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Strategy and justice:
Managing the geopolitics of climate change

Peter Hill

Policy insight

September 2024

Grantham Foundation
for the Protection of the Environment

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Acknowledgements

The author is grateful to Bob Ward for his review comments and to the many current and former colleagues who have provided feedback on parts of the paper. Georgina Kyriacou edited the report and production assistance was provided by Sam Kumari.

This report was first published in September 2024 by the Grantham Research Institute on Climate Change and the Environment.

Suggested citation: Hill P (2024) *Strategy and justice: managing the geopolitics of climate change*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science.

Contents

List of abbreviations

AfDB: African Development Bank

AI: artificial intelligence

BECCS: bioenergy with carbon capture and storage

BII: British International Investment

BOGA: Beyond Oil and Gas Alliance

BRI: Belt and Road Initiative

CAF: Capital Adequacy Framework

CBAM: carbon border adjustment mechanism

CCC: Climate Change Committee

CCUS: carbon capture, usage and storage

COP: Conference of the Parties

Defra: Department for Environment, Food and Rural Affairs

DESNZ: Department for Energy Security and Net Zero

DFI: development finance institution

EBRD: European Bank for Reconstruction and Development

EMDCs: emerging markets and developing countries

EV: electric vehicle

FCDO: Foreign, Commonwealth and Development Office

GNI: gross national income

IADB: Inter-American Development Bank

IBRD: International Bank for Reconstruction and Development

ICF: International Climate Finance

IDA: International Development Association

IEA: International Energy Agency

IFC: International Finance Corporation

IHLEG: Independent High-Level Expert Group

IMF: International Monetary Fund

IPCC: Intergovernmental Panel on Climate Change

IRA: Inflation Reduction Act

JETP: Just Energy Transition Partnership

LNG: liquefied natural gas

MDB: multilateral development bank

MDRI: Multilateral Debt Relief Initiative

NDC: nationally determined contribution

NSC: National Security Council

ODA: official development assistance

OECD: Organisation for Economic Co-operation and Development

OPEC: Organization of the Petroleum Exporting Countries

OPEC+: OPEC plus its allies, e.g. Kazakhstan, Mexico, Russia

opex: operating expenses

PV: photovoltaic

SDR: Special Drawing Right

UKEF: UK Export Finance

UNDP: United Nations Development Programme

UNFCCC: United Nations Framework Convention on Climate Change

WTO: World Trade Organization

Summary

This report focuses on the UK's foreign, development and economic policies as they relate to climate. It argues that governments, including the UK's new government, should treat climate as a first order geopolitical issue and examines the UK's role and required actions within this context.

While the transition to a net zero global economy is now all but inevitable, advanced economies are paying insufficient attention to what is needed to accelerate the journeys of others or to the spillover effects of their policies on the rest of the world. This inattention will come at increasing cost both to the objectives of climate change policy and the UK's geopolitical interests. Perceptions that fiscal constraints and public opinion prevent governments doing what is both necessary and in their interests are generally not backed up by evidence and are a matter of political choice, not fact. For the UK and its close partners, the demands of strategy and justice are broadly aligned and can be met at limited cost and with public support.

The decade ahead

The international context in the decade ahead is likely to be marked by increasing geopolitical competition and confrontation, with difficult conditions for international cooperation and multilateral organisations. Competition between the United States and China will be a structuring feature of the international order, with Russia aligned with China, and Europe and the US sharing interests and values to a greater extent than with any other major power. Emerging markets and developing countries (EMDCs) will be increasingly important to the evolving international order. And as events of the past decade have shown, Western governments cannot take international support for their core interests for granted.

As climate change plays a growing role in every country's economy and politics, its importance in international relations will increase. For most countries, a clean energy system will be more resilient than one based on fossil fuels, which in a contested geopolitical context will be attractive to many. It is also a system in which China will remain the dominant provider of key technologies and materials. While this is likely to be less consequential than the dominance of energy supply by OPEC+, the UK and its partners will need to manage the tensions between access to essential technologies and materials, more resilient supply chains that create industrial opportunity in EMDCs, and supporting domestic producers in key industries.

In most advanced economies and to an extent China, the major part of the transition will have been largely achieved by the mid-2030s, thanks to the decarbonisation of power, road transport and buildings. Europe, including the UK, will lead the way, followed by the US, with China catching up. Industry, aviation, the maritime sector and agriculture will take longer, but the transition may happen faster than commonly expected and at a marginal macroeconomic cost.

Most advanced economies are pursuing energy and industrial policies but doing so in a weakly coordinated manner. This risks competing approaches, expensive or ineffective domestic industrial measures, industrial production being concentrated in jurisdictions that create new vulnerabilities, and green industrialisation opportunities for EMDCs being missed.

Carbon is becoming a central feature of trade and investment policies, whether through domestic investments and subsidies, levies, carbon pricing or trade measures. By the mid-2030s, the EU's carbon border adjustment mechanism (CBAM) will have been fully implemented in a first tranche of sectors and likely extended to further sectors. Despite objections to the CBAM, it may well promote the uptake of carbon pricing globally, particularly in emerging markets that would rather tax emissions themselves than have the EU do so. By the mid-2030s, over half of the global economy may be covered by carbon pricing, and some countries will have introduced some form of carbon border measure as a result. This risks creating a two-tier trade system: those that can access clean power will boost their industrial development; those that cannot may see their exports penalised. Jurisdictions introducing carbon border measures will need to do more to address their negative effects.

As a result of these measures, global greenhouse gas emissions are likely to peak soon but will decline slower than science or fairness demands. They will do so in part because emissions in many EMDCs will remain stable or grow, slowing down global reductions and baking in more damaging climate impacts, even though the most cost-effective emission reductions will be in EMDCs in the 2030s. Limiting global warming to the terms of the Paris Agreement will increasingly depend on the world beyond the West and China: but the energies and investments of advanced economies are currently spent at home, with limited support provided to the rest of the world.

Accelerating the transition will be capital-intensive. It means bringing forward investments and discounting high-carbon assets early, in return for compensating savings in time. Investment and trade are at the heart of the capital-intensive transition and are becoming increasingly geopolitical. Advanced economies' dominance of international financial flows and development assistance has been eroded. China is currently better placed than advanced economies to partner with many EMDCs from an investment and technology perspective; and the role of Gulf countries is growing, particularly in Africa and Asia.

Many in EMDCs are disillusioned with Western countries. Climate change is a growing reason, if not the only cause. Many see Western countries as demanding emissions cuts without providing adequate support, subsidising their own industries and raising trade barriers under the guise of environmental protection. They see advanced economies as bearing the greatest responsibility for climate impacts, which hit them most and will worsen as the world approaches warming of 1.5°C on an enduring basis. Even global warming consistent with the terms of the Paris Agreement will increase inequality and hit the most vulnerable hardest. Development gains will slow down and may reverse. Impacts will no longer be distant local tragedies but will affect all countries and spill across borders. A world of intensifying climate impacts will likely be less welcoming of democracy and human rights and more favourable to repressive and autocratic regimes.

This combination of neglect and frustration will become an increasingly expensive own-goal in geopolitical terms for the West. As advanced economies invest in the transition and adaptation at home, they will need to present a more credible offer to the rest of the world to address climate change and to maintain and renew the fundamental characteristics of the international order that they value. They will need to bring a greater sense of purpose to these issues or risk discovering when it is too late that while they have been tending to their own transition preoccupations, the primary objective – to limit global warming consistent with the goals of the Paris Agreement – will have moved out of reach.

In this sense, the demands of strategy and justice are aligned. What is in the national interest of Western countries is broadly aligned with the demands of fairness and equity towards the rest of the world, including the most vulnerable.

The role of the UK in the global net zero transition

How the UK approaches the transition and addresses climate domestically matters internationally. It will affect others' perceptions, and their willingness to work with and invest in the UK, adopt its ideas and buy its products. The UK's influence and standing has declined over the past decade due to changes in the international context and the country's own choices. As climate change grows in importance for every country, the UK's domestic performance and international offer will matter more to its wider international standing.

The UK must transform its economy while showing how the transition can be achieved at the same time as maintaining domestic support. The energy transition will have the greatest implications for external policies, greatly reducing the UK's dependence on oil and gas imports and its exposure to price spikes. The UK will need to do more to get to grips with agricultural emissions, including addressing the trade and development implications of measures needed to do so.

The UK's international influence will depend on the effectiveness and ambition of the policies it pursues at home; and coherence between what it does at home and abroad. The UK will need to promote abroad measures it takes at home and do more to take the international context into account in its domestic policies, including the interests of EMDCs. Better coordination of domestic and international climate, energy and nature policies in government will be needed.

The UK's relationships

The most significant international questions for the UK will be its relationship with the EU; how it addresses high levels of dependence on China; how it coordinates with the US, EU and others on the external aspects of industrial policy; and how, with partners, it strengthens its offer to EMDCs.

The UK and EU should seek a comprehensive energy and climate agreement to promote consistent regulatory approaches, increase investment in technologies and infrastructure of common interest and deepen international cooperation. Any agreement could be self-standing or part of a wider agreement.

The UK should work with partners to reduce its vulnerabilities in green technology supply where feasible while recognising that the country will continue to have a high level of dependence on China in this respect. Given its market size and reliance on trade, the UK is likely to take a more open approach than the US or EU but will need to work with others for both climate-related and geopolitical reasons to reduce its exposure and sharpen its offer to EMDCs as they seek to decarbonise their economies and develop green industries.

An increasingly competitive relationship with China risks descending into confrontation, weakening wider international cooperation and multilateral organisations. Competition will need to be balanced with elements of cooperation. The UK should encourage cooperation with China in the common interest – for example, on reforming the multilateral development banks (MDBs) or debt restructuring.

While the UK's key international relationships will remain with the US and Europe, developments in the international system mean these relationships are far from sufficient. More countries matter on more issues; and the UK will be in constant competition to secure the good opinion of the world. The UK will also need to work to ensure the multilateral system responds to the range of climate challenges, strengthening those organisations that remain able to perform their core function, maintaining those that for now are not, and innovating where there are gaps.

UK industry and trade

As it develops green industrial policies, the UK will need to navigate tensions between value for money, jobs, resilience, and external trade and economic policies that support sustainable development. The UK does not have the market power of the US, EU or China and is likely to need a more open trade regime, supporting and protecting sectors where there are particular risks, rather than those where the UK does not have the potential to be competitive; and to remain open to international clean tech investment into the UK subject to national security and technology transfer conditions. The UK should be cautious about trade restrictions such as tariffs that are not related to carbon content. While the UK is unlikely to have a leading position in most of the key technologies or materials of the transition, it could have a strong international offer in some sectors, including those related to designing, delivering and managing a clean energy system. This could also reduce the risk of excessive dependence on China of energy systems in EMDCs, many of which are likely to be based on Chinese solar PV, batteries and other technologies.

The UK should work with its close partners to better coordinate the external dimension of industrial policy. This has the potential to reduce costs while increasing resilience and supporting clean industrialisation in EMDCs. The UK should work with partners to identify specific sectors, products, materials and countries where cooperation can accelerate the cost-effective deployment of green technologies and increase assurance about diversity of supply.

The outlook for the multilateral trading system in the short term may be poor, but the UK has a strong interest in it being as effective as possible and adapting to new challenges. The UK should articulate its vision for a global trade regime that incorporates carbon and sustainability. It should commit to use proceeds from its carbon border measures to support green industrialisation in EMDCs.

International financial institutions and the UK

The net zero transition will be capital-intensive in its early phases, producing significant savings over time. The costs of climate impacts will follow a different path, either growing rapidly and enduringly without; or slowly and temporarily with investment in resilience and reducing emissions. Well-designed policies to support productive clean investment can boost output and jobs.

The investment required for climate, resilience and nature by 2030 for EMDCs other than China is about four times current levels: around US$2.4trn[1] per year, with $1trn from external sources, according to the Independent High-Level Expert Group on Climate Finance. Although many EMDCs need to reform their energy markets and wider investment climate, most do not have the fiscal room or capital markets to make investments on the timescale necessary. Debt distress is growing and finance flows to EMDCs have turned negative.

There is a critical role for international financial institutions, advanced economies and others in a position to do so to support climate-related investment in EMDCs. Western leadership in generating the investment needed has been lacking. Stretched public finances, difficult domestic politics, crises in Europe and the Middle East and a year of elections have all played their part. Following an exceptional year of elections around the world, and an election in the US to come, there is an urgent need to refocus political attention.

The UK should, before the COP29 UN climate conference (in November 2024), set out its approach to international climate issues, with a focus on those that require sustained engagement from leaders and finance ministers. In the immediate term, it should prioritise a package of measures that can have a short-term impact and create the conditions for a more significant investment package next year. The immediate priority should be to ensure MDBs make better use of their existing resources, scale up World Bank support to lower-income countries and negotiate a stretching but credible climate finance goal at COP29.

The priority in 2025 should be to increase the capital available to the MDBs and ensure they use it effectively. The UK should also start discussions with key partners about debt restructuring for highly indebted countries. The current approach offers partial responses while the problem grows, but the conditions may not yet exist for agreement on a better approach. France and the US will be important given their respective G7 and G20 Presidencies in 2026; and the US and UK with their G7 and G20 Presidencies in 2027. Discussion should include the role of MDBs; and measures to integrate climate and nature considerations more systematically into debt restructuring.

The UK should pursue other potential sources of investment. It should take a more prominent international role in working to redirect fossil fuel subsidies. It should support an increase in International Monetary Fund (IMF) Special Drawing Rights (SDRs) which countries recycle to developing countries, and channel part of its SDRs through the MDBs. The UK should seek the most ambitious shipping emissions levy in the short term while building a coalition to direct a share of levies to wider climate action in time; and it should seek to ensure that a share of the proceeds from compulsory aviation offset funding is directed to international climate programmes. The UK should engage constructively in proposals for other international levies while recognising that it is likely to take some time to build domestic and international consensus on some measures, if at all.

To be influential abroad, the UK needs to be credible at home. A shrinking official development assistance (ODA) budget has weakened the UK's credibility and influence and led to tensions between climate and other development priorities. The UK should set a development finance commitment that moves real spending towards its legislated target of 0.7% of gross national income (GNI). As the UK increasingly regulates or taxes carbon at home and abroad, it should ensure a share of revenues is devoted to international climate programmes, starting with revenues from its border carbon tax.

The UK will need to target and leverage what it spends more effectively. The UK should increase the use of guarantees and gradually move the most concessional climate finance towards adaptation, nature and loss and damage. The UK should rebalance its international investments towards multilateral channels given the ability of multilateral lenders to leverage other finance and unlock policy reform. In geopolitical terms, multilateral banks offer the most credible alternative to less transparent and accountable sources of finance. The UK should take a mission-based approach to coordinate and leverage its bilateral tools, particularly export finance and development finance institutions. Untying export finance from requirements for UK content would make it more competitive and encourage investment in UK supply chains.

[1] The use of '$' indicates US dollars throughout.

Public opinion about climate action in the UK

There is a common misperception among decision-makers that the public will not support the measures necessary to address climate change at home and abroad. The weakening of the political consensus that has endured in the UK over the past three decades is also a factor. These perceptions, and concerns about the UK's fiscal position, are constraining the choices decision-makers believe are open to them in ways that risk slowing down the transition and damaging UK – and Western – geopolitical interests. Polling and election results suggest that these perceptions are generally not based on evidence and that properly prepared and communicated, action to address climate change at home and internationally enjoys strong levels of public support.

While primarily relevant to domestic climate policy, this applies equally to international action. External policy may generally be under less pressure from public opinion than domestic but international leadership cannot be sustained without a strong domestic story. And providing a better offer on climate change and the transition to EMDCs will require greater investment, whether from governments or other sources, along with public understanding and support.

Recent polling[2] shows that there are arguments to which the public respond. The British public is concerned about the national and international security context and takes a broad view of the security risks facing the UK. They have an intrinsic understanding of the geopolitical aspects of climate change and the broad and interlinked nature of climate and national security threats. They believe that the UK's international influence has declined and they would be proud to see UK leadership on climate. They believe there is a strong in-principle case for supporting other countries; and for helping other countries become more self-sufficient by transferring and building green technology. They want the UK to support nature as much internationally as at home. The public thinks international development assistance should stay at current levels rather than increase but generally overestimate how much the UK actually spends. As climate impacts worsen, the public's connection to the issue will likely strengthen, although how will depend in part on how decision-makers respond.

Action to address climate change presents opportunities for international influence to the wider geopolitical benefit of the UK. It is a role that the British public want and believe the UK can play. Political leaders have arguments they can use to justify the measures necessary to increase international climate efforts if they wish to do so.

The UK's role in strengthening climate governance

A weakened international system is bad for EMDCs and worse for the most vulnerable, even if some developing countries can benefit some of the time from a world of great power competition.

As a beneficiary of an open and stable international order, the UK is exposed to its decline and has a strong interest in preserving and renewing it. All organisations will need to adapt to the demands of climate change and new fora may be required. The UK should establish a commission on the evolution of international organisations to address these growing challenges.

The UK will need to put climate change and the net zero, climate-resilient transition at the centre of statecraft, managing the geopolitics of climate change to enable the transition and prevent climate issues from further fragmenting the international order. The UK has built and dismantled climate and nature expertise according to the preferences of the government of the day. This is not a serious approach to a significant challenge. The UK should put in place governance and capabilities to integrate the levers of government in support of a coherent strategy. This should include stronger analytic capabilities, an annual climate, energy and nature security assessment on which the UK's strategy should be based, and a sub-committee of the National Security Council to oversee delivery of that strategy. The UK should expand the role of the Climate Change Committee to advise on the Government's international policies and should draw on other external expertise. The UK should re-establish international envoy roles and consider the scope to bring together teams working on climate and nature-related issues.

[2] By More in Common

Introduction

This report focuses on the UK's foreign, development and economic policies as they relate to climate. It recommends actions the UK should take at home to strengthen its international position and vice versa. It suggests changes in the ways that government assesses and takes decisions on climate-related issues. And it considers public attitudes to domestic and international climate action, drawing on recent polling.

The argument of the report is straightforward.

First, governments should treat climate change – meaning both the transition to a net zero economy and the impacts of climate change – as a first order geopolitical issue. The time that climate might be insulated from geopolitics as an issue exclusively of cooperation is past. Competition between states has become an important factor in influencing climate outcomes. And the impacts of climate change will increasingly affect relations between states as well as within them. Left untended, these trends will lead to greater geoeconomic and geopolitical fragmentation and confrontation, resulting in worse climate outcomes and undermining other objectives, from human development to international peace and security. Governments must harness these geopolitics in the service of the transition and work to ensure that climate change does not increase the fragmentation of the international order. That means putting the complex of climate and transition issues at the centre of statecraft.

Second, managing climate-related dependencies on China will be an important geopolitical challenge for the UK and other advanced economies in the next decade. China dominates most of the key technologies and materials of the transition: dominance that will abate only marginally over the next decade. This may not give China the leverage over the green economy that OPEC+ enjoys over the oil economy but creates dependencies that need to be reduced where feasible and managed where not; and it produces tensions between accelerating the transition and reducing reliance on China. The UK will face choices between maintaining access to the technologies it needs to power the transition, supporting domestic producers, developing friendly supply chains and aligning with allies.

Third, advanced economies are focused on their own climate challenges, paying insufficient attention to what is needed to speed up the journeys of others or to the spillover effects their policies have on the rest of the world. It is all but certain that the world will reach the destination of a net zero global economy in the coming decades. This transformation is now driven by deep-rooted economic and political forces. But the nature of the journey and time of arrival are uncertain. Investments in China and advanced economies are accelerating and the costs of the key technologies of the transition continue to tumble. In much of the rest of the world, emissions continue to rise as investment falls far short of needs. Unless remedied, this will delay the transition and make it more disruptive, increase the damaging impacts of climate change and skew costs and benefits to the disadvantage of the most vulnerable.

Fourth, for the UK and its close partners, the demands of strategy and justice are broadly aligned. Many emerging markets and developing countries (EMDCs) are frustrated and disillusioned with Western governments and the international order they have been instrumental in building. Climate change is not the only factor, but it is an important and growing one. Many countries see advanced economies as: being responsible for the climate impacts that risk setting back their own development; demanding emissions cuts while failing to provide support to enable them; and subsidising their own industries and raising trade barriers to prevent industrial development in EMDCs under the guise of 'saving the planet'. This is fertile ground for those looking to undermine the West and relationships between advanced economies and EMDCs. China is at present better positioned to partner developing countries in the transition, and is under little international pressure to accelerate its transition or to increase its share of international support to EMDCs.

