pace of action, the extent to which promises are likely to be delivered, or the potential for climate injustice.

One of the key outcomes of COP29 was an agreement around the New Collective Quantified Goal on Climate Finance (NCQG), which is intended to be a crucial funding mechanism for climate finance over the coming years.

This briefing sets out the details of what was agreed at COP29, the implications of the summit for environmental science, and how COP29 fits into the wider context of climate action on an international and national level.

What happened at COP29?

While the full range of issues linked to climate change were discussed throughout COP29, some topics played a more significant role in the negotiations than others.

The most significant outcome was an increased aspirational goal for finance, the New Collective Quantified Goal on Climate Finance (NCQG), which has received a mixed reception. COP29 did not produce a separate outcome declaration.

Financing action

Even before the summit began, commentators were referring to COP29 as a 'finance COP', with the ambition to use the summit to leverage finance for mitigation and adaptation in far greater amounts than previously.

At COP29, the New Collective Quantified Goal on Climate Finance (NCQG) was agreed, including:

- An increase in the goal for finance to developing countries from developed countries, from 100billion USD each year to 300billion USD, to be achieved by 2035.
- A further ambition to scale up finance to developing countries from public and private sources to 1.3trillion USD per year by 2035.

The NCQG was controversial, prompting the Alliance of Small Island States to walk out of negotiations, citing both the limited scale of the finance being discussed and the historic failure to achieve past finance goals.

Recent research suggests that far greater amounts of finance will be needed by emerging markets and developing countries, with 1trillion USD a year needed by 2025 and as much as 2.4trillion by 2030.

COP29 also saw the full operationalisation of the Loss and Damage Fund, completing the work started at previous climate summits.

Further finance initiatives targeted by the COP Presidency included the Climate Finance Action Fund, seeking to catalyse public and private finance for climate mitigation, adaptation, and research; and the Baku Initiative for Climate Finance, Investment and Trade (BICFIT), which focuses on the interactions between climate finance, investment and trade, with a view to promoting investment.

Mitigation

Despite their increasing urgency, conversations around climate mitigation remain politically difficult and subject to delay.

In particular, negotiations around the transition away from fossil fuels did not see a significant rise in ambition.

Efforts to include that language as part of the mitigation actions in the Mitigation Work Programme agreed at COP26 were ultimately unsuccessful. Similarly, the inclusion of the Global Stocktake and NDCs within the Work Programme was not agreed by parties.

Despite the outcome of COP28, the UAE Consensus, which committed the world to transitioning 'away' from fossil fuels, COP29 did not deliver implementation plans to carry out the consensus, nor did it lead to a further commitment to phase out fossil fuels entirely.

One of the major successes of COP29 was the finalisation of technical rules relating to carbon markets under Article 6 of the Paris Agreement.

These rules have been a contentious point of negotiation in the past and this agreement now lays the foundations for international coordination to reach national emissions reduction targets. However, carbon trading cannot become a substitute for effective mitigation of emissions.

A key focus area for energy at COP29 was energy connectivity and storage, seeking to address the key infrastructure requirements which will be necessary to support decarbonised economies around the world.

COP29 saw the launch of the Global Energy Storage and Grids Pledge, aimed at agreeing a collective goal of deploying 1,500 GW of energy storage in the power sector globally by 2030.

In addition to the Storage and Grids Pledge, there were also further attempts to generate action through the COP29 Hydrogen Declaration and the Pledge on Green Energy Zones and Corridors. These pledges have not yet seen sufficient adoption to deliver their goals.

Even in the absence of significant progress on energy decarbonisation at COP29, agreements and funding for storage and connectivity will be critical to facilitating more ambitious commitments at COP30.

Some countries used the opportunity of COP29 to launch new Nationally-Determined Contributions (NDCs), including the UK and Brazil.

Find out more about the UK's new NDC in the chapter on the UK's role at COP29.

Countries are expected to 'ratchet-up' their NDCs in 2025 ahead of COP30 as part of commitments under the Paris Agreement, so these early updates provide some positive indication that countries may be prepared to take on more ambitious commitments next year.

Adaptation and resilience

Adaptation and resilience were a key issue for COP29. Given the urgent need for climate resilience, adaptation finance needs to be more in line with finance for climate mitigation, though both require significant further investment.

Before COP29, the Presidency had already committed to several relevant initiatives, including the Baku Initiative on Human Development for Climate Resilience,

Multisectoral Actions Pathways (MAP) for Resilient and Healthy Cities, and Water for Climate Action, which were each intended to be progressed either through the outcome declaration or through separate initiatives.

During COP29, there were several developments for the adaptation agenda. These contributed to progress, albeit limited:

- Shortly prior to COP29, the publication of UNEP's Adaptation Gap Report 2024
- The High-Level Dialogue on National Adaptation Plans, aimed to increase global discussions about adaptation planning
- A provision to establish support for the least developed countries in implementing National Adaptation Plans
- The launch of the Baku Adaptation Road Map through the High-Level Dialogue, seeking to improve the delivery of the agreements made at COP28

Ultimately, progress was limited, and the lack of a final outcome declaration left many of these questions unanswered.

After the progress made at COP27 and COP28, it was hoped that negotiations could go beyond traditional approaches to climate resilience, including greater consideration of food security, energy security, and other risks.

COP29 missed the critical opportunity to embed a systems approach to adaptation, recognising the potential for systemic risk vulnerabilities or embedded risks, such as over-reliance on electrification and the associated 'single points of failure'.

Environmental justice

Environmental justice was also a key consideration, particularly in the context of conversations around loss and damage.

Despite being a high priority, COP29 did not sufficiently deliver on key priorities for climate justice.

Loss and damage funding was not included in the NCQG goal for climate finance, despite recognition in the agreement that funding for loss and damage is currently insufficient.

The negotiations around the NCQG were also seen as a failure of climate justice, with concerns that some of the most vulnerable countries were unable to participate as negotiations over-ran.

COP29 also failed to reach an agreement on the just transition work programme, which will remain a priority for negotiations between now and COP30.

The triple crisis

After negotiations at COP16 for the Convention on Biological Diversity failed to reach an outcome, it was crucial that COP29 delivered for climate change.

Moreover, the outcome of COP16 increased pressure to bring together global action on climate change, biodiversity loss, and other interlinked environmental crises.

Despite this pressure, COP29 did not significantly improve the links between global action on climate change and biodiversity.

Inconclusive negotiations at COP16, COP29, and on the prospective Treaty to End Plastic Pollution have now left the future of an integrated approach in doubt.

The Kunming-Montreal Global Biodiversity Framework agreed at COP15 and the decision to establish a science-policy panel on chemicals and pollution are both substantial developments towards addressing environmental challenges, yet all three aspects of the triple crisis still require more ambitious action.

Other outcomes of COP29

Beyond the primary negotiations between member states, COP29 also supported the development of bilateral agreements and other programmes of work.

Some further key developments included:

- The completion of the Enhanced Transparency Framework (ETF) reporting tools, aiming to provide training and technical support to developing countries, alongside further efforts to promote transparency and reporting at the global level
- The launch of the Net Zero Export Credit Agencies Alliance first target setting protocol, aimed at improving accountability around net zero exports
- The 2024 Global Yearbook of Climate Action, launched by the High-Level Champions under the Marrakech Partnership
- The launch of the inaugural report of the Forum for Insurance Transition to Net Zero, which highlighted the importance of specific guidance for the insurance industry to support the global transition

Following controversy around the NCQG and limited action on climate mitigation, questions have been raised about the appropriateness of countries with substantial fossil fuel industries hosting climate summits.

As 2030 draws ever closer, it will fall to the UNFCCC and participating countries to find new ways to make it possible for ambitious climate negotiations to continue.

For more information:

- New Collective Quantified Goal on Climate Finance
- UAE Consensus on transitioning away from fossil fuels
- COP29 Presidential Action Letter
- Kunming-Montreal Global Biodiversity Framework
- IES Briefing on Kunming-Montral Global Biodiversity Framework
- UNEP Adaptation Gap Report 2024
- World Resources Institute NDC Tracker
- Transforming the planet: Our vision for the future of environmental science
- Priorities for the UK Government, 2024-2029 (including key actions on climate change)