As a result, the measures necessary to promote the UK's strategic interests are not only consistent with those to promote justice, particularly for the most vulnerable, but require them. Western countries must rapidly improve their offer of partnership on addressing climate issues to EMDCs if they want to present a credible alternative to China and others, and to secure the fundamental characteristics of the international order that have served them and, they argue, the world well.

Unaddressed, the ability of the UK and its allies to persuade other countries of their cause, not only on climate but other international issues, will continue to decline – and with it the UK's standing and influence in the world. Previous periods of geopolitical competition, in particular the Cold War, led to increased US foreign assistance in the face of domestic political reluctance. It is possible and desirable for this to happen again, provided it is managed and directed to avoid clientelism.

Fifth, there is a common misperception among decision-makers that the public will not support the measures necessary to address climate change at home and abroad. This is based on perceptions of public opinion that are generally not supported by evidence, and a weakening of the political consensus on climate that has endured in the UK over the last three decades. These perceptions and concerns about national fiscal positions are constraining the choices that decision-makers believe are open to them in ways that risk slowing down the transition and further damaging the UK – and the West's – geopolitical interests. Polling and election results indicate that under reasonable conditions there are strong levels of public support for action to address climate change at home and internationally. Understanding the views of the public and addressing those in the design and delivery of climate-related policies will be as important in the UK's international policies as in its domestic policies.

The decade ahead

This report examines the world as it may develop over the next decade in order to illuminate decisions needed in the short-term. By the mid-2030s, according to assessments by the Intergovernmental Panel on Climate Change (IPCC), the world will likely have warmed by 1.5°C above pre-industrial levels. Climate impacts are already driving hunger, conflict and migration. In a decade's time, the world may be moving from moderate to far more severe climate impacts with the odds of high-impact tipping points shortening.

The real if insufficient progress made in addressing climate change over the past 30 years has led to an increasingly clear outlook for the decade ahead. The risk of catastrophic levels of global warming of 3°C or more, which were likely before the Paris Agreement, has reduced. Limiting warming to levels consistent with the Paris Agreement is possible at little overall macroeconomic cost and with significant associated benefits and savings – although those costs and benefits will not be distributed evenly. And while the catastrophic effects of warming of 3°C may be avoidable, the impacts at lower temperatures are worse and likely to hit sooner than previously thought.

The race to reduce greenhouse gas emissions is about limiting warming to as close to 1.5°C as possible. It is a realistic possibility that global emissions will peak soon, largely depending on China's emissions. But without further action, in particular greater investment in the transition in EMDCs beyond China, the plateau in emissions could last years and the decline be long and slow, with highly damaging effects on human development and potentially on the relations between states.

Decisions taken in the coming year will affect the outlook for the next decade. By the end of 2024, Parties to the Paris Agreement are due to agree on the finance required to address climate change over the medium term. By early 2025, they are expected to produce their emission reduction plans – so-called nationally determined contributions (NDCs) – to 2035.

Structure of the report

- Part 1 considers a world shaped by the impacts of climate change and the transition to a net zero global economy. It addresses the main systems of the transformation and the range of issues that will be impacted by climate change – from conflict to health to poverty. It identifies implications for the UK and makes recommendations for the UK's international policies.
- Part 2 considers how these factors play out in the world's regions, and the implications for the UK.
- Part 3 considers the role of the UK in the world in the decade ahead against this background. It examines the UK's own net zero transition as relevant to its international policies and public attitudes towards the actions necessary to address climate change, before considering the choices this raises for the UK.
- Part 4 summarises the report's recommendations for the UK.

Part 1: The international context in the decade ahead

Summary

- **Most advanced economies should achieve a great part of their transition to a net zero, climate-resilient economy by the mid-2030s.** Europe is likely to lead the way, followed by the US, with China catching up. This will likely lead to global emissions peaking imminently. But on the current path, the attention and investments of advanced economies will be spent at home, with insufficient attention paid to the rest of the world. The result will be that emissions in many EMDCs will continue to grow or fall gradually, slowing down global emission reductions, baking in damaging climate impacts and proving a geopolitical own goal. Outside the US, EU and China, the decisions of India and Indonesia will be most consequential to the path of emissions in the 2030s.
- **The international context in the decade ahead is likely to be marked by increasing geopolitical competition and fragmentation.** Risks of confrontation and conflict, including between major powers, are growing and the prospects for many areas of international cooperation are weak. As climate plays a growing role in every country's economy and politics, its importance in international relations will increase, affecting and being affected by the wider context. Climate change will not be an island of cooperation in a sea of competition, and could drive economic fragmentation and geopolitical confrontation.
- **But this is not inevitable and more than other issues, states can manage competition and cooperation on climate change in the common interest,** preserving the ability of a reformed international system to address the multiple challenges it brings. Whether they do will depend in part on the attention they give to understanding and managing these challenges.
- **Investment and trade are at the heart of the transition and are becoming increasingly geopolitical.** The advanced economies' dominance of international financial flows, including development assistance, has eroded. China is better placed than advanced economies to partner with many EMDCs from both an investment and technology perspective; and the role of Gulf countries has grown rapidly, particularly in Africa and Asia. Advanced economies will need to invest at greater scale abroad if they are to address their declining geopolitical position and the world is to meet the goals of the Paris Agreement.
- **Most advanced economies will pursue active energy and industrial strategies in the coming years but risk doing so with limited coordination or attention to the implications for EMDCs.** A more coordinated approach could diversify supply chains, lower costs and support the industrialisation of developing countries.
- **Carbon is becoming a central feature of trade and investment policies, whether through domestic investments and subsidies, levies, carbon pricing or trade measures.** By the mid-2030s, the EU's carbon border adjustment mechanism will be fully implemented and likely extended to further sectors. Despite international objections, it may be effective in promoting the introduction of carbon pricing globally, particularly in major emerging markets that would rather tax emissions domestically than have the EU do so. By 2035, over half of the global economy and emissions could be covered by carbon pricing; and many countries may introduce some form of carbon border measure as a result. This risks creating a two-tier trade system – those with clean power could boost industrial development; those without may see their exports penalised and development stymied. Jurisdictions introducing carbon border measures, including the UK, will need to do more to reduce their negative effects.
- **The impacts of climate change at 1.5°C will be worse than previously thought and have an increasing geopolitical dimension as they proliferate, destabilising weak states and spilling over borders.** Climate change will slow the pace of development and could reverse gains made in many countries, increasing inequality and hitting the poorest and most vulnerable the hardest. Many societies are likely to be more violent than they would be in a world without climate change. Migration in all its forms will grow – primarily local and regional, but also international. A world of accelerating climate impacts is likely to be more hostile to democracy and human rights and to favour autocratic regimes.
- **All of this raises questions for the UK in how it uses its influence internationally; and how it resources and organises its international action to greatest effect.**

- **As a major beneficiary of an open and stable international order, the UK is exposed to its decline and has a strong interest in preserving and renewing it.** The UK should work to ensure that the multilateral system responds to the range of climate challenges, strengthening organisations that remain able to perform their core functions, maintaining those that for now are not, and innovating where there are gaps. Having been preoccupied by its post-Brexit trade negotiations, the UK should set out its approach to the future of the global trade regime and its national trade policy, paying particular attention to the role of carbon and sustainability in trade.
- **The UK should work with its partners to reduce its dependencies and vulnerabilities on green technology supply** to increase its resilience, build its own capabilities and support the industrialisation of developing countries. There will be limits to how far these dependencies can be reduced over the next decade.
- **The UK should promote cooperation with China where it is in the common interest – e.g. on multilateral development bank (MDB) reform or debt restructuring.** Competition with China has the potential to accelerate the transition and to help EMDCs reduce or manage their own clean tech dependencies on China; but it needs to be balanced with elements of cooperation to reduce the risk of competition spiralling into confrontation.
- **The UK's most important set of relationships on climate and the transition will be with the EU and European countries;** and the UK and EU should seek a comprehensive energy and climate agreement to promote consistent regulatory approaches, improve conditions for investment and deepen international cooperation.
- **Coordination between advanced economies to mobilise finance for the transition in EMDCs will need greater direction and ambition.** Finance from a wide range of private and public sources will be necessary, but the current approach lacks high-level political direction. Leaders and finance ministers, particularly from G7 countries, need now to bring greater attention, purpose and prioritisation to these issues.
- **While the UK does not have control over these issues as it does over its own instruments, it has influence internationally, which it has the opportunity and responsibility to use.** The UK should, before COP29 in November 2024, set out its short- and longer-term approach to bring greater urgency to the range of international financing issues, with particular focus on those that will require sustained engagement from leaders and finance ministers.
- **In the immediate term, the UK should support a package of finance measures to have a short-term impact and create the conditions for a more significant investment package next year and beyond.** The priority should be to ensure MDBs make better use of their existing resources, scale up World Bank support to lower-income countries and work for a stretching but credible new climate finance goal at COP29.
- **The priority in 2025 should be to increase the capital available to the MDBs and ensure they use it effectively.** The UK should also start discussions with key partners about debt restructuring for highly indebted countries beyond the current approach, which offers partial responses while the scale of the problem grows. This should include the role of MDBs in debt restructuring; and measures to integrate climate and nature considerations more systematically into debt restructuring. France and the US will be important given their respective G7 and G20 Presidencies in 2026; and the US and UK given their G7 and G20 Presidencies in 2027.
- **The UK should pursue other sources of investment while remaining realistic about their prospects:** e.g. taking a more prominent role in reducing and redirecting fossil fuel and agricultural subsidies, supporting an increase in the proportion of IMF Special Drawing Rights which countries recycle to developing countries and championing their use as hybrid capital to finance climate projects through MDBs. The UK should work for an ambitious shipping emissions levy while building a coalition to direct a share of levies to wider climate action in time. It should seek to ensure that a share of the proceeds from compulsory aviation offset funding is directed to international climate programmes. The UK should engage constructively in other proposals while recognising that progress will take time and that there are political risks if discussions are mishandled.

Introduction

This part of the report assesses international relations over the next decade in light of the transition of the global economy to net zero and the impacts of climate change. The world it anticipates is based on the IPCC's Sixth Assessment report, whose scenarios assess that global warming is more likely than not to reach 1.5°C of warming by the mid-2030s. In terms of the transition, the analysis is broadly based on the International Energy Agency (IEA) Accelerated Policy Scenario set out in the World Energy Outlook and Energy Technology Perspectives.

Section 1.1 considers the geopolitics of the competitive transition, which will be particularly acute over the next 10–20 years. **Section 1.2** examines the growing inter-state implications of climate impacts, which will increase over a longer timescale.

This assessment presents choices for the UK. The country faces international choices that have domestic implications, where the UK has varying degrees of influence, whether through its ability to build partnerships or to spark change through the example of its actions or the strength of its ideas; these are examined in this part of the report. Part 2 goes on to assess the UK's domestic choices that have international implications, where it has a high degree of control.

First, as important background, the likely pace of the transition is examined.

Prospects for the speed of the transition

There are a range of uncertainties about the pace of the global transition, captured in IPCC and IEA scenarios. Because of historical and current emissions, there is a relatively high degree of certainty about the trajectory of global temperatures over the next decade, whatever action countries take in the near term. There can also be a reasonable degree of certainty that global emissions are peaking, but the duration of the peak and the speed of decline are unclear. While the public in many countries want their governments to address climate change, there is uncertainty about the evolution of public opinion in specific countries at specific times and on specific issues. There can be a reasonably high degree of confidence that the outlook for global economic growth in the medium term will be lower than over the past decade, but there is uncertainty about where inflation and interest rates will settle, which is particularly important for climate change given the need for capital to accelerate the deployment of new clean infrastructure. And the political choices of leaders in key countries will have significant short-term implications for prospects for addressing climate change and for the wider prospects of managing great power competition without conflict.

In this context, there can be a reasonable degree of certainty that by the mid-2030s, most advanced economies will have largely completed the most significant phase of the transition to a net zero economy. This will require them to meet or come close to meeting their targets, with Europe, including the UK, leading the way followed by the US, other advanced economies and China. Most advanced economies will likely have overwhelmingly decarbonised their electricity generation systems, which will also have grown to meet new demand as transport, buildings and some industrial sectors electrify. Electric vehicles (EVs), including heavy goods, will have largely replaced petrol and diesel vehicles. The heating of buildings will have been overwhelmingly decarbonised, primarily through the use of heat pumps. This will not simply be the replacement of one form of energy production by another, but new systems with new interdependencies and synergies.

China will also be well along this path, ahead of advanced economies in road transport and behind in the power sector. China has hit its 2030 renewables target before the end of 2024 but also continues to expand its coal fleet. Whether it uses coal as baseload or for peaking capacity, as it has suggested, will determine its and the world's emissions path. Although in percentage terms China may achieve only half the emission reductions of the US by 2035, this may be similar in terms of gigatonnes of CO_2 given the scale of China's emissions. This progress will be driven not only by concern for the habitability of the planet but also by security and economic interests.

These achievements will represent significant progress but will not be sufficient to limit warming to 1.5°C. Much of the harder work – decarbonising industry, aviation and the maritime sector, land use and

agriculture – will be less advanced by the mid-2030s. And many developing countries will not, on the current path, have access to investment on the scale necessary to deliver the Paris Agreement targets.

The pathway to zero-carbon shipping and aviation is less clear than in other sectors; and in the case of aviation may not exist (it may always require the sector to offset using carbon removals). As battery efficiency improves, electrification will play a role for small vessels or short distance travel. And as fewer hydrocarbons are moved internationally, demand in shipping may fall (40% of global shipping is to transport hydrocarbons). But both sectors will rely heavily on low- or zero-carbon fuels, which are not yet commercially viable or deployed at scale.

Green hydrogen will start over the decade ahead to replace hydrogen from fossil fuels and will spread to aviation and maritime fuels, long-duration storage and potentially the highest temperature industrial heat (it will not be used at meaningful scale in domestic heating or road transport). Carbon capture will develop on a similar timescale for some industrial processes but its role in the power sector is uncertain and likely limited. Carbon removals such as direct air capture are likely to play a marginal role over the next decade but grow beyond that. Nuclear power will play a role particularly for those countries with existing nuclear fleets, above all China. Hydro and geothermal power will play a similar role for some countries.

As a result, fossil fuels will decline in importance economically and politically over the decade for those countries leading the transition. Political leaders will still worry about disruptions to supply but will no longer fear this could send inflation sky-rocketing, drive millions into debt or cost elections.

The prospects for the transition in the rest of the world are less clear, due to inadequate finance and uncertain policy. On current policies, emissions in developing Asia (outside China) and Africa are likely to be rising in the mid-2030s and to account for a growing share of emissions. As a result, while oil demand will be falling in advanced economies, IEA scenarios for the global pace of decline range from 100 million barrels per day in 2050 (compared with 102 today) to a reduction of 75% in a net zero scenario. Whatever the trajectory, the transition to a system dominated by renewables will not be smooth. Price spikes and troughs are likely, with the former creating demand for subsidies to reduce the impacts on consumers and business.

The transition creates risks for countries dependent on oil and gas revenues. Many producer countries are betting on a long peak and slow decline and potentially for consumption rebounds as prices drop. A mismatch between their assumptions and the pace of the transition will expose the fiscal position of producers, with serious economic and political implications for some.

1.1. Geopolitical context

The geopolitical context over the coming years is likely to be more uncertain, contested and conflictual than it is currently. Geopolitical assessments have moved from a preoccupation with the benefits and challenges of globalisation and the role of non-state actors in the 1990s, to growing concern with transnational issues, in particular terrorism in the 2000s, to a return of geopolitics in the past decade as Western countries have struggled to recover from the 2008 financial crisis and the Iraq and Afghanistan wars, Putin has acted out his deepening grievance with the post-Cold War settlement, and Xi Jinping has emerged as a leader determined that China should occupy its rightful place in the international system.

US–China competition is likely to be a structuring feature of the international system over the next decade and beyond. This competition will push third countries to choose a camp; and to treat issues through a lens of geopolitical competition. But this bipolar competition will not be the only dynamic in international relations and will be complicated by the number of other significant actors in the international system, many of whom will want to preserve their options rather than pick a side. This competition is, however, likely to take a toll on multilateral cooperation and the effectiveness of international organisations.

The role of EMDCs that are not consistently aligned to either China/Russia or the West is increasingly important to the emerging international order. As events of the past decade have shown, including the international reaction to Russia's war in Ukraine, Western governments cannot take the support of these countries for granted.

Developing country disillusionment with advanced economies has grown over the past decade. The reasons are numerous but include the damage done to perceptions of democratic governance and

free market economics by the 2008 financial crisis; rising debt levels for developing countries as a result of COVID-19, and energy and food price spikes; the conflict in Gaza; growing protectionism; stalling development in many countries; and China's growing economic and political influence.

Climate change is an increasingly important factor in this wider context. The effects of climate change and the transition will be unpredictable and disruptive, contributing to macroeconomic and geopolitical volatility. The net zero transition is now a matter of great power competition. China dominates most of the technologies and materials of the transition, raising concerns of dependency and leverage in Western and increasingly in major emerging economies. Climate impacts will become an increasing issue between as well as within states.

Climate-related tensions are growing between high-income countries and the rest of the world. There is a widespread perception in EMDCs that developed countries are concerned above all about emissions reductions; that the growing burden will fall on developing countries; that the green global market being developed by advanced economies will disadvantage poorer countries; and in the meantime, that developed countries are failing to deliver on their commitments to help countries transition and adapt to climate change. Developed countries missed the 2020 deadline agreed in 2009/10 to provide $100bn per annum to help developing countries tackle climate change.

One expression of this in international climate politics has been the rise of the notion of 'climate justice', used variously to refer to inequities and inequalities caused by climate change and the action to address it within and between countries, groups, individuals and generations. It has been championed by grassroots movements and some developing countries and was one of the motivations behind the establishment of the Loss and Damage Fund at COP28. While the specific notion of climate justice has limited resonance with the UK public, related notions of fairness and equity are well understood. In the short term, the upcoming advisory opinion of the International Court of Justice[3] may provide further guidance on the responsibilities of states. And as the impacts of climate change grow, so too may the idea of climate justice.

Climate impacts are likely to become increasingly geopolitical as their effects grow and they interact with other issues in relations between states. To date, the inter-state dimension of climate impacts has played out primarily in the UN Framework Convention on Climate Change (UNFCCC), where issues of adaptation and loss and damage have grown in prominence; and demands for sessions of the Conference of the Parties (COPs) to the UNFCCC to address the increasing range of impacts – whether on water, food or health – have grown. As the world warms, these impacts will affect more countries, spilling over borders and across continents. Long before tipping points are reached, climate impacts will affect relations between countries in ways for which governments and multilateral organisations are not yet prepared. And in a disrupted international context, climate events will interact unpredictably with others – as, for example, when global shipping was affected by both falling water levels in the Panama Canal related to climate change, and Houthi attacks on shipping in the Red Sea.

Climate change will not be an island of cooperation in an ocean of competition. Climate change is now a major issue in the economy and politics of all countries, and is becoming more important in their external policies. Geopolitical competition has the potential to descend into confrontation and conflict; and competitive decarbonisation to descend into protectionism and mercantilism, fragmenting supply chains, marginalising developing countries and slowing down the transition.

But competition is also capable of accelerating action: concern that the US was being surpassed in the green tech race was one of the factors behind the Inflation Reduction Act. One of the issues motivating support (however inadequate) for vulnerable countries in dealing with climate impacts is geopolitical competition for influence. Trying to insulate climate change from this wider context would be futile. The question is how to manage elements of competition and cooperation most effectively to address climate change: at a minimum to reduce the contribution of climate change to wider geopolitical instability; at best to provide a cooperative balance to wider forces of competition.

China's dominance of the technologies and materials of the transition is central to the geopolitics of climate. China has an overwhelming dominance of solar PV (photovoltaic) production and the processing of minerals critical to the energy transition. It has significant dominance in batteries and wind power, and

[3] See /www.icj-cij.org/case/187

increasingly in electric vehicles. It could come to dominate the electrolysers necessary to produce green hydrogen.This dominance will, as intended, create leverage, although how much is uncertain.

It also creates dilemmas: low-cost, high-quality Chinese green technology is accelerating the transition while increasing dependencies. A report by Wood Mackenzie found that without China, the US transition would be slower and cost 20% more (Wood Mackenzie, 2024). While the US and EU will seek to minimise (in the case of the US) or limit (in the case of the EU) China's green tech exports to their markets, China is likely to outcompete both in most other markets, particularly in EMDCs.