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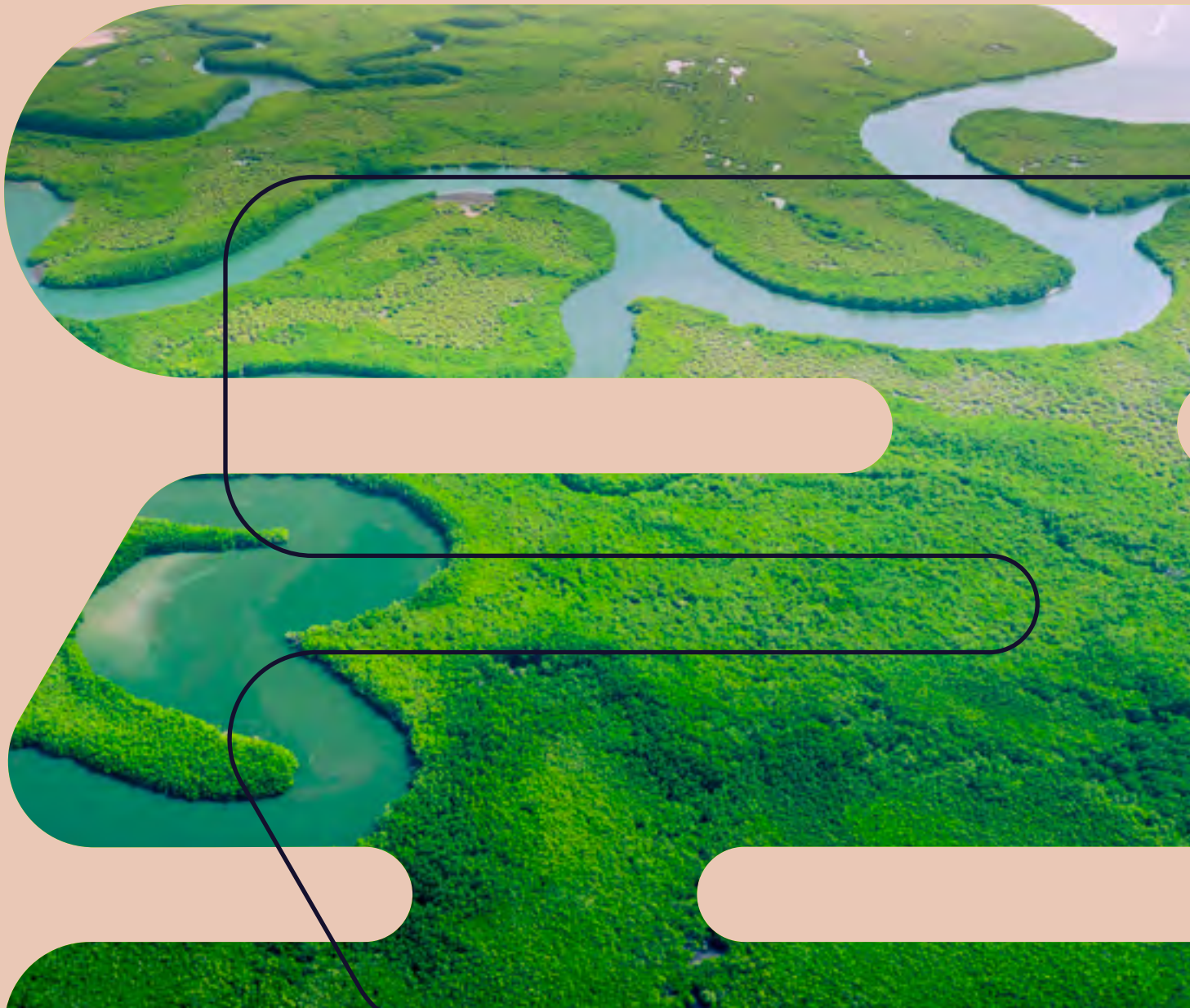
“COP29 missed the critical opportunity to embed a systems approach to adaptation.”



Recap: COP26, COP27, & COP28

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.

Subsequent 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:

- IES COP26 Wrap-up
- International Energy Agency: Net Zero Roadmap
- 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 COP27 Wrap-up
- IES UK Climate Commitments Gap Analysis
- IES Analysis on IPCC AR6 Synthesis Report

COP28 Dubai

Negotiations at COP28 faced a significant degree of criticism, partly owing to the UAE's role as host, but they were ultimately able to reach a consensus on a global transition away from fossil fuels.

This final agreement has been viewed by many as an important step towards meeting obligations under the Paris Agreement.

Despite this positive progress, further action is still needed to get the world back

on track to address climate change.

In particular, the consensus 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.

Some of the other outcomes of discussions at COP28 included:

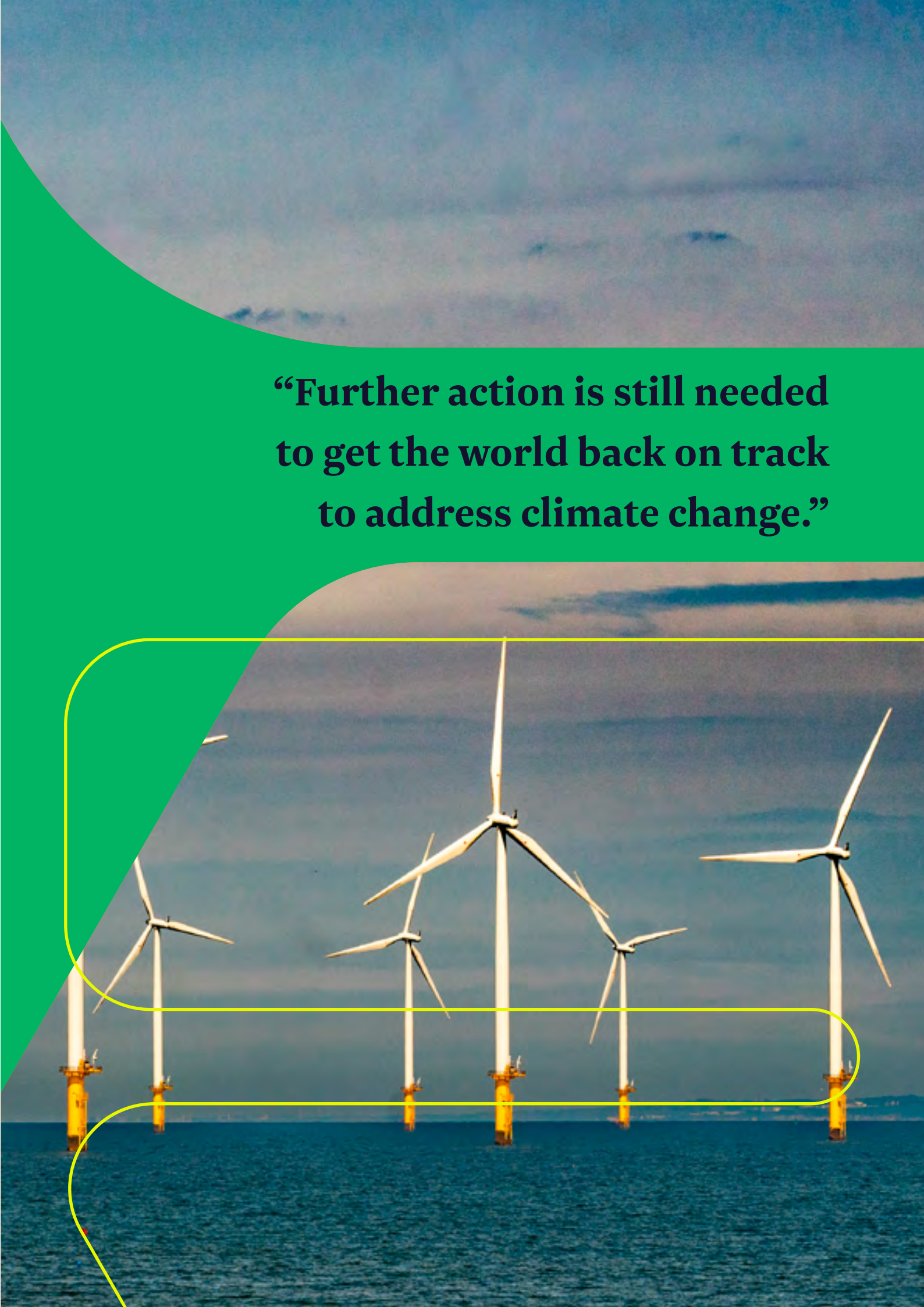
- The conclusion of the first Global Stocktake to assess the world's progress towards addressing climate change
- The Food and Agriculture Organization (FAO)'s Roadmap to 1.5
- The Buildings Breakthrough (as part of the Breakthrough Agenda) to link business, governments, and civil society to support the transition to climate resilient and near-zero emissions buildings as a global norm by 2030
- The Global Renewables and Energy Efficiency Pledge to triple the world's renewable energy generation capacity by 2030
- Negotiations towards an 'Adaptation Playbook' to support the financing and roll-out of the Global Goal on Adaptation
- Delivery of an agreement on the Loss and Damage Fund 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

Discussions around climate adaptation at COP28 managed to secure a modest increase in finance, though far greater action was anticipated at COP29 in order to include considerations around food security, energy security, and other risks.