Geopolitics are likely increasingly to influence aid policies, including climate finance. Geopolitical competition has the potential to lead to an increase in advanced economy aid flows, which are currently constrained by the domestic preoccupations and fiscal positions of Western governments. This was the experience of the Cold War, which saw geopolitical concerns overcome Congressional resistance to increases in US foreign aid. The risk is that this leads to clientelism and the inefficient use of resources to support favoured leaders or countries, rather than the sustainable growth that is necessary to bring down emissions and adapt to climate impacts.

The US, EU, China and to some extent the Gulf countries and India are in competition to support climate action in developing countries, with China currently best positioned. China has invested about $1trn in the Belt and Road Initiative (BRI) and, partly following criticism from advanced economies, has committed to greening it. Recipients' debt levels and China's own fiscal constraints may mean it funds smaller projects in future but the BRI will remain a strategic priority for China as it directs domestic capacity in green industrial sectors to international markets. China's established relationships and export offer give it a major head start on advanced economies.

Gulf countries are increasing their investments in developing countries, with a range of commercial and geopolitical motivations. The UAE and Saudi Arabia in particular are major investors in Africa. This has the potential to support climate action as many transition investments offer predictable returns that can be well-matched with the long-term needs of Gulf investors. In some cases, the opposite may be the case, with investments made to maintain demand for fossil fuels (as in Saudi Arabia's Oil Demand Sustainability Programme), to buy or lease land for offsets with insufficient standards, or to support climate-vulnerable countries with the aim of influencing their position in international climate negotiations.

For the UK, the demands of strategy and justice are broadly aligned as far as climate change is concerned. Many of the measures set out in this report that are in the UK's national interest from a geopolitical perspective are also necessary to support the sustainable, inclusive and resilient development of the majority of the world and to reduce global emissions.

In its declaratory policy, the UK should make clear that it understands measures to address climate change in the broader context of sustainable development.

The UK should also make clear that its climate policies are guided by who is contributing and has contributed most to the problem; who is benefiting and has benefited most from activities that cause climate change; and who has the greatest ability to address it. The UK will ultimately be judged by its actions, and by the consistency between what it says and what it does. But words matter too, and signal intent.

International cooperation and multilateral organisations

The difficult geopolitical context is affecting multilateral organisations; the international security and trade architecture is particularly affected. The UN Security Council is increasingly unable to perform its core function of addressing threats to international peace and security. The World Trade Organization (WTO) has been weakened by a decline in support for free trade, particularly in advanced economies, and the growth of national preference and subsidies. Attempts to evolve the multilateral trade agenda to better address issues of climate change and nature are currently blocked.

China and Russia are building organisations that respond to their priorities, not least through the growing membership of the BRICS[4] or the Shanghai Cooperation Organisation.[5] The ability of

[4] Egypt, Ethiopia, Iran, Saudi Arabia and the UAE joined the group, previously consisting of Brazil, Russia, India, China and South Africa, in 2024.

[5] The international alliance now has nine member states and four observers from Eurasia.

organisations led by China or Russia to reach agreement on a positive programme of action may be limited; and their diverging interests have limited their interest to date in organising on climate issues.

But they may have more success in bringing countries together around anti-Western positions, enabled by the perceived failures of Europe and the US to make good on their promises to help developing countries develop. And, as Part 3 sets out, it would be unwise to assume that Russia's hitherto relatively constructive role in international climate negotiations will continue as its share of global emissions increases.

This context has particular implications for lower-income and climate-vulnerable countries. Effective multilateral organisations benefit all countries, but multilateralism tends to strengthen the voice of less powerful states. While smaller countries can at times benefit from a competitive international order with weakened multilateral institutions, a breakdown in multilateral cooperation will most disadvantage the vulnerable.

While effective international cooperation in some areas has declined, it is not inevitable that it continues to do so or that all forms of cooperation suffer equally. Some international organisations remain better able to act and it is important that their ability to do so is strengthened.

The multilateral development banks (MDBs) and the IMF in particular perform important functions and remain a locus of international cooperation that should be preserved and expanded, even if their role in the global economy has diminished in recent decades.

The UNFCCC, criticised by climate activists and sceptics alike, is one of the more effective international organisations of the last 30 years. No other organisation brings all countries of the world together annually to address a common problem and continues to produce results, even if it has fallen short of meeting the scale of the climate challenge. This relative success is not due to the unique features of the institution but to the willingness of states to cooperate in addressing a common challenge.

The UNFCCC has also acted as a restraint on power and climate competition. The annual meetings of the COP shine a spotlight on the behaviour of the most powerful. Major powers, including China, the US and the EU, want to avoid being held responsible for failure to make progress on an issue that affects all humanity. This is not a guarantee of progress, and recent COP summits have shown the limits of the power of multilateral negotiations to put major emitters under pressure. But the summits have restrained zero-sum behaviour and provide a basis for wider cooperation. The US and China have maintained some cooperation on climate change, despite a deteriorating relationship. Russia played a broadly constructive role at COP26 even though it has a non-existent bilateral relationship with the UK. Armenia and Azerbaijan were able to agree that the latter should host COP29 while the two countries were at war.

More than other issues, action to address climate change holds the possibility of maintaining elements of cooperation between major powers alongside elements of competition. It is also possible that those competitive aspects can be bent to the purpose of reducing emissions and supporting countries in adapting to the effects of climate change.

But climate change does have a growing governance problem. Climate change is moving up the agenda of many organisations, some of which will adapt (e.g. the international financial institutions), while others struggle (e.g. the WTO). As climate change reaches into all areas of the economy and society, the number of overlapping initiatives and fora has grown, with unclear follow-through or accountability. Demands on the UNFCCC and COP summits are growing, whether to provide more information, transparency and accountability on commitments made or to cover the growing range of issues impacted by climate change. There will be gaps in governance, not least in relation to impacts on water or food security, for example.

The UK should make the strengthening and reform of multilateral institutions a cornerstone of its international climate policies. While reforming international institutions is difficult, the UK has a track record of providing support for the multilateral system and institutional innovation. As a major middle power outside the EU, the UK has a clear interest in a functioning multilateral system. All things being equal, growing geopolitical competition will weaken the multilateral system. But international organisations can play an important role in addressing collective problems and in managing great power competition.

The UK should convene a representative panel to recommend changes to multilateral organisations and governance, to address the growing demands of climate change and respond to emerging gaps in governance. This work could also consider the governance of geoengineering, which may become a contested issue as interest in it grows and groups or wealthy individuals take matters into their own hands.

In the immediate term, the UK should seek to ensure that all international organisations play their full part in addressing climate change – from the G7 and G20 to the UN and its agencies, to the range of development, financial and standard-setting bodies. As climate change affects all areas of the economy and society, the range of organisations that are playing a role or should be has grown.

During its COP26 Presidency, the UK sought to pursue a coherent approach across the international system to addressing climate change. It should do so again, with a comprehensive plan to work with partners to gear the international system to better address climate change.

Regional cooperation is also likely to grow in importance (see Part 3). Energy trade, which has been global in the fossil fuel age, will become local, national and regional in the electric age. As the impacts of climate change grow, they will no longer be local tragedies but will spill across borders, affecting and drawing in neighbouring countries. Both trends are likely to demand more regional cooperation.

Industry and trade

The race between major economies to decarbonise is reshaping global trade, driving the resurgence of industrial policy and a preference for domestic and 'friendly' supply chains. As a result, growth in direct trade between the US and China and EU and China will likely slow down and be diverted through or partially replaced by other countries. US and European trade with India is likely to grow. China has long prioritised industrial policy, giving significant support to domestic providers and creating a growing range of obstacles to international companies. The EU and US are increasing support for their green industries and in parallel restricting imports from China in electric vehicles, batteries, wind technologies and solar PV. Given the absence of global or major regional trade negotiations, restrictions and taxes once introduced are likely to endure.

Carbon is becoming a central issue in the international trading system. By the mid-2030s, the EU's carbon border adjustment mechanism (CBAM) will be fully implemented and likely extended to further sectors. Many developing countries see these border adjustments as protectionist but concerns about the costs of complying are leading many emerging economies, including China, India, Brazil and Indonesia, to introduce carbon pricing in some form to try to ensure that if there are to be taxes on carbon, they, rather than the EU, retain them. The Biden Administration in the US has indicated that it is considering a carbon border measure (whether or not alongside a domestic carbon price is unclear). There is a reasonable possibility that by the mid-2030s, over half of the global economy and emissions could be covered by carbon pricing.

As countries introduce carbon pricing, some will also introduce carbon border adjustment measures to prevent high-emitting sectors from relocating. There is a realistic possibility that China could do this before 2035. India could also do so once its own emissions have peaked.

A cascade of carbon pricing regimes and border measures by advanced and, in time, major emerging market economies will have implications for other developing countries. Those that can access clean power have the chance to boost industrial development; those that cannot will see their exports penalised and development stymied.

This will give rise to challenges which if mismanaged will exacerbate tensions between advanced economies and others; and undermine development. The EU, as the frontrunner in the border adjustment race, has sought to address this, including through the Global Gateway initiative, which aims to mobilise up to €300bn investment from the Commission and Member States for sustainable projects in developing countries. But it has not addressed the widespread frustration that many developing countries have towards the EU's regulatory approach.

Countries introducing carbon border measures, as the UK is committed to doing, should seek to reduce their negative effects. Carbon border measures will generate revenue until such time as exporting countries decarbonise. The assumption has been that those revenues will be used within the EU (or the UK). But these are taxes imposed on third country producers for the primary purpose of preventing leakage rather than generating revenue. There have been suggestions that least-developed economies should be

exempt from carbon border measures. Given the objective of the measures is to reduce emissions, it would be better for those introducing such measures to put any revenues into transition-related programmes in developing countries, including with the objective of building diversified supply chains.

Progressive electrification will mean that the cost of electricity will become even more important in the location of industrial production, particularly for processes that are energy-intensive and lower value-added. Countries with low-cost renewables stand to benefit, especially those close to major markets and with reasonable governance. Developing countries could have particular opportunities in sectors including green ammonia, fertilizer and other chemicals; e-fuels (or electrofuels, a form of synthetic fuel); iron, some forms of steel and aluminium; and for some countries, the processing of critical minerals (sometimes also referred to as 'energy transition minerals').

The nature of industrial policy in advanced economies will affect how far these opportunities are realised. Some advanced economies may seek to preserve existing industrial production by subsidising energy costs for industry and taxing imports in ways that delay the transition, impose costs on consumers and public finances, and obstruct the growth of green industries in EMDCs. The larger economies, in particular the US, EU and China, risk seeking high levels of vertical integration in their jurisdictions for political, commercial and security reasons. The main drivers of industrial policy, including the trade-off between security of supply and cost, will be domestic. But it will not be possible for any country to support all industrial sectors equally in the transition, nor will it be efficient to try. One way or another, the transition will lead to changes in the nature and location of industrial production.

The UK will need to work with European, G7 and other close partners to develop a more coordinated approach to green energy and industrial policy; and with other countries to identify economic opportunities for EMDCs that promote diversity of supply.

The UK, in common with major economies in Europe and the US, will pursue a more activist energy and industrial policy in the coming years. To date, there has been limited coordination between the main players or attention to the implications and opportunities for EMDCs.

A more coordinated approach could increase the diversity and resilience of supply chains, reduce participants' dependence on China, lower costs and support economic development in EMDCs. This would involve identifying countries, sectors and technologies critical to the transition and in which the UK and its partners need to develop capacity and use all instruments – including export credits, loan guarantees, concessional and commercial finance, and off-take agreements – to do so. In the absence of an active approach between advanced economies and between them and EMDCs, transition costs may be higher than they need to be, and industries may move to countries that do not provide assurance about security of supply.

The UK does not have the industrial footprint of some other G7 countries, and is particularly dependent on other suppliers of key transition technologies and materials. It is likely to be the first major economy to implement a clean energy system, is historically open to trade, and has a wide range of international partnerships, giving it the basis on which to convene such a forum. A number of international initiatives and fora – including the Breakthrough Agenda, Clean Energy Ministerial and G7 Climate Club – are trying to coordinate international efforts on decarbonisation. The UK should consider whether any of these could be repurposed for this objective – or whether a new forum is needed.

Critical minerals

The transition requires significant increases in the production of some critical minerals – up to six times for some minerals in the IEA's scenarios – driven above all by batteries and electric vehicles (EVs). Production and processing of critical energy transition minerals and metals, meaning those essential to the transition and where supply chains are vulnerable, are heavily concentrated in China (12 of the 18 identified by the UK). China has on several occasions restricted exports for political purposes.

Concerns about the demand for transition materials are affected by the experience of dependence on fossil fuels. Fossil fuel importing countries want to avoid replacing one set of dependencies with another.

Minerals critical to the energy transition are, however, widely distributed. They are not burned, so can be reused. Although disruption to supply could slow down the transition, it is unlikely to be a fundamental

threat to energy availability. The geopolitics of transition minerals are also not one-way. Countries are concerned about their dependence on a small number of producers and processors but these countries also rely on others: China relies on other countries for key components, materials and technologies to develop renewable energy technologies.

Markets may respond in time to growing demand and there is significant scope for greater efficiency and substitution. But companies are not investing at the scale needed, partly given concerns about long-term demand. Even where they have committed to invest, demand by the end of this decade could double or triple for some materials – or more for lithium – such that the combination of production, processing, recycling and substitution may be insufficient. And while critical mineral producers with good levels of environmental and social governance will be in a strong position, the risks of a scramble for materials undermining human rights, labour and environmental standards are real.

Access to critical materials has become a matter of strategic competition, with several countries elevating the issue in their international relationships. China has secured access to a wide range of transition materials and developed a dominant processing industry. The US is seeking agreements with producer countries and incentivising domestic processing. The EU has sought to develop a critical minerals buyers' club.

Given the demand for materials, this competition is creating opportunities for some developing countries to move up the value chain, generate investment and export revenue and diversify their range of buyers. They are also concerned about the implications of increasing raw material extraction: African countries at the UN Environment Assembly in February 2024 called for critical mineral extraction to promote equitable benefit-sharing and avoid the injustices associated with fossil fuels.

Finance

This section examines a range of international finance issues as they relate to climate. While the UK does not have control over the instruments and organisations mentioned to the extent it does those examined in Part 3, it has an important position in many and has the potential to exercise significant influence internationally as a result. Following an exceptional year of elections, the UK has a particular opportunity and responsibility, working with others, to set the agenda for the months and years ahead.

The World Bank has referred to the current period as a "wasted half-decade" for growth. A range of forecasts suggest that while the global economy will continue to grow, it will do so more slowly than over the past decade due to a lack of productive investment, ageing populations in many higher-income countries, and weaker growth in China which other sources, such as India, Southeast Asia and the Gulf can only partly compensate for.

There are strong arguments for domestic policies that support productive investments in the green economy. As a number of studies have shown, well designed climate policies can drive sustainable, resilient and inclusive development. In advanced economies, the bulk of transition finance is needed over the next decade. As a percentage of GDP, overall investment needs to increase by 2–3 percentage points (e.g. see Stern et al., 2022), which will decline as savings on operating expenses (opex) grow.

Financing needs in the emerging markets and developing countries are greater. In developing countries excluding China, $2.4trn is needed by 2030 to meet climate, nature and resilience objectives, with $1trn coming from external finance, split between physical, human and natural capital, according to analysis for the Independent High-Level Expert Group (IHLEG) on Climate Finance, co-chaired by Nicholas Stern and Vera Songwe (Bhattacharya et al., 2023). The IHLEG report assesses that of the $1trn investment needed from external sources, half or more could come from private sources, $250–300bn from MDBs and development finance institutions (DFIs), and the rest ($150–200bn) from bilateral and new innovative forms of finance. The overall quantum is roughly four times current levels and will require all forms of finance to be scaled up, although the highest priority in the short term is to increase investment in high-emitting middle-income countries. Around 95% of global energy investments currently go into the advanced economies and China, and the rest into a small number of major emerging economies. Clean power investment in Africa has actually declined over the past decade by about 34%, according to the IEA (2024a).

As well as needing domestic policy and regulatory reforms, many developing countries do not have the balance sheet or access to affordable capital to make the investments in the transition or to address climate impacts at the scale and pace required. There is therefore an important role for international financial institutions, advanced economies and other countries in a position to do so – such as China and the Gulf countries – to support sustainable investments in developing countries.

Although major economies are increasing domestic investment, Western leaders are not drawing the link between the actions they take at home and those necessary to respond to climate change abroad. Many are promoting a green transition backed by public investment at home but doing relatively little to support that in the rest of the world. The US, for example, has called on other countries to follow its lead in stimulating domestic green industries but has done a limited amount to help them do so, or to benefit from the US green stimulus.

The UK, working with partners in the G7 and G20, should promote coordinated domestic and international efforts to increase productive investment to drive sustainable growth. Leaders in multilateral fora have not to date been able to agree on a coordinated approach to domestic green stimulus measures; or the need for a significant upscaling of international support. There has been insufficient coordination between major Western economies of domestic policies that have a significant external dimension; and limited collective leadership in generating the finance needed to support the rest of the world. The UK cannot of course do this alone – and the prospects will be affected by the outcome of national elections in 2024, particularly in the US.

The possible elements of a financial package to accelerate climate action internationally are well known: bigger, better and bolder MDBs; restructuring developing country debt; SDR rechannelling; mobilising private finance; scaling up carbon and nature markets; new levies and other innovative financing mechanisms; reforming and repurposing subsidies. All these need to be pursued – but some are more important than others; timeframes for achieving them differ; and given all will require leader-level engagement, political capital will need to be spent in the most effective way.

Multilateral Development Banks

At least for the decade ahead, MDBs and DFIs are likely to be the primary means of addressing the funding gap in EMDCs. MDBs, in particular the World Bank, have been criticised for their conservative approach to lending and failure to mobilise private finance. A range of reforms are underway to address these shortcomings (see below). But no other set of institutions is able to operate at the scale of the MDBs, to leverage other sources of finance, bring policy and regulatory expertise to support reforms to attract domestic and international capital and do so with good levels of transparency and accountability. Given the risk that other sources of finance – private, bilateral and new – fall short in the coming years, MDBs and DFIs will need to over-deliver.

Scaling up the ability of MDBs and DFIs to accelerate the transition in major emitting middle-income countries needs to happen urgently. Like donors, MDBs will need to rebalance over time their financing of emission reductions in emerging economies and middle-income countries towards a mix of emission reduction and resilience in lower-income countries. But given that the bulk of the investments by major emitting countries in the major sectors of the transition – particularly energy, transport and buildings – need to happen over the next 10–15 years, scaling up MDBs' ability to lend and to better mobilise private finance is a pressing need.

The first step is for MDBs to make greater use of the capital available to them. In a statement in October 2023, MDBs announced that measures they had identified could yield $300– 400bn of additional finance over the next decade (see World Bank, 2023). This is positive but short of what is needed. The Capital Adequacy Framework (CAF) Review commissioned by the G20 provides an order of magnitude of the finance that could be released, potentially up to $1trn, based on, *inter alia*:

- Ratings agencies changing their approach to callable capital (shareholder commitments that can be called on in extreme need); this has the most immediate prospects of meaningfully increasing the lending capacity of the World Bank by tens of billions of dollars.
- Hybrid capital (fixed-income financial instruments, which include equity and debt properties).

- Securitisation of a small proportion of the portfolios of the International Bank for Reconstruction and Development (IBRD), International Development Association (IDA) and the private sector arms (e.g International Finance Corporation [IFC]) – meaning some assets are pooled and packaged as interest-bearing securities.
- Lowering the IBRD's equity-to-loan ratio by 2–3%. It is currently 19% and each percentage point could increase lending by around $40bn. (Capital Adequacy Frameworks Panel, 2022)

Significantly increasing the use of loan guarantees can also increase lending and help crowd in private finance. This would need to be underpinned by donors. The UK has done this for a number of country guarantees in recent years but guaranteeing a wider portfolio of lending would spread risk and increase leverage. An expanded use of guarantees could also provide options in the event that raising general capital is not possible (see below).

These measures alone will not be sufficient and must be accompanied by a significant injection of capital, particularly into the World Bank (the European Bank for Reconstruction and Development [EBRD] and Inter-American Development Bank [IADB] had recent capital injections); **and clear metrics to ensure that risk-averse MDBs use the finance available to them.** While progress is being made on the CAF Review recommendations, they alone will not release sufficient capital for the MDBs to respond to the scale of the challenge. Discussion of the need for more capital has been paused for several reasons: some countries want to see the World Bank make greater use of the resources it has; the current US Administration has been reluctant to press this issue with Congress at this point in the electoral cycle; and there are potential implications of an increase in paid-in capital for voting shares (the question of China's underrepresentation in voting would need to be addressed). To create the political conditions to enable a general capital increase, other measures need to be agreed this year.

The UK should support the following package of international investment measures this autumn that could have an immediate impact while enabling a more significant package in 2025:

- MDBs need to show further progress in using their existing balance sheets better, including by using their callable capital to increase their ability to lend.
- The IDA – which supports lower-income countries – should be replenished with at least a 20% increase on the 2021 replenishment of $93bn. This is necessary in its own terms and because a general capital increase will be seen as benefiting middle-income countries. The UK will need to make a substantial contribution.
- At COP29, a credible but stretching climate finance target is required, including in relation to public finance which in effect will set the framework for what the MDBs need to achieve by the end of the decade.

Putting more capital in and ensuring MDBs, in particular the World Bank, use it effectively, including to mobilise more private finance, should be the UK's climate finance priority in 2025. This will need to be greater than previous capital raises in order to generate at least $100bn of additional lending (including earnings), reflecting the objectives set for the MDBs and the fact that other forms of funding – bilateral donor funding, innovative funding and private capital – are likely to fall short. This means at minimum a tripling of MDB lending capacity; and at least a doubling of paid-in capital from shareholders. While there are political challenges in such an increase, the cost to MDB board members is modest: for example, the UK's share of such a capital raise could be in the low hundreds of millions per year.

To achieve this increase in MDB capital, there needs to be greater coordination among board members in support of a clear plan for when, how and at what scale capital should be increased; and what conditions should be attached to it. The UK should, before COP29, set out its position on the future size and role of the MDBs, including the World Bank; and convene relevant board members to agree a common approach to the timing and scale of a capital increase, the requirements of the MDBs and political conditions that will be needed. The UK has been clear about its willingness to discuss a capital increase and has set out to the World Bank some of the elements of the package it believes necessary. While discussions between the US and China will be critical, the UK can play an important role in setting the level of ambition and enabling the wider discussion among board members.

As the scale of MDB lending increases, the UK and partners will need to focus on the quality and effectiveness of spending, including on collaboration between MDBs and with DFIs and the private sector, and on the MDBs' approach to risk. The CAF Review commissioned by the G20 provided a clear route-map for reforms. As lending increases, board members should set clear performance measures on the quality and effectiveness of spending, collaboration with each other and the private sector and improvements in their approach to managing risk, which remains conservative.

If key board members, above all the US, are not willing to agree to a general capital increase, there is no 'Plan B' of similar effect but the UK and its partners will need to consider other measures, including guarantees, hybrid capital and further capital injections to other MDBs.

Private finance

There are a range of initiatives designed to scale up private finance for climate investments in EMDCs, from proposals addressing the regulatory requirements in advanced economies which discourage investments in EMDCs to improving the investment environment in EMDCs, and a range of bilateral and multilateral tools to derisk private investment to bring levels of risk and return closer to levels within the Organisation for Economic Co-operation and Development (OECD).

To date, limited international private finance has been deployed to support the transition in EMDCs; and less has been mobilised by public finance. Private finance for climate is predominantly mobilised behind specific projects or in relatively small funds and has further to go to develop as an asset class. This is due to a range of factors, including investor perceptions of risk in EMDCs compared with the opportunities in advanced economies; inadequate carbon pricing and common taxonomies for green investments; regulatory including financial stability requirements in advanced economies; the regulatory and policy framework in EMDCs, including in the energy system; an inadequate pipeline of projects; and difficulties of cooperation between private and public finance institutions.

The UK should continue to encourage changes in how MDBs enable private finance, including doing more to move investments from their balance sheets to private markets ('originate to share') and making investment data more readily available to enable risk to be better measured. The UK can also continue to encourage the MDBs to do more to build a pipeline of investible projects and do so itself by scaling up financing for British International Investment (BII) and the Private Infrastructure Development Group it helped establish.

But while initiatives to mobilise private finance from international investors into EMDCs may in time produce results, it is likely to play a limited role in the short term. Macroeconomic and geopolitical factors may help as interest rates fall and investors look for opportunities in emerging markets outside China. As carbon pricing and green taxonomies spread, the conditions for new green asset classes – which will be required to move institutional finance at scale – may improve. Larger emerging markets should have the ability to mobilise domestic and international capital behind regulatory and policy reforms (as has happened in South Africa following energy market reforms). But for many EMDCs in the coming years, MDBs and DFIs will need to play a central role in financing the transition to sustainable, inclusive and resilient economic development and growth.

Special Drawing Rights

IMF Special Drawing Rights (a form of reserve currency) have the potential to increase liquidity in EMDCs. In 2021, the IMF agreed to allocate its largest ever round of SDRs to its members. High-income countries and China committed to recycle a proportion of these to EMDCs, increasing their ability to borrow at low cost. The process of recycling is making gradual progress and the IMF recently agreed that some SDRs can be recycled to MDBs to be used as hybrid capital, which by leveraging other funding could lead to a four-fold increase, potentially up to $80bn. Discussions are most advanced with the African Development Bank (AfDB) and the Inter-American Development Bank (IADB), but require the support of a minimum number of countries to progress. Eurozone countries will not give their support because of the position of the European Central Bank. The UK has not yet done so for a number of largely technical reasons. If the MDBs are to turn these possibilities into reality in 2025, they will need a critical mass of countries to back them by the time of the annual meetings of the IMF and World Bank in October 2024.

The UK should set out that it is in favour of extending the role of SDRs in providing liquidity by increasing the proportion that countries commit to recycle to 30%.

The UK should channel part of its SDRs through the MDBs, most likely the AfDB, as hybrid capital that could be used for project finance rather than only fiscal support. Given the position of eurozone countries, UK support could be critical to making this use of SDRs possible.

International levies

A wide range of proposals for raising finance from other sources are under discussion, including levies on international shipping, aviation, fossil fuel producers, financial transactions and a global tax on the wealthiest. Under any scenario there will not be enough concessional finance from traditional donors to meet the demands of the transition or deal with unavoidable climate impacts. Most of the proposals under discussion are not new and building support for them, whether between coalitions of the willing or on a universal basis, is likely to be challenging and take time.

Shipping is the most advanced but the short-term prospects are uncertain. International Maritime Organization member countries in 2023 committed to reach net zero by or around 2050, with "indicative checkpoints" at 2030 and 2040. Parties are negotiating on fuel standards and an emission levy, raising hopes that any levy could be used to address climate change and its impacts – the rationale being that most of global trade, and the carbon embedded in it, is carried on ships, and that a small levy on a large volume of trade could generate significant revenue (tens of billions of dollars per year) with limited impact on consumers or countries.

The UK should seek the most ambitious outcome possible on a shipping emissions standard and levy in the short term and build a coalition for the medium term to direct a share of levies to wider climate action. Given the opposition of China and others, it is unclear whether agreement on a fund that provides finance for climate action outside the sector can be reached in this round of negotiations, but if a fund is agreed, it could in time evolve to provide a share of proceeds for climate programmes. This would require a diplomatic strategy and concerted action over the medium term.

International aviation has also been identified as a potential source of climate finance. Several countries impose air passenger duties. They could use a proportion of these funds to support international climate programmes, although few currently do (France does to fund the vaccine alliance Gavi). In an industry with tight margins and no clear path to full decarbonisation, agreement on a new international fund or levy, particularly to fund wider climate programmes, will be challenging to reach.

The aviation sector has, however, established a carbon offsetting framework, CORSIA, which will become mandatory for international aviation in 2027, requiring operators to purchase offsets from an approved set of providers. This could require around 200 million tonnes of CO_2 equivalent in offsetting by 2035 according to CORSIA scenarios, generating several billion dollars per year depending on the price of offsets. A proportion of the revenues generated could be used for climate programmes other than offsets, the role of the latter in reducing emissions being contested. The mechanism taking these revenues (e.g. through established providers or other channels) and their destination (e.g. UN funds or other approved programmes) would be matters for negotiation.

The UK should argue for 10% of proceeds from aviation offset funding to be directed to international climate programmes. There may be objections from some parties on principle but there is no technical obstacle to such an approach, and a diplomatic campaign could yield results.

An international levy or obligation on fossil fuel producers would be hard to achieve. Most oil and gas producers are national companies and their governments are unlikely to agree. Several countries, including the UK, have introduced levies on the windfall profits of oil and gas companies to offset government support for high domestic energy bills following Russia's invasion of Ukraine. It would be open to them, including the UK, to allocate a share of these revenues internationally, although the domestic politics of doing so may be difficult.

Litigation may lead to a domestic levy in some countries. Cases targeting oil and gas companies are underway, particularly in US states, and more are likely to follow. Litigation against tobacco companies in the US established that companies can be held liable for the costs associated with consumption of

their product. Current cases target international oil and gas companies (US and European) and any requirement for compensation would be for national or state-level remedy. Although 'soft law' complaints against national oil companies (e.g. Saudi Arabia's Aramco) have been made to the working group of the UN Human Rights Council, there is no obvious route in international law to establishing and enforcing liability.

Against this background, Western governments should be open to discussions on an international levy that includes all major producers, which would be more equitable and raise more finance as national oil companies account for the overwhelming majority of global production. Western governments may otherwise find that litigation imposes costs on international publicly listed companies but not national oil and gas companies.

An international financial transaction tax has been debated for decades. Several countries, including the UK, have a domestic levy on such transactions but it would require a significant shift for countries to allocate these revenues externally. France and Brazil have also proposed that there should be a 2% additional tax on billionaires and the current US Administration supports a domestic billionaires' tax (although Congress does not). Building international consensus on such a proposal would be challenging, and any revenues raised would likely be considered part of general taxation rather than allocated internationally.

While focusing on those most likely to deliver in the short to medium term, there is reason to continue discussion of the full range of options. This is both because no potential source of funding should be excluded, and because climate change-associated litigation and regulation over the next decade may impose costs on the UK and UK companies, which may be better and more fairly addressed through international approaches. In parallel, the UK should consider the scope for domestic measures to generate revenue for international climate action (see Part 2).

Country platforms

One approach to bringing coherent public, private and other finance together behind a national plan is through country platforms. Often convened by MDBs on behalf of a host country, these seek to coordinate public and private investment and technical assistance in support of a country's development plans, whether on a comprehensive or sectoral basis.

Aligning public and private, domestic and international finance behind a national programme of change is complex. Climate and transition programmes face similar challenges from domestic and international politics, as development programmes have faced for decades. There is no perfect way to bring together the necessary political, financial and technical elements and the range of relevant parties and maintain the necessary levels of commitment over time. But country platforms have the potential to do so and are an increasing focus of G20, OECD, MDB and donor interest and they are an approach the UK should continue to promote.

Just Energy Transition Partnerships (JETPs) are a particular form of country platform focused on the energy sector and notable for the level of engagement from leaders and capitals. JETPs have been criticised for not delivering the scale of finance or changes to energy systems they promised. But the challenges in cleaning up energy systems, particularly those that are heavily coal-dependent, are significant and it is premature to conclude the partnerships are not delivering. With newly elected leadership in key JETP jurisdictions, both host and donor – including Indonesia, South Africa, the US, EU and UK – and South Africa hosting the G20 next year, the UK should bring the JETPs back to leader level following elections to assess progress and provide direction.

Carbon and nature markets

Given the scale of climate and nature financing needs, carbon and nature credit markets hold the potential to mobilise significant finance for EMDCs. The value of carbon markets has been growing: compliance carbon markets (to meet statutory targets) reached $865bn in 2023, while voluntary carbon markets (generally to help companies meet their commitments) could be valued at $10–40bn in 2030, according to a recent report by the Boston Consulting Group (Gilbert et al., 2024). While many credits generated in carbon markets relate to the protection and restoration of ecosystems such as forests or peatlands, a smaller biodiversity credit market is also emerging.

Voluntary carbon markets face credibility challenges, which bodies including the Voluntary Carbon Markets Initiative and the Integrity Council for Voluntary Carbon Markets are seeking to address by defining criteria for the supply and use of credits. While voluntary standards and bodies play an important role, regulation in key markets will likely be necessary to provide greater transparency and confidence in the market and so help it to scale up (see Part 3).

Debt

The problems in financing climate-related investment in EMDCs have been exacerbated by fiscal deficits caused by COVID-19, and energy and food price shocks and high interest rates following Russia's invasion of Ukraine. Debt servicing costs are at a historic high such that net finance flows to EMDCs turned negative in 2024, making them financial contributors to the rest of the world. Emerging markets have weathered the storm better than low-income countries, although the positions of some are also deteriorating. For some countries, debt has been more a problem of liquidity than stock, although that is changing as debt servicing costs remain higher for longer. For many low-income countries, debt burdens are now impeding the investments necessary for sustainable development; in early 2024, more than 60 countries were in or at high risk of debt distress.

Restructuring this debt is complicated by the range of creditors, with private creditors accounting for a significant proportion of EMDC debt, and China and other non-Paris Club creditors holding more debt than the Paris Club.[6] Between private and state creditors, China accounts for around 40% of EMDC debt; Chinese lenders want to avoid significant write-downs or facing worse terms than other creditors and want MDB creditors to be part of any restructuring.

The current international approach through the Common Framework for Debt Treatments offers slow and partial responses. A range of proposals are under discussion, primarily to address issues of liquidity rather than restructuring; and to link debt restructuring to climate and nature. An Expert Review on Debt, Climate and Nature launched by Colombia, Kenya and France will consider how debt can be made more sustainable. Cooperation between the US and China, potentially encompassing a broader range of issues, will be necessary to make greater progress on meaningfully restructuring current debt; and a more systemic approach will be needed to address the likely reappearance of unsustainable debt as climate impacts grow.

The UK should start discussions with key partners about a more significant debt restructuring package, particularly with France and the US given their respective G7 and G20 Presidencies in 2026, and the UK and US G20 and G7 Presidencies in 2027. Twenty years ago, the UK championed the Multilateral Debt Relief Initiative (MDRI) as part of the Heavily Indebted Poor Countries Initiative, under which the World Bank, AfDB and IMF offered debt cancellation to qualifying countries underwritten by developed countries. MDB participation in debt restructuring has been one of China's demands. Creditors would not currently support such debt restructuring, not least given the potential cost, but this may change if the debt outlook worsens. Moving the debate forward will take time and consistent political attention.

Debt-for-nature and -climate swaps will be appropriate for some countries and should be part of the approach. They can also help secure support in some creditor countries (such as Germany and the UK) where there can be public scepticism about debt relief. But each agreement is bespoke, meaning they take time to agree, and to date they have accounted for a very small share of debt restructuring. A more systematic and standardised approach would be needed to expand the use of such swaps.

Subsidy reform

Subsidies are poorly addressed by international trade rules and are growing, with green subsidies joining existing subsidies in agriculture, fossil fuels and fisheries. Reducing and repurposing subsidies in advanced economies will be essential to reducing emissions, financing the transition and potentially providing export opportunities for EMDCs. Export subsidies in EMDCs are also a major potential source of finance. The World Bank's *Detox development* report highlights the costs and impacts of subsidies (Damania et al., 2023). It finds that over the past decade, EMDCs collectively spent $3.7trn on subsidies for oil, natural gas and coal, with fossil fuels receiving 75% of energy subsidies. These subsidies disproportionately benefit wealthier

[6] The Paris Club is "an informal group of official creditors whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries".

households and contribute to premature deaths due to the health impacts of fossil fuel use. Agricultural subsidies, often intended to boost efficiency, frequently produce the opposite outcome while also damaging the environment and human health, contributing to deforestation and the effects of drought.

Reducing subsidies and repurposing some to support the transition would be a major source of funding for fiscally constrained countries, while benefiting households and the environment. Progress on subsidy reform in the WTO, G7, G20, and Climate and Biodiversity COP summits has been limited, with subsidies globally rising, not falling. The lack of progress is due to the political difficulty of removing subsidies once established and the limited purchase that international cooperation has on domestic subsidies.

The UK should take a more prominent role in working to reduce and redirect fossil fuel subsidies. The UK could, as some other G20 countries have, ask the OECD to review its fossil fuel subsidy regime in the context of its next spending review. Having committed to phase out fossil fuel subsidies, the UK should join the coalition launched by the Netherlands and others at COP28 to promote national and international action to phase out fossil fuel subsidies, including by ensuring this is a priority in its own trade and development policies and those of the IFIs.

Subsidies to support the transition to green industries have also increased, particularly in China, the US and the EU. The Inflation Reduction Act (IRA) in the US earmarked $369bn in tax credits (likely several times this amount in practice). EU subsidies are split between the EU and country level but equate to several hundred billion euros. China's green subsidies over the past decade may be as much as $1trn.

These subsidies will continue both to bring down the costs of green technologies to wider international benefit, and to generate trade disputes, which risk slowing down the transition. EU subsidies brought down the costs of solar, which China has built on; China's support to the battery sector has accelerated cost reductions and will do so for EVs; US subsidies may bring down costs for carbon capture and removals and industrial decarbonisation. But these subsidies are also generating trade disputes that will escalate and risk increasing costs and slowing the uptake of clean technologies. And most EMDCs are not in a position to match the subsidies of the advanced economies.

As an open global economy, the UK has a particular interest in an open international trading regime. And as a strong advocate of international climate action, the UK has a strong interest in supporting the international trading system to better integrate climate change and other issues of sustainability. In an era of competitive decarbonisation, these objectives can be in tension and the immediate prospects for addressing them multilaterally are poor. International trade policy in the foreseeable future is likely to be unilateral, bilateral or regional rather than global. The increasing use of tariffs and other restrictions will be difficult to lower in the absence of trade-liberalising negotiations. The role of the WTO in this context is likely to be in convening discussions that inform and influence measures taken elsewhere rather than addressing trade issues itself.

The UK's trade agenda since Brexit has been dominated by the pursuit of free-trade agreements; its trade and climate agenda by discussions on the trade in environmental goods and climate commitments in trade agreements; and recently by border carbon adjustment measures. The UK has the opportunity to set out a comprehensive approach to trade and sustainability, including on green subsidies, tariffs and carbon border adjustment methods, which it and the international trading system will need to address in the coming years; and to pursue this agenda through the WTO and G20 in particular.

The UK should set out its trade policy objectives, including how UK and international trading systems can promote sustainable, inclusive and resilient growth.

1.2. Climate change impacts

This section considers the main channels through which the geopolitics of climate impacts may play out. Where the geopolitical tensions of competitive decarbonisation are likely to be the most acute over the next 10–20 years, those arising from climate change impacts are likely to grow as these impacts worsen. Climate change impacts will continue to grow until global emissions of greenhouse gases reach net zero. At net zero, many impacts stop increasing, although some such as sea level rise will continue to grow.

As global warming approaches 1.5°C, climate impacts are set to increasingly affect relations between states. To date, the effects and implications have been treated as largely local and dealt with by

humanitarian and development communities. They are hitting those most vulnerable to climate change and create other shocks, with second order effects – whether in terms of the movement of people, conflict or trade – spilling over and drawing in neighbouring countries.

Many within the national security and defence communities in the UK and elsewhere have assessed climate change as a threat multiplier that increases the risks of political instability and conflict. Over time, well governed and resilient states may also struggle although there are significant uncertainties about how impacts will cascade and compound each other. As warming increases, the risks of reaching climate thresholds, such as destabilisation of the land-based polar ice sheet in West Antarctica and Greenland, increases. The risks of rapid or abrupt change in the global or regional climate cannot be confidently assessed or ruled out.

Ecosystems

By the mid-2030s, climate impacts on the natural world will have become even more severe and in some cases devastating. The degradation of nature and biodiversity has begun to induce feedback loops, which will make climate impacts and climate change worse, notably due to decreasing ability of the land and oceans to act as a carbon sink.

Impacts on the world's oceans, rivers, glaciers, forests, land and biodiversity of a 1.5°C world are well documented in the IPCC's *Special Report on Global Warming of 1.5 Degrees* (2018) and other reports, although confidence levels about assessing the probability of many major impacts is low. Among those impacts for which confidence is relatively high is that coral reefs are projected to decline by a further 70–90% on today's extent. An increase in marine heatwaves will increase risks of biodiversity loss in the oceans. The number of species projected to lose over half of their climatically determined geographic range is likely to be 6% of insects, 8% of plants and 4% of vertebrates at 1.5°C (IPCC, 2018). As rivers dry up, trade-offs between the environment, agriculture and other human demands for water will become increasingly difficult to handle and may happen in haphazard, inefficient or inequitable ways, fuelling tension between those dependent on river resources. Climate impacts will compound other stresses on ecosystems, such as water pollution and other causes of biodiversity loss.