For more information:

- IES briefing on COP28
- 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

“Further action is still needed to get the world back on track to address climate change.”



In the UK: the latest climate change developments

In the UK, the most immediate factor affecting new policy developments is the change of UK Government, with the new Labour administration having come to power at the 2024 general election.

The Government has indicated a desire to review key environmental policies, including England's Environmental Improvement Plan (EIP) and environmental regulations affecting the planning system, with significant implications for the UK's approach to climate change.

Mission for clean energy

While those policies are still under review, the Government's policy agenda around the environment has primarily been focused on energy system decarbonisation, through its 'Mission to make Britain a clean energy superpower'.

The five key actions attached to the mission are:

- 'Set up Great British Energy to cut bills for good'
- 'Energy independence from dictators like Putin'
- '650,000 new high-quality jobs'
- 'Warmer homes to slash fuel poverty'
- 'Water companies forced to clean up our rivers'

In its 2024 election manifesto, the new Government further elaborated on what the mission would mean in practice.

Recognising the economic opportunities associated with renewable energy, the manifesto committed to:

- "shape markets and use public investment to crowd in private funding"
- "double onshore wind, triple solar power, and quadruple offshore wind by 2030"
- "tackle the … nature emergency, including the unforgivable pollution of our rivers and seas"
- "ensure the long-term security of the [nuclear] sector, extending the lifetime of existing plants, and … new nuclear power stations, such as Sizewell C and Small Modular Reactors"
- "maintain a strategic reserve of gas power stations … [and] ensure a phased and responsible transition in the North Sea"

- "not issue new licences to explore new fields", though the manifesto also notes that "oil and gas production in the North Sea will be with us for decades to come"
- "close the loopholes in the windfall tax on oil and gas companies ... [and] extend the sunset clause in the Energy Profits Levy until the end of the next parliament"
- "strengthen the regulator to ensure it can hold companies to account for wrongdoing, require higher standards of performance, and ensure there is automatic customer compensation for failure"
- "work with industry to upgrade our national transmission infrastructure"
- "directly invest in ports, hydrogen and industrial clusters" through the National Wealth Fund
- "invest an extra £6.6 billion over the next parliament ... to upgrade five million homes"
- "the introduction of a carbon border adjustment mechanism"

For further information on the Government's commitments on climate, nature, and the environment, see the Labour Party's 2024 election manifesto.

In December 2024, Prime Minister Keir Starmer gave a speech setting out 'milestones' for each of the missions, which are functionally non-binding targets.

For the clean energy mission, the milestone is to 'put the country on track for at least 95% clean power by 2030'.

Great British Energy

The primary mechanism for delivering the Government's energy decarbonisation objectives is Great British Energy, a new publicly-owned energy company, primarily working with the Department for Energy Security and Net Zero.

While the activities of GB Energy are still relatively nascent, the Government's election manifesto provides an overview of what to expect over the coming years.

The manifesto says that GB Energy will:

- "partner with industry and trade unions to deliver clean power by co-investing in leading technologies"
- "support capital-intensive projects; and will deploy local energy production"
- "capitalise Great British Energy with £8.3 billion, over the next parliament" (in the Autumn Budget 2024, GB Energy was allocated £125 million, but the Chancellor committed to providing the initially pledged £8.3 billion in subsequent years)
- "deploy more distributed production capacity through our Local Power Plan"

Though the government has changed, existing policy is still relevant in many cases, including the Net Zero Strategy published in 2021.

It is expected that the Government may make revisions to the Strategy to better reflect its new approach and its revised NDC.

The UK at COP29

Although many international heads of state did not attend COP29, or had only a minimal presence, the UK Government was relatively active during the summit, including through a speech by the Prime Minister.