Ice sheets on land are melting faster than anticipated. At 1.5°C, around half of the world's glaciers may have melted. Glaciers in the Garhwal Himalayas in India are retreating so fast that most central and eastern Himalayan glaciers could all but disappear by 2035. Melting polar ice sheets are affecting the circulation of the oceans. Cold freshwater entering the North Atlantic from the melting of Greenland is disrupting the North Atlantic sub-polar gyre, risking a potential significant cooling of the UK and northern Europe. Destruction of the ice shelves around Greenland and West Antarctica could lead to unstoppable and irreversible flow of ice sheets into the world's oceans, locking in many metres of sea level rise over the coming centuries.

Preserving standing forest is the single most important measure countries can take to address both climate change and prevent biodiversity loss. Around 2.6 billion tonnes of carbon dioxide is absorbed by forests every year but this is reduced by deforestation and forest degradation, which account for 10–20% of global emissions. In terrestrial ecosystems, 3–14% of the tens of thousands of species assessed by the IPCC in its 2018 1.5°C study will likely face a very high risk of extinction. As well as arresting biodiversity loss, halting the loss and degradation of forest ecosystems and promoting their restoration have the potential to contribute over one-third of the total climate change mitigation required by 2030.

The Biodiversity COP15 summit[7] held in Kunming, Montreal and Nairobi in 2021– 23 was an important step in mobilising more effective international cooperation to halt and reverse nature loss. COP16 is due to take place in Cali, Colombia in October 2024. Recent Climate COPs have given increasing prominence to nature-related issues but it remains the case that the international architecture to address nature has to date proved less effective than that for climate change.

The UK should seek to host an international nature summit in the course of the next Parliament to keep the momentum. International action and multilateral cooperation need to be maintained, and the Biodiversity COP meets only biannually. To be a credible host of any nature event, the UK would need a

[7] These summits are the meetings of the Conference of the Parties (COP) to the Convention on Biological Diversity.

strong story to tell on its domestic performance on nature preservation and restoration. This means delivering on the UK's significant domestic and international commitments in relation to nature and biodiversity, the most important of which is the preservation of primary forest, particularly in the Amazon basin, Congo Basin and Indonesia.

Food

The global food system is responsible for about one-third of greenhouse gas emissions, second only to the energy sector. It is the largest source of methane, the largest cause of biodiversity loss, and will account for a growing proportion of emissions as other sectors decarbonise. It is also more exposed to the effects of climate change than any other sector.

The primary demand on most land systems has historically been to provide food for growing urban populations but these demands have been changing. They now also include reducing emissions, restoring nature, hosting infrastructure and housing, and providing for leisure. Reconciling these demands while maintaining political support will be difficult, as recent developments in Europe have shown, with farming groups and nationalist-populist movements objecting to climate and environmental measures.

Climate change will make food less available and accessible, putting more people at risk of hunger. While there may not be an absolute shortage of food in the world, more than 800 million people are not getting sufficient calories due to the availability and quality of food. This hits vulnerable communities the hardest: about 80% of the global population most at risk from crop failures and hunger as a result of climate change are located in Sub-Saharan Africa, South Asia and Southeast Asia (WHO, 2022).

There will be a race between increasing productivity through more efficient and resilient agricultural practices, and the effects of climate change on yields and arable acreage. Reduced yields or lower productivity growth will lead to further pressure to expand areas under production, putting greater pressure on natural capital, with Africa particularly affected. Whether this leads to growth in productivity stalling or reversing is unclear but it will be slower than it would have been under a stable climate. In all climate scenarios, there is likely to be a growing risk of food supply shocks that will have humanitarian, migration, trade and geopolitical implications.

International governance of food security is fragmented. The Food and Agricultural Organisation, Committee on Food Security, WTO, UN Office for the Coordination of Humanitarian Affairs and other organisations have a role to play in addressing this. The UK hosted a Global Food Security Summit in November 2023 in response to the impacts of Russia's invasion of Ukraine but there has been no follow-up. In an arena where national processes and decisions dominate, international coordination outside of emergency response is relatively weak.

Food and agriculture have to date not been included in carbon pricing or emissions trading systems. Despite objections to some environmental and climate measures in parts of the farming sector, pressure to include it is likely to increase as the sector accounts for a growing share of emissions. In January 2024, the European Scientific Advisory Board on Climate Change recommended that the EU introduce such measures by 2031 at the latest. Denmark recently introduced the world's first carbon tax on agriculture. Carbon taxes in agriculture will be contentious domestically and internationally (because domestic carbon prices will tend to lead to border measures) but will become an issue all governments need to address.

Shocks to global food supply chains can lead to shortages and price rises in many countries, including the UK. These shocks can increase the risk of political unrest and conflict, particularly in populations that already suffer from food insecurity.

Water

Climate change will make the world thirsty and flooded. Over a quarter of the world's population lacks access to safe drinking water, and roughly half suffers severe water scarcity at some point every year. The IPCC assesses that at 1.5°C there will be high risks from dryland water scarcity and the world will face more intense and frequent extreme rainfall and associated flooding in many regions. Sea level rise will threaten to flood and contaminate freshwater supplies in coastal communities, particularly those that are located on sinking river deltas and exposed to storm surges. Weather events linked to climate

change affect the most vulnerable disproportionately, with low- and lower-middle income countries suffering 82% of all fatalities from 1970 to 2020. If warming reaches 2°C, the proportion of the world population expected to suffer from water scarcity could double compared with 1.5°C (IPCC, 2018).

Competition for water resources is increasing tensions within countries and will be a growing issue in inter-state relations as countries seek to divert shared water sources to their needs. To date, conflict over water has tended to occur at the local and regional level. States have shown that shared water resources can prove a source of cooperation rather than conflict but it would be unwise to assume that this will continue. Tensions over the Nile and Indus waters are growing, for example, exacerbated by the effects of climate change.

Without active management, the growing challenges of food and water security may become a source of geopolitical tension. There is no standing international forum whose primary purpose is to address water access or security. These issues tend to receive less funding than other areas of climate action. While there is growing international interest, there is a gap between the range of water-related issues that will arise over the next decade and the level of associated international attention and governance. Discussions in multiple fora in which water is not a priority issue do not generally lead to consistent focus or follow-through.

The UK can help address the governance gap on water and food security by convening, in partnership with others, a summit to address issues of food security and water access and security, funding and markets. The UK could follow the approach it took with artificial intelligence (AI) safety. The AI Safety Summit it convened in 2023 helped to plug a gap in international governance on this emerging issue, not least by ensuring follow-up (South Korea hosted a second summit in May 2024; France is due to host another before the end of this year). The purpose of such a summit on water and food security would be to increase high-level attention; consider new mechanisms of funding; and establish a forum to provide the continuing focus and follow-up that is currently lacking in international discussions.

Poverty

The pace of reducing extreme poverty has slowed and absolute numbers living in extreme poverty are projected to remain relatively unchanged over the next decade. Climate change is one of the main factors reducing the rate of human development, disproportionately impacting poor, marginalised and vulnerable individuals and communities, compounding and exacerbating inequalities, with the overwhelming majority of those worst affected being located in Asia and Africa.

Depending on the level of temperature increase, between 32 million and 132 million people could be pushed into poverty as a result of climate change in 2030, according to a recent World Bank paper (Jafino et al., 2020). The IPCC's 1.5 Degrees report assesses that the number of people exposed to multiple climate risks could double between 1.5°C and 2°C of warming, and almost double again at 3°C to half the global population (IPCC, 2018).

Climate change will affect all human development objectives. Earlier sections have set out the impacts on access to food and water but the effects extend to all areas covered by the Sustainable Development Goals. Access to education will be increasingly affected; as an illustration, in recent months schools in several countries including South Sudan and the Philippines have had to shut as a result of soaring temperatures.

Climate change exacerbates health shocks, which leads to income loss from an inability to work compounded by the costs of medical care. At 1.5°C, more frequent and intense hot extremes and heat-humidity conditions will cause increased mortality, morbidity and losses in labour productivity. Food, water and vector-borne disease risks will increase, with animal and human diseases emerging in new locations. Climate change impacts will increase mental ill-health, including anxiety and stress. This will put growing pressure on healthcare systems, with the most vulnerable and disadvantaged hit hardest. The World Health Organization (WHO) estimates that health shocks push around 100 million people into poverty every year (WHO, 2023).

The transition away from fossil fuels will bring broader health benefits beyond the avoided impacts of climate change. The WHO assesses that 7 million people die annually from air pollution and other studies find a significant proportion of these deaths are due to burning fossil fuels (e.g. Lelieveld et al., 2019), which the transition provides the opportunity to reduce and potentially eliminate.

The international humanitarian system is under increasing pressure due to extreme weather events and conflict. It is overstretched and will struggle to cope with increased demands and as a result, support to the most vulnerable will be found more wanting more often. Climate change is making extreme weather events more frequent and severe all over the world, which means that emergency responses will be needed to more potential disasters that occur simultaneously or in quick succession.

There is debate in the international development and climate communities about the relationship between action to address poverty and to tackle climate change. Some argue that reducing emissions is not a priority for many EMDCs because their emissions are negligible and the costs of doing so outweigh the benefits; and that they should be supported to develop their fossil fuel resources where they have them, including to generate revenue that can address domestic priorities. Some also argue that focussing on climate can divert resources from the more immediate priorities of health and education. However, EMDCs are more vulnerable than advanced economies to the impacts of climate change, which are growing and can stop and reverse efforts to tackle poverty.

In practice, this is a largely theoretical debate, exacerbated by constrained aid budgets. As climate impacts grow, distinctions between climate, development and humanitarian programmes will increasingly blur. Access to energy is also essential to development and renewables with storage offer better value for most countries than coal or gas. The underlying issue is access to affordable investment. Given constrained resources and the growing scale of climate impacts, the most concessional resources will need to be increasingly targeted to countries and sectors that cannot attract other means of funding.

Violence, unrest and conflict

Climate change acts as a threat- and conflict-multiplier, driving an increase in the pre-conditions for violence, in particular in areas dependent on agriculture. Although the relationship between climate change and violence is complex, a hotter planet is likely to be a more violent one. This will take a number of forms:

- **Conflict between groups within states**, for example over resources or due to migration. These conflicts can in turn become theatres for proxy conflict between neighbouring states. A drier climate may have exacerbated the civil war in Syria (Kelley et al., 2015).
- **Conflict between groups/individuals and governments**, particularly when governments are unable or unwilling to meet citizens' basic needs in part due to the effects of climate change. There is little history of environmentally motivated terrorism but climate change will contribute to terrorism in vulnerable regions and to violent crime in many societies. The militant group Boko Haram in West Africa and the Sahel has benefitted from grievances exacerbated by the impacts of climate change (Asaka, 2021). Climate change will also provide new opportunities for organised crime groups. Unorganised violence may also increase, given that there tend to be more incidents of violence in summer and on hot days.
- **Violence by states against groups or individuals:** the repression of climate change activists and organisations may grow as citizens react to the impacts of climate change.
- **Conflict between states:** for example, over access to resources, particularly water. To date, states have been willing to pursue dialogue to manage shared water resources. As impacts grow, more people move, agricultural expansion continues and access to water is threatened, climate change may become a greater factor in inter-state conflict.
- **Conflict itself exacerbates climate change,** leading to water, soil and land contamination and the release of pollutants and makes affected populations more vulnerable to climate change impacts.

Movement of people

Climate change is causing an increase in the number and intensity of many types of extreme weather events across the world, which impact vulnerable communities in particular. According to the UN, mortality rates from floods, drought and storms are 15 times higher for highly vulnerable countries compared with regions with low vulnerability (United Nations, 2023).

These impacts are driving the movement of people from the local to global level. Large numbers could be displaced by 2050 due to climate change and natural disasters, with a World Bank paper putting the

figure at between 44 and 216 million people (Clement et al., 2021). Rural–rural and rural–urban migration will likely accelerate due to heat, droughts and strains on food production and availability, affecting tens to hundreds of millions of people that have climate-sensitive livelihoods in Africa, Asia and Latin America. This will put pressure on resources and services, which could lead to ethnic or civic strife and conflict – as has been seen between pastoralist and agricultural communities in Nigeria and the Sahel already.

Sea-level rise and more extreme weather events will also drive people from their homes. Small island states in the Caribbean and Pacific are particularly affected relative to the size of their populations and are most vulnerable to forced displacements as a result of rising sea levels. So too are those in low-lying areas such as in Bangladesh.

Some South Pacific countries are exploring relocation options. Tuvalu and Vanuatu have reached migration agreements with Australia. Demand from the most climate-vulnerable countries for such agreements may increase – with neighbouring countries in the first instance but potentially with others.

Populations are also starting to move within developed countries. Environmental factors such as flood risks or wildfires are joining more traditional decision-making factors such as jobs or schools; and as insurance becomes prohibitive or unavailable in some locations. Following the record-breaking wildfire season of 2022–23, California has seen a widespread removal of insurance, for example. A recent survey by Forbes showed that the effects of climate change are a growing factor in the motivation of Americans to move house.

These movements will put greater pressure on resources and politics in receiving areas. Within countries, tensions over migration will be exacerbated. Asset prices will fall in abandoned areas, leaving the most vulnerable more exposed. There are likely to be macroeconomic effects as household, incomes and financial markets are affected.

Democracy and human rights

The economic, social and political disruptions caused by climate change are likely to undermine democracy and human rights; and strengthen the influence of authoritarian powers.

The impacts of climate change will destabilise countries, particularly those already vulnerable or with poor governance. Affected by drought, floods, impaired growth or the expanding movement of people, some countries will struggle to address public demands and manage civic, ethnic or geographic tensions. This disruption may favour political entrepreneurs and groups, including criminals or terrorists, who can mobilise on the basis of a grievance. Countries weakened by climate change risk turning more readily to autocracies – as countries in the Sahel are today turning to Russia to provide regime security services.

The severity of these various impacts will depend on the actions taken to reduce emissions over the short to medium term and to increase resilience over the long-term. How these factors interact and play out in particular places at particular times will be hard to predict and will depend on governments' understanding of the issues and their effectiveness in responding. All governments, including the UK's, will need to build up their understanding of climate change impacts and their interaction with other issues such as governance, and more consistently factor this into their policies and programmes.

Part 2: Regions of the world in the decade ahead

Summary

- By the mid-2030s, the world will have had over a decade of competitive decarbonisation between major powers.
  - China will remain the dominant global force in clean energy manufacturing, supply chains, and critical minerals. When and how fast its emissions decline will be the most important factor in the prospects for limiting global warming.
  - The US will have grown its capacity in key sectors sufficient for domestic requirements but will struggle to compete with China's market dominance in many countries.
  - The EU will be the major regulator of the transition to net zero, driving change and alienating trading partners in equal measure.
  - As the US seeks to close its market to Chinese green tech, how the EU and major emerging markets respond will be critical to China.
  - India will be a winner from the shifting geopolitical and economic landscape, benefitting as an alternative supplier and a target of US, European and regional investment. Its emissions path in the next decade will be decisive for the pathway of global emissions.
  - Russia will be marginal in the clean energy economy, with the exception of nuclear fuels and technology. It will have become a transition outlier and likely a disruptive force in climate politics.
- To be broadly consistent with the Paris Agreement, from various baseline years the US will need to reduce emissions by 65–70% by 2035; China by 40-45%; the EU by 75%; Russia by 55–60%; and India will need to peak emissions before 2035.
- Africa has enormous potential in renewable energy generation and some green industries but is held back by high costs of capital. China will be key to Africa's transition, although competition between the West and China/Russia has the potential to lead both to increased investment and to clientelism. Providing support through MDBs and finding areas for cooperation with China could help geopolitical competition lead to positive outcomes. Africa's oil and gas producers will be highly exposed in the transition. Climate change will slow down and could reverse development gains on the continent, which will undermine food security, increase migration and exacerbate conflict.
- No region will be more affected by the geopolitics of the transition than the Middle East. The influence of the Gulf in global oil markets will grow as the market shrinks. The region will become less important in Western and more important in Asian energy demand. With cheap solar and hydrocarbons, countries across the Middle East and North Africa are working to become major exporters of hydrogen-related products including e-fuels and to capture a larger share of the market in energy-intensive manufacturing. North Africa can provide system resilience to Europe through interconnectors and help meet demand for hydrogen products. There are significant risks of a disconnect between the pace of the energy transition and of economic diversification and the domestic political settlement in many oil- and gas-producing countries. With the growing impacts of climate change, particularly in those countries in the region most vulnerable to them, this has the potential to destabilise the region further.
- Japan and South Korea's fossil fuel dependency and slow transition risk their competitiveness and their influence in Southeast Asia as China steps up its clean exports and investment. Their industrial capacity gives them the ability to catch up with stronger policies.
- Southeast Asia is lagging behind in the energy transition with continuing dependence on high carbon energy and low but growing deployment of renewables. Southeast Asia and the Pacific are theatres of US–China competition, which has the potential to benefit the countries of Southeast Asia as they decarbonise, and Pacific region countries as they respond to the impacts of climate change.

- **Indonesia will need to reduce emissions by one-third by 2035 from a 2019 baseline. Its choices in the next decade will be of global significance** as its emissions path becomes the most important factor in global warming outside the major powers. The region includes some of the countries most vulnerable to the impacts of a warming planet with the basic viability of many Pacific islands threatened by sea level rise this century.
- **Latin America can play an outsized role in the new economy given its energy and mineral resources.** It will be an important market for China's vehicle exports and investment, displacing regional and international producers. China is also well-placed in the raw material sectors, including but not only lithium. Latin America has some of the highest rates of inequality in the world, which will be compounded by the impacts of climate change, ensuring a continued movement of people northwards.
- **Central and South American oil producers will struggle to compete with lower cost Gulf producers even in a moderate transition scenario.** The transition is an opportunity for the Caribbean to reduce its dependence on fossil fuel imports if it can raise the finance, but with insignificant emissions the region has not been a priority for investment.
- **Caribbean and Pacific nations are among those most vulnerable to the effects of climate change,** including rising sea levels, coastal erosion, and stronger and more frequent storms, with the fundamental viability of some Pacific nations threatened by sea level rise this century. The important role of these countries as a moral voice for climate action may come under greater pressure in the coming years.
- **The most significant questions for the UK will be** its relationship with the EU on climate and energy-related issues; how it manages high levels of dependence on China across many transition sectors; how it coordinates with the US, Europe and other partners to increase resilience and reduce dependencies; and how, with partners, it improves the West's offer to developing countries.
- **The UK has an interest in** supporting countries in the Middle East to sustainably diversify their economies while not creating new dependencies; and in cooperating where possible with Gulf countries, particularly where they have an interest in Africa and South Asia, while remaining clear-eyed where those interests diverge. The transition to net zero will significantly reduce but not end the UK's energy-related dependencies and the country will need to take a strategic view of its vulnerabilities, including but not limited to critical minerals. A shrinking aid budget and support for Ukraine have significantly reduced UK financial support for Africa, which it will need to remedy in the coming years. Indonesia will be central to the UK's climate and transition interests given its role in emissions growth, its critical minerals and need to preserve standing rainforest. The UK should seek to support the Pacific and Caribbean to continue playing their influential role in international climate negotiations in the face of mounting geopolitical pressures. The capacity of regional powers and organisations to manage these issues will be important and building the capacity of the latter should be a priority.
- **For the UK's external climate-related programmes, Asia excluding China will be the highest priority in reducing emissions; and Africa and small island states in addressing climate impacts.**

Introduction

This part of the report considers the prospects for the transition to net zero and climate-resilient economies, along with climate impacts and their geopolitical implications in the major regions of the world over the coming decade. From a transition perspective, it examines in particular the largest emitters (China, US, EU, India, Russia, Japan, Brazil, Indonesia, Iran, Saudi Arabia and Canada).

Assessments of the transition usually consider countries from the perspective of their emissions or vulnerability to climate impacts – reviewing major emitters, climate progressives, climate-vulnerable states and so on. It is also important to consider countries in their regional contexts as both the transition and climate impacts will have strong regional dimensions: energy trade will in future be more local, national and regional and less global. Climate impacts will have a particular regional impact, from the availability of water to extreme weather events, the movement of people and violence.