During that speech, the UK announced its new Nationally-Determined Contribution (NDC): to cut UK emissions 81% (compared to 1990 levels) by 2035.

The previous UK NDC was to reduce emissions by 68% by 2030, so the new target should be viewed as a longer-term continuation, rather than an outright replacement of the previous objective.

Alongside the announcement at COP29, the UK Energy Secretary, Ed Miliband, gave a statement in Parliament, setting out further details of the target and highlighting the role of the Climate Change Committee and the alignment of the new target with the UK's 6th carbon budget and the ambition to achieve net zero by 2050.

Ultimately, the UK's ability to achieve the new target will depend on how the Government plans to deliver it in practice. The Energy Secretary noted that these plans will be officially published ahead of the UNFCCC's deadline in February 2025.

For now, careful scrutiny and robust evidence will both be critical to ensure that the UK is able to meet its new international obligations.

At COP29, the UK also announced that it had become a signatory to the Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies (COFFIS), which seeks to improve transparency and move towards a phase-out of subsidies for fossil fuels.

Another priority for the UK Government at COP29 was to highlight the role of nature in climate discussions. Nature Minister Mary Creagh attended COP29 and announced new funding for projects to protect the ocean from climate change and biodiversity loss.

The UK delegation was also joined by the new Special Representative for Climate, Rachel Kyte, and the Special Representative for Nature, Ruth Davis.

While COP29 did not successfully integrate approaches to climate change and biodiversity loss, and although the UK still needs to do much more to address nature nationally, the Government's decision to highlight nature during climate talks is a positive indication of a holistic approach in the future.

Is the UK on track?

The UK has historically succeeded in meeting its climate targets, and although much more needs to be done, the UK still has an important role as a leading nation on climate change.

The Climate Change Committee reported in July 2024 that the pace of action had slowed on climate mitigation, with urgent action required to get the UK back on track.

The Committee's recommendation was an 81% reduction in emissions by 2035, which has now become the UK's NDC.

If the Government can set out a robust delivery plan for meeting the new NDC, it should bring the UK back on track long term. However, there is still an urgent need for action to meet the 2030 target, so there is no scope for complacency.

At the same time, adaptation and resilience also require a significant degree of action to bring the UK back on track. As weather patterns throughout 2024 have made the consequences of climate change more immediate than ever, the need to improve UK resilience is imperative.

The Climate Change Committee's 2023 report on adaptation concluded that "the Second National Adaptation Programme has not adequately prepared the UK for climate change."

In response, the Third National Adaptation Programme began in 2023 and will run until 2028, informed by the 2023 National Risk Register.

The period covered by the Programme will be critical for increasing UK resilience, which will require adequate funding and extensive support for implementation.

The UN Environment Programme's Adaptation Gap Report 2024 provides a global perspective on the current state of adaptation to climate change.

For an overview of the current state of the UK's policy on climate change, as well as the key actions needed to keep the UK on track, you can read the priorities for the UK Government published by the IES ahead of the 2024 general election.

Our top recommendations on climate change included:

1. Commit to a 'transformative change' approach to reshaping unsustainable systems, addressing climate change, biodiversity loss, and environmental pollution together

2. Take an integrated approach to climate adaptation alongside climate mitigation, bringing resilience funding and support in line with the scale of the UK's adaptation challenge