2.1. East Asia

When China's emissions peak and how fast they decline is the single most important factor in global warming this decade. Small changes to its growth rates, deployment of renewables and coal utilisation will have enormous influence on the pace of the transition. China is dominating most of the technologies and materials of the transition and is responsible for the overwhelming majority of the world's prospective supply of coal. China has delivered on its 2030 solar and wind targets of 1,200 GW six years early. It accounts for more than half of global EV sales and is on track for almost all new vehicle sales to be electric this decade. In a decade's time, China's electricity system could be largely decarbonised, putting China on track to reach net zero well before its stated goal of "by 2060" (IEA, 2024b). **If China's emissions peak before 2025, it should be able to reduce them by 40–45% from their peak by 2035. This should be reflected in its next nationally determined contribution (NDC).**

China's climate policies are driven by deep-rooted economic, security and social stability priorities. China's leadership is determined to secure a leading position in the technologies of the transition as part of a national economy and security programme, including to make China more energy-independent and resilient in the event of conflict over Taiwan or in the South China Sea. China will remain the dominant global supplier of solar panels, batteries and EVs. It leads the world in installed electrolysers (necessary to produce green hydrogen) and has 40% of global capacity. In wind, China accounts for around 60% of global manufacturing. Green technologies accounted for 40% of its growth in 2023 (Myllyvirta et al., 2024), indicating that it is pivoting its investment-led model from property and other infrastructure to green investment (rather than consumption-based growth).

China's green tech dominance may abate slightly in the 2030s but the scale of demand and lead times for new manufacturing and for mining and processing mean that for most transition materials and technologies, China will remain the dominant force over the next 10 years – the period during which most advanced economies will decarbonise their power and transport systems.

This dominance is historically exceptional and gives China leverage – although not to the same extent that oil has provided to Gulf producers. China is increasingly reliant on clean technology exports. Exercising or threatening to exercise its clean tech leverage would invite retaliation. And while China would impose costs and delay on Western countries, its main impact would be to accelerate decoupling and slow down the transition, to the detriment of all countries.

Japan does not have a credible plan to deliver an overwhelmingly decarbonised electricity system by 2035, as committed to by G7 countries. Japan has high hopes for hydrogen and for mixing green ammonia with coal to reduce coal plant emissions and is seeking to export these technologies in South and Southeast Asia (but is likely to have limited success given the economics and the laws of thermodynamics). The Japanese government would like to restart nuclear power plants taken offline after the Fukushima disaster and potentially start a new nuclear programme, but is struggling to advance at pace. Japan is behind other advanced economies in the uptake of EVs. Given its industrial capacity, it has the potential to catch up although on current policy settings its competitiveness may decline as it falls behind other industrialised countries and China in key clean technologies, exacerbating its challenges of high debt and population decline. **For its 2050 net zero commitment to be credible, Japan's next NDC will need to commit to reduce emissions by 65– 70% by 2035 from its 2013 baseline year.**

Japan's influence in Southeast Asia will decline if China is better able to respond to the region's transition needs. Japan is keenly aware of China's growing influence not only in the region but also in Africa. This may affect Japan's traditionally conservative approach to innovative financing approaches and capital increases for the MDBs (Japan has recently championed measures to enable the African Development Bank to use IMF Special Drawing Rights).

South Korea faces similar challenges to Japan, with its historically high-carbon energy mix and the lowest share of renewables in the OECD. Plans under consideration by the government could see it increase clean power generation to 70% around the mid-2030s.

China will be one of the countries most exposed to climate change. It already experiences frequent coastal flooding, storm surges, coastal erosion, saltwater intrusion, inland flooding and heatwaves, which will increase in severity and frequency over the coming decade.

Given the economic importance of China's low-lying coastal cities, unabated climate change could lead to GDP losses of between 0.5 and 2.3% as early as 2030 (World Bank Group, 2022). Impacts on human health due to climate change have the potential to become a political problem for the Communist Party. As a result, China has a huge engineering-led national adaptation programme to, *inter alia*, protect its coastal settlements, store and move water and increase grain storage.

Japan and South Korea will face increasingly extreme weather events over the next decade as a result of rising sea levels and temperatures. Japan's average temperature is rising faster than the global average. As in other regions, higher temperatures and heavier rains will impact the yields and quality of crops including rice, which productivity gains will struggle to offset.

The UK should work with others to diversify supply in the technologies and materials of the transition where that is feasible while recognising this will depend on effective coordination with partners, including in Europe, and that high levels of dependence in some areas are likely to endure. Given the UK's domestic capabilities and existing trade in clean tech products, reducing dependence may be harder for the UK than the EU and the US – although all will struggle to reduce their dependence on China for critical minerals over the next decade.

The UK, with allies and partners, should compete with China in third countries by making a stronger positive offer rather than trying to constrain or counter China's offer in green technologies, which is unlikely to be successful. Competition with the purpose of addressing climate change (rather than for reasons of ideology or influence *per se*) has the potential to offer developing countries choices, accelerate the transition, influence China's own choices and strengthen the West's declining international standing. The UK will have particular strengths in a limited number of sectors, including, importantly, in the design, delivery and management of a clean energy system (see Part 3).

The UK has a role, working with its partners, in ensuring that competition with China is managed as predictably as possible; and is balanced by areas of cooperation. Competition without cooperation has the potential to descend into confrontation and undermine climate action. These risks can be reduced by balancing desirable cooperation with necessary competition. For example, traditional donors and China will need to work together if developing country debt is to be meaningfully restructured or more capital is to be put into the MDBs. China has in the past expressed an interest in discussing JETPs with G7 countries. Chinese institutions and some parts of government may be interested in scientific and technical dialogues on transition-related issues (from which the UK stands to gain as much as China).

2.2. North America

The Bipartisan Infrastructure Act, Inflation Reduction Act and accompanying regulatory measures could enable the US to make up ground with the EU and China and accelerate the transition globally by bringing down costs in newer technologies such as carbon capture and removals. The outcome of the 2024 Presidential elections will affect the pace of the US transition but not the destination, as the drivers are now sufficiently embedded that they are unlikely to be reversed. The election could have a greater effect on the ability of the West to mobilise support for developing countries, particularly through international organisations, further strengthening the position of China.

The US is not on track to meet its 2030 NDC emissions reduction target (of 50–52% compared with 2005) and will need to set a 2035 NDC with a target around 65% to achieve net zero by 2050 in a manner broadly consistent with the Paris Agreement. Like most other advanced economies, almost all new vehicles in the US are likely to be zero emission by 2035 and its energy system to be overwhelmingly decarbonised. Support through the Inflation Reduction Act (IRA) to industry may mean that while it is behind other advanced economies in the power sector, the US catches up with Europe on EVs and is able to compete with China in decarbonising the industrial sector.

While Donald Trump has committed if re-elected as President to unravelling the IRA, large parts of it are likely to endure regardless. Trump would be likely to take the US out of the Paris Agreement again (and potentially the UN Framework Convention on which the Agreement is built) and seek to reduce parts of the IRA that promote social justice or community benefit. He is hostile to EVs and wind power and is likely to further enable fossil fuel production (although under Biden, the US has become the

largest oil and gas producer in the world), and weaken the Environmental Protection Agency and enforcement of climate and nature regulations. But it is difficult to roll back legislation.

Many Republican states and voters benefit from the tax credits and associated investment and jobs, so much of the IRA may survive. Coal power continued to decline under Trump's earlier presidency, despite his avowed support for the industry. EU–US relations would likely deteriorate given Trump's hostility to the EU in general and its trade policies in particular. This would have implications for the UK, most likely strengthening UK–EU relations.

The willingness of the United States to increase support for EMDCs in the transition and in addressing climate impacts will be an important question for the next Administration and affect the ability of Western countries more broadly to redress their declining geopolitical position. The US's failure to play its full part in supporting EMDCs has created an opportunity for those hostile to the country's international leadership. The US also has a domestic interest in creating greater opportunities for developing countries to be part of its green supply chains: its combination of subsidies and tariffs to drive vertical integration of production in the US is likely to increase the cost of the transition and lead to inefficiencies in its clean tech sectors if not addressed.

Canada is the 10th largest global emitter and has committed to reduce emissions by 40–45% by 2030 compared with 2005. Its climate targets are broadly compatible with the Paris Agreement but its performance and policies fall well short, as does its climate finance offer.

Climate impacts will increasingly drive internal migration in the US and affect asset values, which will have macroeconomic implications. The US will see increases in mean precipitation and more intense rainfall events at 1.5°C and a strengthening of hot extremes. Droughts will affect the southwest in particular; the wildfire season will extend and become more intense. The intensity and frequency of cold days and nights will decrease. Hurricanes will become stronger and more intense.

The UK can apply constructive pressure to the next US Administration by setting out the steps needed to better support sustainable development in EMDCs. The position of the next Administration on reform of the IFIs, new sources of revenue and debt restructuring will be critical to the prospects for progress.

The UK has a strong interest in working with the US – and with European countries and the EU – to diversify supply chains and access to critical minerals, including through the G7. This would need to be outside the context of a free trade agreement, negotiations on which would consume energy and attention with little prospect of success.

2.3. Europe

The EU will remain the most influential global regulator of the transition. It is likely that its carbon border adjustment mechanism (CBAM), while antagonising many countries, will drive the global uptake of carbon pricing and in time border measures. Other regulatory measures, such as corporate reporting or supply chain due diligence, will antagonise and influence other countries in equal measure. How the EU handles the decarbonisation of agriculture, including the external implications of doing so, may be one of its greatest challenges in the coming decade. **For the UK, the EU's transition policies will be the most consequential of its international partners'.**

The EU should be able to achieve its objective of an overwhelmingly decarbonised electricity system by 2035. Through a combination of subsidies (mainly at the country level), regulation and trade restrictions, the EU should by the end of this decade be in a position largely to meet its own transition needs in wind, batteries and to a lesser extent EVs and electrolysers, but will remain dependent on imports for solar PV and hydrogen derivatives. While the EU's trade and investment restrictions will continue to grow, they will be limited by what it considers legally defensible. Given existing levels of green trade, derisking its trade with China will be more difficult for the EU than the US and its approach will differ as a result, meaning that a fully aligned transatlantic approach to China's green tech market power will be hard to achieve. The European Commission has proposed that the EU should reduce emissions by 90% by 2040 compared with 1990. Before COP29, **the EU will also need to provide a 2035 emissions reduction target, which should be around 75% compared with 1990.**

Europe is warming twice as fast as the global average. It will suffer from weather extremes at both ends of the spectrum: more extreme heat, drought, wildfire and marine heatwaves, along with unprecedented glacier melt and flooding. Central and southern Europe are projected to be among the regions facing the hottest extremes under 1.5°C of warming. Climate change will severely impact Europe's agriculture. Without compensating increases in productivity – which will be hard to achieve in a mature sector – or extensions in cultivated land, the continent will suffer worsening harvests, leading to higher production costs and likely greater political disruption.

Europe will experience a continuing rise in refugees, in particular from Africa, driven by climate change. Although many European countries will face labour shortages over the next decade, these two facts are unlikely to balance – concerns about a lack of control at the border and the pace of change are more likely to ensure Europe's politics continue to be affected by the movement of people.

Of all its climate and energy relations, those with the EU and European countries will be the UK's most important over the next decade. The North Sea will be critical to Europe's energy security whether in terms of wind power, interconnectors or storage (for CO_2 and hydrogen). EU investments in its clean technologies, supply chains and critical materials may represent competition in some sectors as the UK increases its investments but on balance are likely to be positive for the resilience of UK supply chains.

2.4. South Asia

India is in a strong position to benefit from changes in the global economic and geopolitical order. The transition offers India an opportunity to reduce import dependency, improve its trade balance, reduce the fiscal impact of its energy subsidies and build a green industrial alternative for countries concerned by their dependence on China. This will require rapid industrial decarbonisation if India is to avoid lock-in of high-carbon manufacturing. Although India can mobilise significant domestic capital markets, investment needs estimated at $223bn mean India requires external finance at reasonable rates to meet its targets. There is some evidence that major investors are increasing investments in India's transition, particularly in renewables.

India is also the most coal-dependent country in the world, with 70% of electricity being coal-fired and plans to double coal production by 2030. India's demand for fossil fuels is likely to grow over the next decade, ensuring the continuing importance of its relations with Russia, the UAE and Saudi Arabia. Like China, India may use coal as a peaking and backup power source but if it plans to use its coal fleet as baseload for the lifetime of that fleet, emissions will continue to rise throughout the 2030s.

As China's emissions pathway is the single most important factor in climate change this decade, it will be India's in the next and India's next NDC should commit to peaking emissions before 2035. Whether India's emissions peak at the beginning or end of the 2030s will have a significant impact on the world's ability to meet the objectives of the Paris Agreement.

South Asia is predicted to experience a combination of water scarcity, which threatens food security, and extreme rainfall and flooding, which will drive migration. Hotter temperatures and worsening pollution, especially in urban areas, will lead to greater risks of disease and ill health, threatening in particular the elderly and the poor. Bangladesh and Pakistan will face some of the most devastating floods, as the latter did in 2022 when 33 million people were impacted.

India is already seeing unprecedented temperatures, floods and droughts, and deteriorating air quality. Mumbai has the world's largest population exposed to coastal flooding, with large parts of the city built on reclaimed land below the high-tide mark. Rapid and unplanned urbanisation further increases the risks of flood damage and sea water intrusion. Glacier melt from the Himalayas will likely affect food production, altering the flows into the Indus, Ganges and Brahmaputra Rivers, which will impact irrigation in the basins of each. Tensions over water in the Indus basin have been effectively managed for the last 60 years but climate impacts will make this harder to sustain.

Food security concerns are leading India to impose more export restrictions than any other country. As of early 2024, in response to the price shocks following Russia's invasion of Ukraine, India had the highest share of export restrictions as a percentage of its exports. Unless increases in agricultural

productivity outpace the impacts of climate change, India may resort to export restrictions more often and on a wider range of products.

The UK is underweighted on India given its growth prospects and role in the transition – it may not have many of the technologies or materials India needs, but its expertise in grids and finance could be the basis of a stronger offer.

2.5. Middle East and North Africa

No region will be more affected by the geopolitics of the transition to net zero than the Middle East. This is already influencing efforts in the region to normalise relationships between major powers and to deepen relationships with Asian countries. Gulf oil producers plan to be the last producers standing, increasing their market power while, at least in the case of Saudi Arabia and the UAE, diversifying their economies.

The Gulf will become less important to Western and more important to Asian economies over the next decade, but the region could become a major exporter of hydrogen-related products and capture a larger share of the market in energy-intensive manufacturing given its combination of cheap solar and hydrocarbons. Advanced economies will need to assess how far this will contribute to diversification or to new concentrations of production. With windfall oil and gas revenues following Russia's invasion of Ukraine, the Gulf has become an important global investor, particularly in South Asia and Africa. Given its solar potential, North Africa can provide system resilience to Europe through interconnectors and help meet demand for hydrogen products. Iran's emissions over the next decade are likely to grow as a proportion of global emissions as others diversify their economies and Iran does not.

The region is highly exposed to warming, with significant risks of extreme drought occurring at 1.5°C. Water scarcity will increase but may be addressed for higher-income countries by desalination powered by solar PV. Land available for farming will decline, increasing rural–urban migration which will put pressure on services and increase civil tensions, particularly in North Africa and the Levant. Where terrorist organisations are active they will benefit from this; where they are not, they may re-emerge.

There are significant risks of a disconnect between the pace of the energy transition, economic diversification and the domestic political settlement in many countries. If the headline objectives of COP28 – to triple renewable deployment and double energy efficiency by 2030 – come close to being achieved, the energy transition is likely to be faster than Gulf countries may be prepared for. With the growing impacts of climate change, particularly in those countries in the region least able to address them, this has the potential to destabilise the region further.

The UK has an interest in supporting countries in the region to diversify their economies while not creating new dependencies; and in cooperating where possible in Africa and South Asia while remaining clear-eyed about where interests align and do not.

2.6. Russia and Central Asia

As other countries decarbonise, Russia's prominence as a major emitter may grow and its high-carbon economy will pose an increasing risk to its trade. Russia is the world's fifth largest emitter and its per capita emissions are among the highest in the world. Around 25% of Russian government revenue depends on oil and gas and over 60% of that is at risk in a moderately-paced transition scenario. Its war against Ukraine will further reduce its ability to diversify and make maintaining production harder while its need for income to fund the war grows. The transition away from fossil fuels is affecting its geopolitical leverage while increasing its reliance on China and on Asian demand. Liquefied natural gas (LNG) set to enter the market in the coming years means Russia's share of internationally traded gas, which was 30% in 2021, will likely halve by 2030, even in the IEA's low-ambition STEPS scenario.[8] Russia has an unambitious 2060 net zero commitment which relies on significant negative emissions from forestry and tends to escape the scrutiny of other major emitters because it is seen as a hopeless case – a growing omission as Russia's share of global emissions grows. **A credible 2035 NDC target would mean Russia reducing emissions by 55–60% on 1990 levels.**

[8] Stated Policies Scenario; see www.iea.org/reports/global-energy-and-climate-model/stated-policies-scenario-steps for a description of this scenario.

Although it has promoted climate mis- and disinformation online, Russia has been a broadly constructive player in international climate negotiations, but it would be unwise to assume this will continue. Russia is doing little to transition and its dependence on declining fossil fuel assets is likely to endure in the next decade. Trade with the EU is no longer a driver of its climate policy. Russia's proportion of global emissions may grow as others decarbonise; so may its interest in undermining international cooperation and national action, including through dis- and misinformation, particularly in advanced economies where climate scepticism is closely but not exclusively associated with nationalist-populist forces. There is already evidence that this is happening.

Kazakhstan, the largest economy in Central Asia, is at the limits of its fossil-fuel-dependent growth model. It exports 80% of its oil production and while a mid-cost producer, it is highly vulnerable to declining global demand with a fiscal breakeven over $70/barrel; and its trade is exposed to the EU's CBAM. It could lose $250m per year under the CBAM under its current scope and up to $1.5bn if, as is likely, the scope of the CBAM is extended.

The UK's direct influence over Kazakhstan's direction of travel is limited. But the effects of EU trade policies and China's growing role in Kazakhstan have the potential to affect its transition policies in positive ways, which could further isolate Russia on its high-carbon pathway.

Russia is the most vulnerable of the major powers to climate change and the least prepared, with a tendency to emphasise the benefits of climate change, which for Russia could include an expansion of arable land, opening up the Arctic passage and making more land hospitable for habitation. But its permafrost will likely start to melt at 1.5°C, impacting infrastructure. It will face growing risks from flooding and fire; damage to agriculture in the breadbasket territories of European Russia; damage to its forestry economy; and internal population movements. While the state can mobilise resources in response to specific climate-related events, the government, private sector and the public are doing little to prepare for climate impacts; and Russia's response resources may become stretched by a prolonged war against Ukraine.

As one of the world's largest wheat exporters, the impacts of climate change on Russian production is of international concern. Following Russia's invasion of Ukraine, restrictions on the export of food and fertilizer around the world grew rapidly, an indication of what to expect from the growing impacts of climate change. There is a history of sporadic, local protests linked to environmental issues in Russia. These will likely grow but are unlikely to pose a threat to the regime over the next decade as they tend to occur in eastern and northern regions, and public discontent is increasingly suppressed.

Central Asia is highly vulnerable to climate change impacts, in particular flooding and drought. Temperatures there are rising faster than the global average, with flooding and drought threatening livelihoods and health, and leading to internal displacement of people and potentially to conflict. A 2021 border conflict between Kyrgyzstan and Tajikistan started as a water dispute between local residents, for example.

The UK has little ability to influence Russia directly – Russia's approach to energy and climate issues will be influenced by its wider geopolitical position and the outcome of its war against Ukraine. But **the UK should support countries neighbouring Russia in their transition, monitor and expose Russia's disinformation operations and closely monitor Russia's approach to international climate negotiations.** Working with European and US partners, the UK should in particular champion the clean reconstruction of Ukraine – both as a source of clean energy and materials for Europe and for the example it provides to Russia of a different possible future.

2.7. The Arctic

Accelerating melting of the ice sheets means that global warming will impact the Arctic more than any other region of the globe. This is not only leading to sea level rise along Arctic coastlines but is also changing shipping routes, opening up an ice-free passage north of Russia for shipping traffic from China and Asia. Pressure to use the Arctic for shipping will grow as the route opens and climate change affects the Suez Canal. This would be highly damaging to its fragile ecosystems and strategically destabilising while creating economic opportunities for Russia in particular. A High Seas Treaty, agreed

in March 2023, has been signed by nearly 90 countries – but Russia has voiced concerns about it, raising questions about its commitment to ratify and implement it.

2.8. Sub-Saharan Africa

Africa is the continent least responsible for climate change, most vulnerable to its impacts, and worst served by current international efforts to support the transition to zero-carbon and climate-resilient development.

Africa has enormous potential in renewable energy generation, with solar and batteries the backbone of its transition. It could secure a significant share of global trade in hydrogen derivatives and drive industrial development on the back of low-cost solar power and batteries. Industrialisation will also drive Africa's energy demand, with the continent's manufacturing output growing at around 6% each year. The high costs of capital and limited interest from advanced economies and the private sector are hampering Africa's ability to seize these opportunities.