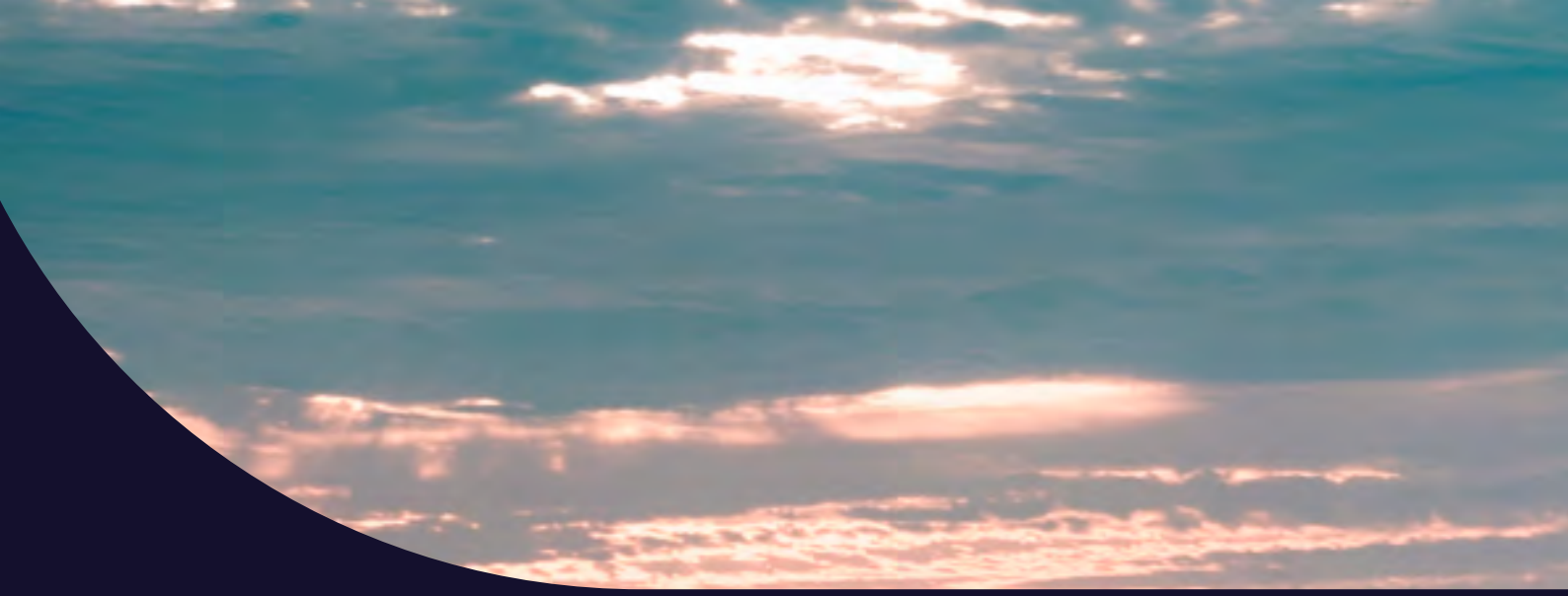
3. Deliver ambitious action to mitigate UK emissions, closing the gap between current commitments and a plan aligned with 1.5°c, with explicit implementation plans

4. Work with communities and NGOs on a 'just transition' away from fossil fuels which fairly distributes costs and benefits so that no communities are left behind

5. Work with businesses to unlock private finance and drive corporate sustainability that supports a nature-positive future

The full report sets out how those recommendations can deliver the Government's missions and how they could be delivered in practice, which additional advice on implementing each policy.

If you require further information about these recommendations, or about the state of UK climate policy, please contact Joseph Lewis at joseph@the-ies.org.



“The UK’s ability to achieve the new target will depend on how the Government plans to deliver it in practice.”

FAQs & Key Concepts

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.

For a complete overview of the latest climate science, see the full Synthesis Report from the IPCC, and its Summary for Policymakers.

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 and the UK Government's 2023 National Risk Register.

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

Where do we need further action?

The report from IPCC Working Group III evaluates mitigation efforts so far. The 2024 CCC Progress Report also identifies gaps in current UK climate plans.

In 2024, the Institution of Environmental Sciences set out priorities for the UK Government between 2024 and 2029, including priorities for climate action in the UK.

On the global level, the IES 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.

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.

The UK Government's Independent Review of Net Zero described net zero as 'the economic opportunity of the 21st Century'.

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' provide further evidence to support that perspective.

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.

In its 2024 message to the new UK Government, the IES set out priority recommendations to deliver an approach to environmental crises which will lead to thriving people, a healthy economy, and a flourishing environment.

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.

Further action is still needed to properly address loss and damage, including addressing 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 host governments, the UNFCCC is responsible for organising COP29 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 in 2023, comprises reports from three working groups on:

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

Further information

Find out more about influencing policy decisions

Our IES 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.

Is there a policy-related topic which you would like to see covered by the IES?

Get in touch with Joseph Lewis (joseph@the-ies.org) to let us know your thoughts on potential topics for future briefings, or with your suggestions for other content.

Other relevant legislation & regulations

Find out more about existing legislation & policy 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 briefings 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
- IES Climate Videos Playlist
- Priorities for the UK Government, 2024-2029

More analysis and insights are available on the IES website and YouTube channel.

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