Africa's share of emissions this decade is not significant, which in part accounts for the limited attention it receives. But it will account for a growing share of emissions in the 2030s and failing to support Africa with renewable options now risks locking in the systems and politics of fossil fuels.

African oil- and gas-producing countries are highly exposed in the IEA's Announced Pledges scenario.[9] Several countries with gas resources object to the growing restrictions by donor countries on financing gas investments but the medium-term opportunity is likely to be limited by the surge in LNG entering the market from 2025 and will likely decline in demand later this decade. Those betting on increasing gas revenues risk locking themselves into dependency as the market shrinks and prices fall.

China will be critical to Africa's transition over the next decade. China has well-established infrastructure project links to many African countries and is seeking to green the Belt and Road Initiative (BRI) as it increases its domestic capacity in green technologies. BRI countries (which include many African members) may not want to depend on China: not least given the cost of loans, which tend to be less transparent, with higher interest rates and less favourable conditions than Western equivalents. But they will make pragmatic decisions based on the options available.

Gulf countries, particularly the UAE and Saudi Arabia, are increasing investments in Africa. These will reflect their interests – whether in the transition, nature credits, oil and gas or countering militant Islam – which will align with the UK's in some but not all respects. Saudi Arabia's Oil Demand Sustainability Programme, for example, explicitly aims to ensure continuing demand for fossil fuels.

Russia's security presence in Africa through state-sanctioned mercenaries has grown over the past decade. Despite the official liquidation of the Wagner Group of mercenaries, its activities are continuing and as governance in some African countries comes under further pressure from faltering development and escalating debt, partly due to climate change, there will likely be continuing demand for Russia's regime security services.

With current policies, the roles of China, the Gulf countries, Russia and others in Africa are likely to grow, and those of Europe and the US to reduce. This is not necessarily the outcome countries in Africa want; nor is it inevitable. To change the current trajectory, advanced economies will need to scale up lower-cost finance for climate and nature investments, primarily through the MDBs. They will need to offer technologies in which they have particular strengths and increase their support for adaptation, including to address growing pressures on food and water. Competition between the West and China/Russia holds the prospect of increased financial support, as in previous eras of geopolitical competition. This also brings risks of a return to Cold War clientelism to the benefit of ruling elites rather than sustainable development. Competition between China and the West is more likely to lead to positive outcomes for African countries if combined with some elements of cooperation, for example over debt restructuring.

Climate change will slow and could reverse the development gains of recent decades. Africa will face some of the world's worst droughts and heatwaves, which will threaten food security, increase migration and exacerbate conflict. By the mid-2030s, Africa will be affected by increasing heatwaves, accelerated crop loss and changes in precipitation patterns, which will increase the risks of undernutrition, mortality, population movement and conflict at the same time as the continent's population will be growing by

[9] See www.iea.org/reports/global-energy-and-climate-model/announced-pledges-scenario-aps for a description of this scenario.

about 400 million. Violent and terrorist groups will be strengthened where they exist and new ones may emerge, partly thanks to the stresses caused by climate change.

UK overseas aid to Africa has reduced significantly in recent years, largely due to overall reductions in spending on official development assistance (ODA) and increased funding for Ukraine.

The UK's most concessional finance will need to be progressively reweighted towards Africa over the next decade as climate impacts and Africa's share of emissions grow.

In Africa as elsewhere, climate impacts and the transition will both have strong regional dimensions. As a result, the UK should give particular attention in its diplomacy and cooperation programmes to building the capability of regional organisations to manage the transition and deal with climate impacts.

2.9. Southeast Asia and Pacific

Southeast Asia lags behind other regions in its energy transition, with its continuing dependence on high-carbon energy and low but growing deployment of renewables. Most countries in the region will require substantial financial assistance to transition away from fossil fuels. Some could play an important role in clean energy supply chains given their deposits of and ability to process critical materials, and as production is outsourced from China.

Indonesia's choices will be decisive as its emissions path is now the most significant factor in global warming outside the major powers. It is the largest emitter in the region, responsible for nearly twice the volume of emissions as Vietnam, the next largest emitter; and its emissions have been rising strongly since 1990. After the Amazon basin and Central Africa, Indonesia has the most rainforest in the world but has lost nearly 20% since 2001. Its plans see emissions continuing to rise before peaking by 2030 and could see its emissions overtake Brazil's and Japan's by 2035. **To be credibly consistent with its 2060 net zero target, Indonesia's 2035 NDC should commit to reducing emissions by around 30% on an absolute basis against a 2019 baseline.**

The Just Energy Transition Partnership (JETP) between Indonesia, the G7 and other countries has the potential to help reduce Indonesia's on-grid coal emissions significantly and should be integrated into its NDC, although is alone unlikely to put Indonesia onto a 2°C pathway. The progress of the JETP demonstrates the challenges of decarbonising an industrialising economy with a young coal fleet. Mobilising finance including private finance behind the early retirement of coal plants will determine the success of the JETP and potentially other transition plans in the region.

The Southeast Asia-Pacific region includes some of the countries most vulnerable to the impacts of a warming planet. The basic viability of many Pacific islands as places of human habitation is threatened by sea level rise this century. As a result, they play a role out of proportion to their economic weight in international climate discussions. The countries of Southeast Asia are particularly exposed to sea level rise and coastal flooding given the length of coastline relative to land mass and the destruction of coral reefs. Small islands, low-lying coastal areas and deltas will be increasingly exposed to saltwater intrusion, flooding and damage to infrastructure. Coral reefs will decline by a further 70–90% at 1.5°C, rising to more than 99% at 2°C. Continuing urbanisation will contribute further to forest loss and expose growing urban populations to severe droughts at 1.5°C (IPCC, 2018).

The region is a theatre of US–China competition and this is a lens through which both countries (if not necessarily those in the region) see the issues of climate and transition. This has the potential to benefit the countries of Southeast Asia as they seek to decarbonise their economies; and of the Pacific region as they respond to the impacts of climate change.

The UK should bring the JETPs back to leader level following elections in many participating countries in order to assess progress and provide direction. As high-level political contracts, these need to be raised periodically to the level of leaders. The partnerships will need to do more to evidence the 'more-for-more' philosophy on which they were based, as plans move into delivery.

The UK should work to enable the Pacific region to continue to play its influential role in international climate negotiations in the face of mounting geopolitical pressures.

2.10. Latin America and the Caribbean

Latin America, accounting for only 7% of the global economy, can play an outsized role in the new energy economy given the region's energy and mineral resources. It has one of the cleanest electricity sectors in the world, with renewables generating 60% of electricity, twice the global average. It is the global centre of lithium production and has scope to expand production of critical minerals. It is starting to export advanced biofuels and low-emissions hydrogen. Unlike other regions, agriculture and land use account for a high proportion of emissions. **As the region's largest emitter, Brazil will need to commit in its 2035 NDC to reduce emissions by around two-thirds from 2005 levels.**

Emissions from the Caribbean are insignificant in global terms, and as a result the region has not been a priority for investment, with the exception of oil and gas in the south. The region's small grids limit the development of solar and wind; and a fragmented approach to energy across the region hampers investment. The Caribbean is highly dependent on fossil fuel imports, putting pressure on public finances, burdening consumers and undermining the region's competitiveness. The transition is an opportunity for the Caribbean to reduce its dependence on imports if it can raise the finance necessary.

Central and South American oil producers will struggle to compete with lower-cost Gulf producers even in a moderate transition scenario. Around 90% of Mexico's oil and gas revenue may be at risk in such a scenario. Brazil's national oil company Petrobras would need to halve predicted production. Venezuela's government finances are entirely dependent on oil and gas revenues, which – given projected demand scenarios – could drop to 80% below expected revenues (Prince, 2023). Colombia decided in 2023 that despite producing around 750,000 barrels per day, it will not issue any more oil or gas licences.

Latin America will be an important market for China's vehicle exports, which will displace regional and international producers. China is also well-placed in the raw material sectors, including but not limited to lithium. The US is seeking to increase its engagement with key countries for raw materials and supply chain resilience. There has been discussion of mineral producers creating an OPEC-like cartel to ensure more value stays in the region, but this is unlikely: cartels are difficult to form and maintain. But competition for critical minerals does provide opportunities for countries in the region to capture more value from production by moving into processing and related industries.

Consistent with trends elsewhere, Latin America is likely to see growing water scarcity and drought, flooding and landslides, with the poorest hit hardest (although there are fewer impact studies for Latin America than other regions). The Amazon basin is a particular vulnerability, although climate models do not currently suggest a tipping point is imminent. Latin America has some of the highest rates of inequality in the world, which will be compounded by the impacts of climate change. Growing water scarcity and drought will affect more of the region's agriculture, particularly subsistence. Increased incidents of flooding and landslides will hit the rural poor the hardest. Most countries in Central America are already ranked as the highest risk worldwide due to the region's vulnerability and low adaptive capacity. As a result, the movement of people northwards to the US is likely to continue in the decade ahead.

Caribbean nations are among those most vulnerable to the effects of climate change, including rising sea levels, coastal erosion and more intense tropical cyclones. At 1.5°C, the region will see an increased proportion of these cyclones and of very high wind speeds. Water scarcity and drought risk will impact the country's capacity to produce food; sea level rise will threaten its coastal cities. The international financial architecture does not serve Caribbean (or other climate-vulnerable middle-income) countries well because most organisations recognise classifications according to income rather than vulnerability.

As one of the most impacted regions, the Caribbean plays an influential role in international climate discussions. With some Latin American countries (and the Pacific region), the Caribbean has been at the forefront of those pressing for more action to reduce emissions and address climate impacts, although its influence has receded since the Paris Agreement as that of China and the Gulf region has grown.

The UK should continue to support Caribbean countries in encouraging international organisations and programmes to take vulnerability into consideration while working for changes to the way OECD rules account for vulnerability.

Part 3: The UK in the decade ahead

Summary

- **How the UK approaches the transition to net zero and addresses climate impacts domestically matters internationally.** It will affect others' perceptions and willingness to work with and invest in the UK, adopt its ideas and buy its products. The country's influence and standing has declined over the past decade due to changes in the international context and its own choices. As climate and the transition grow in importance everywhere, the UK's domestic performance and international offer will matter more. Climate change and the current international context present opportunities to strengthen the UK's international standing in ways that the public would support.
- **The UK's key international relationships will remain with the US and Europe but developments in the international system mean these relationships are far from sufficient.** More countries matter on more issues; and the UK will be in constant competition to secure the good opinion of the world in order to achieve its objectives.
- **The UK in the decade ahead must transform key systems in its economy in ways that show how the transition can be delivered while maintaining domestic support.** The UK's energy transition will have the greatest implications for its external policies. The country will greatly reduce its dependence on oil and gas imports, will be far less exposed to price spikes and may be a net energy exporter. It will need to do more to address agriculture and land use, including the trade and development implications of measures that may be required, and the implications of climate change for its food security.
- **In its energy and industrial policies the UK will need to navigate the tensions between promoting jobs and domestic supply chains, value for money, resilience, and external trade and economic policies that support sustainable development.** The UK does not have the market power of the US, EU or China and will need to focus on supporting and protecting sectors in which there are specific risks to critical national capabilities or security, rather than mass-market products on which the UK is not likely to be competitive. It is unlikely to have a leading position in most of the key technologies or materials of the transition but could have a compelling international offer in some related services and in designing, delivering and managing a clean energy system. In exporting the latter, the UK could help to reduce the risk that energy systems in EMDCs become dependent on China.
- **The UK's international influence will stem from the effectiveness and ambition of the policies it pursues at home, and coherence between what it says and does at home and abroad.** The UK should promote its domestic measures internationally, including mandating transition plans and possibly nature-related disclosures, and regulating the voluntary carbon market. It should better take the international context into account in its domestic policies, including the interests of and impacts on developing countries. Those dealing with international and domestic climate, nature and energy issues in government should have a clear mandate to ensure policies are coherent.
- **The UK should set a commitment for official development assistance that moves real spending towards its legislated target of 0.7% of gross national income (GNI).** As the UK increasingly regulates or taxes carbon at home and abroad, it should ensure a share of revenues is devoted to international climate programmes, starting with revenues from its CBAM.
- **The UK will need to increase investment in the transition and in addressing the effects of climate change, both by increasing its offer and by targeting it more effectively.** The UK should significantly increase the use of guarantees to support transition programmes in middle-income countries in particular; and over the next decade should move the most concessional climate finance towards activities for which other sources of finance are scarce, in particular adaptation, nature and loss and damage. The country should rebalance its international climate-related spending to multilateral channels due to the ability of multilateral lenders to leverage other finance and offer an alternative to less transparent and accountable sources. It should also better coordinate, target and leverage its bilateral tools, particularly its export finance and development finance institutions. Untying the UK's export finance from content requirements would make it more competitive and encourage investments in its supply chains.

- **The British public are concerned about the national and international security context and take a broad view of the security risks facing the UK.** While the public do not generally respond to arguments for taking action on climate based on consequential threats – such as the risk of conflict, migration or health – survey data shows that they have an intrinsic understanding of the geopolitical aspects of climate and the broad and interlinked nature of climate and national security threats.
- **Growing climate impacts and shortcomings in the UK's domestic response, amplified by the media, are likely to drive public concern about climate change and demands that public authorities and the corporate sector take more action.** High levels of public support for climate action have been sustained despite the pandemic and cost-of-living crisis but growing attention is being paid to how the transition will be delivered and where costs and benefits will fall. The public want the UK to play an active international role on climate change, working with others, and to support other countries, in particular through sharing and building green tech capabilities and protecting nature.
- **There is little evidence to date of a significant green backlash in most countries, including the UK, despite it being the subject of much commentary and a widespread perception among decision-makers.** Concerns about climate or nature issues do not appear to have been a major motivating factor in recent elections in the EU; in the UK the previous government's caution over climate action appears to have cost it votes. If decision-makers wish to step up the UK's international engagement and investment in climate, the public will be receptive to the right arguments for doing so. Caution in doing so is a matter of political choice, not fact.
- **The UK has built and dismantled climate and nature expertise according to the preferences of the government of the day.** This is not a serious approach to a significant and growing global challenge. The UK should put in place the necessary governance and capabilities to integrate the levers of government in support of a coherent strategy. This should include stronger analytic capabilities, an annual climate, energy and nature security assessment on which the UK's strategy should be based, and a sub-committee of the National Security Council to oversee its delivery. The UK should also expand the role of the Climate Change Committee to advise on international policies and draw on external expertise, and re-establish climate and nature envoy roles.

Introduction

How the UK approaches the transition domestically matters internationally. It will affect perceptions of the UK, and others' willingness to work with and invest in it, adopt its ideas and buy its products. This means the transition in all its dimensions: physical – in terms of systems and infrastructure; political – in terms of the UK's ability to maintain a broad consensus on climate; and social – its ability to support those most affected by the economic transition and climate impacts. All aspects will affect and be affected by other countries.

The British public is also keenly aware of the links between domestic and international action, as recent research by More in Common shows (Rajah and Burns, 2024). The public want the UK to be one of the leading international actors on climate, working with others. They are well aware of the difficult global context and concerned about security in the broad sense – whether national, international, energy, food or water. They also want what the UK does internationally to respond to its domestic interests and concerns.

This section considers the UK's place in the world and its international climate programmes, its domestic transition and the impacts of climate change; and public opinion on these issues. It draws on the Government's stated objectives and policies – as contained in a range of publications including the Government's Carbon Budget Delivery Plan (UK Government, 2023h) and reports of the Climate Change Committee (CCC), including its report on decarbonising power by 2035 (CCC, 2023). The section focuses on those sectors most significant from an emissions and international perspective.

3.1. The UK in a changing geopolitical context

This section considers the position of the UK in the evolving international context outlined in Part 2.

The UK's key international relationships, influenced by geography, history and values, will remain with the US and Europe. In this respect, there has been a high degree of continuity in the past 20 years, even if much has changed in the international environment and there have been changes in the priorities of UK governments, as set out in public strategy documents and the UK's international practice. Whatever the political developments in the UK, US or Europe in the coming years, these are likely over the long term to remain the UK's most important international relationships for economic, political, security and cultural reasons. That does not mean following either one blindly, or trying to balance or intercede between the two. But Europe and the US will be the UK's international anchors – and without them it will drift.

However, developments in the international system also mean these relationships are far from sufficient. As debates about the evolution of the international order demonstrate, the coming decades will be unsettled, containing elements of multipolarity, i.e. ordered around a number of major powers, above all the US, China, India, Russia and the EU; and bipolarity, i.e. organised around US–China competition. A significant number of countries, recoiling from the great power competition of the Cold War, do not want to be drawn into choosing sides in a bipolar world. Their positions and preferences will vary according to the issue, and where they settle will determine whether the positions of the major powers are seen as legitimate – which will affect how sustainable they are.

While the UK's traditional alliances remain critical, more countries matter on more issues; and the country will be in constant competition to secure the good opinion of the world to achieve its objectives. The UK and its partners who value an open and stable international order will need to improve their offer to these countries on the issues that matter to them, including on addressing climate change, if they wish to secure the fundamental characteristics of that order.

The UK's ability to pursue its international objectives will rest on its domestic strengths and international perceptions of those; and on its international resources and relationships. At home, the UK's economic performance; the attractiveness of its social and political system, including the rule of law; and its academic, scientific and technological capabilities will remain critical. The country's international standing and influence will depend on the capability of its military and security services, the scale and quality of the international development assistance it offers, the reach and expertise of its diplomacy, and the quality of its ideas.

As an open modern democracy, the UK pursues its national interests internationally in light of its domestic politics and values, and what its governments consider to be the national interest takes account of underlying causes as well as immediate issues. The UK's *Integrated Review Refresh 2023* sets out that the UK's first duty is to protect the country's core interests and that it has a "higher interest in an open and stable international order of enhanced cooperation and well-managed competition based on respect for the UN Charter and international law" (Cabinet Office, 2023).

For a democratic, middle-tier power such as the UK, legitimacy is also important: in terms of both the domestic legitimacy of its foreign policy and its external policies being seen as legitimate by other states, particularly those whose support the UK relies on to pursue its international objectives.

The UK's influence and standing have declined over the past decade due to changes in the international context and the Goverment's domestic and international policy choices. On climate change, the UK has played a leading role for much of the past 30 years in the net zero transition and in addressing the impacts of climate change, but it has faced growing criticism over the consistency of its domestic and international actions and its international finance commitments to developing countries.

As the UK seeks to strengthen its international standing, it should ensure that it is consistent in what it is delivering at home and advocating abroad. How the UK manages the transition domestically and scales up its support to other countries will be important not only in addressing climate change but also for the UK's ability to secure its national interests; and, working with its partners, to promote an open and secure international order.

The UK's fundamental relationships on climate change will be in Europe, in particular with the EU, and with the US. The UK's interests will often be best served where there is a high degree of alignment with the EU and US; the G7 can play an important role in enabling this. But the UK will continue to face choices when the EU and US take divergent approaches (e.g. over tariffs on green imports or green taxonomies), or where the UK's interests are not fully aligned with either.

With strong relations with the EU and US but a distinct approach from both, the UK can play a convening and catalytic role internationally, building and mobilising coalitions of countries to advance specific issues, getting ahead of the pack on occasion and drawing attention to the need for its close partners to do more when warranted.

As climate change and the transition grow in importance for every country, the nature and quality of the UK's international offer will matter more to its wider international standing. Without access at affordable rates to more capital and know-how, not only will many EMDCs be unable to benefit fully from the transition but they may also lose out in an international trade and investment system that increasingly rewards low- and punishes high-carbon goods. All will also be facing the growing costs, social and political disruption caused by worsening climate change impacts. As the scale of the challenge grows, so will the attention and resources the UK will need to devote to it.

The UK's sharpest geopolitical choices in the decade ahead will arise in relation to China. Whether directly or indirectly, the UK, in common with many advanced economies, has a high level of dependence on China's green exports, particularly solar PV, batteries and transition materials; and potentially in future in electrolysers, EVs and wind power. China's dominance has been achieved through extensive state support and private sector innovation and is intended to position China as the leading player in the green economy – but also to increase its resilience and others' dependence on it. This gives China some leverage, although not comparable to that of the OPEC+ states: China's economy will be increasingly reliant on green production and exports and restrictions on these exports would increase prices and slow down the transition rather than produce sudden shocks sufficient to disrupt economies and destabilise governments.

As a general rule, the UK's interests will be best served by remaining open to imports unless there are critical national capabilities to be protected, while working with partners to diversify supply chains in order to reduce dependence on dominant suppliers. The UK's preferences will also be affected by the choices of others. If the US and EU restrict access to their markets for Chinese green technology, exports to the UK are likely to increase disproportionately, and the Government may come under domestic pressure to respond. The UK's partners could also seek to make cooperation on green technology, supply chains or access to technology conditional on the UK introducing restrictions on trade and investment beyond those the country considers necessary.

3.2. The UK's net zero transition

Energy

By 2035 the UK will need to reduce greenhouse gas emissions by around 78% compared with 1990 to meet its Sixth Carbon Budget – and it should set its 2035 NDC around this level. Major capital investments will be needed, particularly in the power and building sectors, with investment peaking at about £60bn around the middle of the next decade.

Of all sectors, power is the sector on which the UK must make the most progress in decarbonising, and its energy transition will have the greatest implications for its external policies. The UK may not be a leader in any single technology of the transition, but by the early 2030s it could be the first major economy to demonstrate how a decarbonised energy system can work, building expertise in grid design and management, and a range of energy-related services that it can bring to the transition in other countries.

By the mid-2030s the UK will have greatly reduced its dependence on oil and gas imports, is likely to be far less exposed to price spikes and may be a net energy exporter. The new Government is committed to a clean power sector by 2030 with a challenging pathway to achieve this based on high levels of renewables deployment, including on- and offshore wind and solar power, long- and short-duration storage, and grid expansion and redesign, including demand-side measures.

A range of technologies, including battery and long-duration storage, pumped hydro and demand management will be needed to provide short-duration storage, grid balancing and demand response. Some combination of stored hydrogen, hydropower, and gas with or without carbon capture, usage and storage (CCUS) will provide peaking and storage capacity for days, months and potentially years. The CCC assesses in its balanced pathway that 25% of hydrogen supply will come from electrolysis by 2035 (CCC, 2020). Bioenergy with carbon capture and storage (BECCS) could play a small but important role given its potential role in carbon removals.

By the early 2030s, the UK's declining nuclear fleet will have been complemented by Hinkley Point C. Sizewell C, if approved, is unlikely to be operating before the mid-2030s. On this timescale, the UK is unlikely to have deployed small modular reactors. The long and uncertain lead time for any commercially viable nuclear fusion means that there will be no power from it on this timescale. Given the likely under-delivery of nuclear power compared with announced targets for the next decade, other energy sources will need to over-deliver.

The role of interconnectors will grow. Around 10% of UK electricity was supplied by interconnectors in 2023 and it has a project pipeline that could add a further 16GW by 2035. The UK has recently, for the first time in 40 years, had periods of being a net exporter of power, and this will become more common. Interconnectors are one technology in which the UK has the interest and capability to develop its domestic production capacity. Europe has the most interconnected grid in the world but has a pressing need for more interconnectors, which may need to increase 120% by 2040 (according to ENTSO-E modelling: see Thomas and Patel, 2023).

These factors mean that UK demand for gas for electricity generation will in all scenarios decline from around 40% today to well below 10% by 2035 (CCC, 2020). This will be a significant change for a country that has been reliant on gas for the past 30 years. It will reduce the UK's exposure to price spikes of the sort seen after Russia's full-scale invasion of Ukraine, which hit the UK harder than other European countries given its reliance on gas and its poorly insulated housing stock (government support schemes for insulation cost an estimated £78bn between 2022 and 2024).

While these vulnerabilities will reduce, new ones will emerge. The UK will be highly dependent on imports of critical materials (see below) but the primary vulnerability of the future system will come from climate change itself – heatwaves, droughts, flooding, storms and coastal erosion. The new energy system's reliance on data to manage supply and demand will increase its vulnerability to disruption from cyber attack, whether from criminals, terrorists, hostile states or error. Addressing these vulnerabilities will require public–private collaboration, and cooperation with international partners.

Machine learning has enormous potential to accelerate the transition and manage climate impacts. The energy demands of artificial intelligence (AI) are a short-term challenge but there are few areas of the new economy that will not in time benefit from AI – from automating grid management to identifying material substitutions to predicting climate impacts. The combination of the UK's leading position in decarbonising the power system and expertise in data science and services may be a particular strength and export opportunity.

For all countries, regional energy relations are likely to become more important. Oil and gas are globally traded, as will be some products produced with electricity, such as ammonia or e-fuels. But electricity, which will dominate the new energy system, will be moved locally, nationally and within regions, not globally. For the UK, energy relations with the rest of Europe will become more important.

The UK and EU should seek a comprehensive energy and climate agreement to promote consistent regulatory approaches, increase investment in technologies and infrastructure of common interest, and deepen international cooperation. The UK and EU have a shared interest in promoting collaboration and investment and minimising regulatory divergence to support the development of wind power in the North Sea, interconnectors, storage including CCUS, and hydrogen trade. They also have a shared interest in compatible green taxonomies, carbon prices and border measures, subsidy rules, local content requirements and cooperation on critical minerals. There have been discussions on some of these issues between countries that border the North Sea, but these should be extended and institutionalised through a comprehensive agreement. Any agreement could be self-standing or part of a wider ranging security and cooperation agreement and will take time.

Given its declining reliance on fossil fuels, and its position on oil and gas licensing, the UK should join the Beyond Oil and Gas Alliance (BOGA). This would send a particularly strong international signal: although other advanced economies are members, the UK would be the first G7 country with an energy sector historically dependent on fossil fuels to join.

Sectors beyond energy

The decarbonisation of road transport will be the main cause of the decline in oil demand in the UK over the next decade. All new cars and vans on British roads are likely to be electric by the mid-2030s, with heavier duty vehicles following shortly after. The UK's trajectory in shipping and aviation is likely to be similar to other major markets, in particular its closest markets in Europe and the US and it will need to decide how far it wants to maintain a clean fuels capacity for these sectors, as without policy and financial support – public or private – countries with low-cost solar power, carbon dioxide for e-fuels and subsidies will be well placed to dominate the industry (most likely the Gulf countries, with other producers emerging over time).

To meet its carbon budgets, the UK's residential and commercial buildings will need to be largely decarbonised by the mid-2030s, significantly reducing dependence on gas. How residential building decarbonisation is managed will be important in maintaining political support and will be watched internationally. Germany's mishandling of the phase-out of gas boilers in 2023 was quickly reflected in discussions and politics of the transition in other countries, including the UK.

The UK's approach to agriculture will have implications for trade and development, particularly if the shortcomings of current approaches lead to the introduction of carbon pricing and border measures. Agriculture's share of emissions will grow as other sectors decarbonise. In many countries, the sector will be difficult to decarbonise, not least due to the political challenges it raises. As successive reports by the CCC have shown, the UK struggles to develop and implement credible plans in this sector.

The UK's agriculture and food links to the rest of Europe may become more important if, as examined in the previous section, climate change leads to slower gains or reductions in global agricultural productivity and increasing restrictions on food exports by major agricultural producers. The UK currently produces about 60% of the food it consumes and most of the around 40% that is imported comes mainly from Europe. To maintain this proportion of domestic production, improvements in agricultural productivity will need to continue, which may be challenging as climate change reduces productivity in parts of the country.

The UK may be particularly exposed if it is unprepared for the coming market in alternative proteins, given how much of its agricultural land is devoted to cattle and dairy farming. These technologies, in particular cultivated meat, have the potential to reduce emissions and make land available for other purposes, including restoration and reforestation. But they are also disruptive and may become another political fault-line in the transition. Republican lawmakers in parts of the US have sought to ban alternative proteins. Italian Prime Minister Meloni has said that alternative proteins could lead to a world where "the rich can eat natural food and synthetic food is for the poor". The UK is right to seek to position itself as a leading player in the development and uptake of alternative proteins.

Implementing its policies on land use, agriculture and nature restoration while maintaining the support of farmers and the public would be an important contribution to the international debate on the future of agriculture. Reducing emissions while restoring nature and supporting rural livelihoods may be the greatest challenge of the transition. No large economy has yet demonstrated its ability to do so. As protests across Europe in 2024 have shown, it will also be one of the more contested areas of the transition. The UK recently introduced a new environmental land management regime and has an opportunity to show how payments for nature services can work in a modern economy while maintaining the support of the sector and the public.

Similarly, the primary contribution the UK can make to the development of biodiversity credits internationally is to show that its domestic scheme works. The UK is creating a domestic biodiversity credit market through the Biodiversity Net Gain requirement on developers, which came into force in 2024. While the UK should encourage the responsible development of high-quality national and international biodiversity credit markets, building a functioning and credible market at home would be a powerful example to other countries.

The case for carbon-equivalent taxes in agriculture and land use is likely to grow, given the challenges of reducing emissions inherent in current approaches and the growing proportion of total emissions originating from farming. The European Scientific Advisory Board on Climate Change in January 2024 recommended that the EU should introduce a carbon pricing system by 2031 at the latest. While there are technical issues in designing a system, the greater challenges would be political.

The UK Government should ask the CCC to advise how carbon-equivalent pricing measures – and their international implications – could be addressed in relation to agriculture and land use. A meaningful domestic emissions levy would normally imply the need for carbon border measures to address the risks of leakage (although it is possible that other regulations relating to supply chain and deforestation due diligence would address part of the risks). The development and political aspects of the EU's introduction of a CBAM were underestimated. A border measure for agricultural emissions would be more complex to design and implement, and sensitive with EMDCs. But the UK will need to examine the feasibility of emissions pricing based on agriculture and land use, and the implications for measures at the border in the event that other approaches to reducing emissions from land continue to prove inadequate. The UK has committed to publishing a land use framework providing guidance on how land should be used, taking a range of land use needs into account. Until it does so, it is not possible to judge whether such a framework would be more effective than measures taken to date in reducing emissions and restoring nature.

Critical minerals

The UK's tools to reduce its dependencies in relation to critical minerals are limited by the size of its market, industrial sector demand and the resources it is able to deploy in support of private sector actors. Beyond a clear understanding of its specific exposure and options in the event of disruption, the UK should coordinate with partners on potential stockpiling of critical minerals; use export finance to support upstream exploration and processing; and channel public resources into research and development of alternatives.

Industry and trade

Policy and financial support to decarbonise industry will be important to the UK's international competitiveness, and to maintain public support in key sectors and locations. The UK will need to balance economic, political and strategic choices between supporting sectors to transition, capturing domestic value from public subsidies, aligning with key partners, and supporting open markets, not least EMDCs. But the nature and location of industrial production in the UK, as in other countries, will need to adjust to changing costs of production, including electricity prices and sites of power generation. The UK will need to take a strategic approach to building supply chains and offshoring production.

There is a role for public investment to derisk and accelerate private sector investment. This is particularly true for sectors, places or parts of the population in which the private sector is unlikely to invest or where there are particular distributional issues. Where public money is invested, the Government and public will want to see returns to the UK, whether in terms of jobs, supply chains or revenue. There is a case for conditions such as requirements for local content or good-quality jobs, and procurement rules and standards to enable this.

The US and EU are imposing restrictions on third-country exports and investments in green technologies aimed primarily at China. Their scale and nature will change over time and according to jurisdiction: the EU may be more open to Chinese green tech investment than exports; the US less open to both. How the UK's closest trading partners and allies approach this issue will affect the UK as more restricted markets in the US and EU may lead to Chinese exports being diverted to the UK.

The UK does not, however, have the market power of the US, China or EU and its home-grown green manufacturing industries are limited. Even with greater domestic support, the UK is unlikely to be a major producer in most of the key technologies of the transition, whether solar PV, batteries, EVs or wind power, and it is unlikely to be critical to clean tech supply chains or in the production or processing of critical minerals; and it will need to remain open to international investment in its clean technology sectors subject to national security and technology transfer conditions.

The UK should focus public support or protection on those sectors where there are particular risks to critical national capabilities or security, rather than on mass-market products in which the UK is not competitive (e.g. solar panels).

The UK should be particularly cautious about introducing tariffs on green imports that are not related to carbon leakage or to protecting critical national capabilities. Once introduced, tariffs are difficult to remove (particularly in the absence of major trade negotiations) and risk leading to enduring elevated costs, slowing down the transition for little domestic benefit. As set out above, there are measures other than tariffs to accompany an industrial policy that may be less distortive.

There will be opportunities in which the UK does have a comparative advantage. The UK has strong services, digital and financial sectors. It will be one of the first major economies to fully decarbonise its grid, and the expertise and capabilities it builds in grid design and management, long-duration storage and CCUS will be relevant to other countries.

These present opportunities beyond the commercial. In geopolitical terms, advanced economies do not have a strong offer to make to EMDCs in many of the key technologies of the transition; China is better placed to provide these, above all solar and batteries which will be the backbone of the energy transition in most EMDCs. But rapidly scaling up the deployment of renewables is not sufficient to decarbonise the energy system: the expansion of an intelligent grid is critical. The UK can help other countries design, deliver and manage renewables-dominated grids, building on its experience of doing so at home. It would not be in the UK's or Western interests for China's clean-tech dominance in EMDCs to extend to the overall design and management of the energy systems of those countries.

The UK should build its international offer in grid design, delivery and management and related services, technologies and supply chains, including as part of its offer to EMDCs. The Government should work with relevant parts of the UK's energy system – including the National Grid, Electricity System Operator and the regulator Ofgem – and the CCC – to strengthen their international offer. British Investment International and UK Export Finance have provided some support to these sectors and the UK should consider making the development and export of these capabilities a priority. Depending on its evolution, the Government could also consider building an international function into the new GB Energy to support this.

Financing climate action at home

The UK's economic performance over the next decade will significantly affect its external policies. Most economic forecasts – whether from the Office for Budget Responsibility, Bank of England, OECD or IMF – put the UK on a low-growth path compared with its recent historical performance. This reflects in part the weaker outlook for global growth, but also UK-specific issues. The UK's growth in productivity has underperformed of late compared with both recent history and peer economies. Real average wages have not progressed materially over the last 15 years. Debt as a percentage of GDP is close to 100% and is expected to pick up in the longer term due to an ageing population and other factors. The UK's long-term fiscal position based on current growth projections and policies is challenging.

The transition to net zero and the impacts of climate change require significant investments – the former primarily over the next decade; the latter increasing over time.

There are high levels of uncertainty about the costs of action to address climate change, and of climate impacts, as a Treasury report of 2021 concluded (HM Treasury, 2021). But the macroeconomic costs of net zero in the UK, even when not taking account of associated benefits, are likely to be slight. The CCC has assessed there to be a net cost across all sectors of £16bn by 2050 (CCC, 2020). And each time the costs are examined, they are lower. Aggregate costs mask the distribution and timing of costs and benefits, but the fiscal costs of the transition are expected to be greatest over the next decade, with capital costs being offset by avoided purchases of fossil fuels and savings in operating costs through the 2030s and beyond (OBR, 2019).

The UK's economic outlook has led to a growing focus on the measures necessary to increase its growth prospects, including the role of productive investment. A number of studies, e.g. Zenghelis et al. (2024), have highlighted the role of investments in the sustainable economy in increasing productivity and growth, and the role of public investment in crowding in private investment. Public investment in climate-related areas of around 1% of GDP, with the right supporting policies and regulations, could

produce in aggregate around 3% of public and private investment (ibid.). Other major economies are making these investments and clean sectors account for a growing share of many economies: transition sectors accounted for 40% of China's growth in 2023, for example (Myllyvirta et al., 2024).

3.3. Climate impacts in the UK

The effects of climate change will be increasingly present in the lives of the British public over the coming decade. The UK will see warmer and wetter winters with an increase in the intensity of rainfall and the number of wet days, which will drive up the risks of flooding. Summers will be hotter and drier, with the number of hottest days increasing more than the average summer temperature increase; but also when there is summer rainfall it will be more intense. More frequent and intense heatwaves will affect agriculture and human health. The UK's seas will continue to rise, increasing the risk of coastal erosion and flooding and the consequences of storm surges.

Climate change will exacerbate existing health issues and inequalities, hitting the vulnerable and disadvantaged the hardest. Infectious diseases could increase; so too may vector-borne diseases, as the prevalence of ticks and mosquitos grows and the risks of new species of biting mosquitos establishing in the UK increases. Higher temperatures could see outbreaks of diseases including West Nile virus, Chikungunya, dengue fever, Zika virus, malaria and others (UK Health Security Agency, 2023).

Agriculture is highly sensitive to climatic changes and the net effect of these changes on the UK will be negative. While there may be some benefits in parts of the country, for example due to longer growing seasons, overall the impacts of drought, heat stress, pests and pathogens, changing rainfall patterns, soil erosion and degradation will be negative. Unusual weather patterns have reduced yields in several recent years. According to a government report on food security in the UK, total economic losses for wheat, potatoes and oilseed rape caused by ozone (a side effect of growing greenhouse gas emissions) were calculated to be £185m in 2018, with more than 97% of those losses occurring in England (UK Government, 2023f).

As temperatures increase, there is a growing risk of even more significant changes – so called-tipping points. The slowing-down of the North Atlantic sub-polar gyre – which brings warmer water to the North Atlantic Ocean and carries cooler water south, circulating oxygen, nutrients and heat – is one of the tipping points that could lead to self-sustaining changes and cause significant cooling of the UK.

Reports by the Climate Change Committee have repeatedly underlined that the UK is under-prepared for those effects of climate change that are now inevitable. While the effects of emissions on temperatures and of these on the natural environment over the next decade are reasonably clear, the impacts on society will be affected by the actions or inaction of government, business and others.

These changes – whether in relation to extreme weather, health or food and energy systems – will be amplified by the media, and the public will be increasingly attuned to the impacts of the changing climate. This has the potential to drive public demand for climate action, provided such action at home and internationally is seen to be having some effect. If it is not, public concern is more likely to be expressed as despondency, frustration and anger. Managing the politics of climate impacts and the transition domestically will be a growing task for political leaders in all countries in the decade ahead.

3.4. Public opinion in the UK about climate action

If the UK is to sustain the actions necessary to achieve its climate objectives during a disruptive transition, it will need to understand, build and maintain public support. This does not mean that every policy requires the endorsement of a focus group: leadership also requires making decisions in the national interest. But it does mean understanding the public's concerns and addressing them in the design and delivery of climate policies.

This is as true for the UK's international climate policies as it is for its domestic policies. Public opinion has long played an important role in the UK's external policies, whether constraining or encouraging governments' choices. As for other modern democracies, the domestic legitimacy of the UK's international policies is important and governments cannot pursue on an enduring basis policies that are inconsistent with the values of the public as expressed through Parliament, the media, civil society and other groups. Polling by More in Common confirms that both practical and values-based considerations are material to the public's views on the UK's international policies (Rajah and Burns, 2024).

Polling suggests that the public want the UK to be seen as one of a group of leaders (rather than 'the' leader) and judges the UK's international actions and standing relative to perceived peers. Governments clearly believe the idea of leadership matters, judging by the importance that successive UK governments have attached to being 'leaders' on climate change even as that leadership has been called into question.

Polling shows clearly and consistently that voters and MPs across the political spectrum support the principle and the ambition of the UK reaching net zero emissions by 2050. Support for net zero holds up among swing voters, despite increasing criticism from some commentators and politicians. This broad support is the result of a progressive growth in concern about climate change, which reached a high point in 2019. Some polls at that time found that 85% of the public were concerned about climate change, and although this high watermark was unlikely to have been sustainable in the longer term, the salience of climate change as an issue, the willingness of people to play a fair role in the transition, and support for net zero have withstood COVID-19 and a prolonged cost-of-living crisis.

This support found in the UK is broadly consistent with the findings of international surveys. The UN Development Programme's *Peoples' Climate Vote* survey published in June 2024 shows consistently high levels of support around the world for governments to do more to address climate change (UNDP, 2024). A recent study by Potential Energy of 60,000 people in 23 countries found significant support for immediate government action on climate change in every country surveyed, with 77% agreeing that "It is essential that our government does whatever it takes to limit the effects of climate change" (Potential Energy, 2023). (The US was the outlier, coming last in terms of public support for a wide range of climate policies while topping the table in terms of polarisation.) A similar study published in *Nature* in February 2024 of 130,000 people across 125 countries found 89% wanted greater political action on climate change; 86% thought that people in their country should try to fight global warming and 69% expressed a willingness to contribute 1% of their personal income towards tackling climate change (Andre et al., 2024). This pattern was not restricted to G7 nations, with countries like India and Brazil reporting similar results.

There are high levels of public support for climate action but this can decline when it comes to specific policies, especially where these have personal cost implications or impact on people's existing habits or lifestyles. This is not unusual – voters may will the ends but not the means and expect their leaders to resolve the trade-offs. This makes individual measures, particularly if badly prepared, communicated or perceived as unfair, fertile ground for political entrepreneurs and opportunists.

The UK has so far avoided the level of polarisation on climate change seen in the US and Australia, but voters have concerns about consumer-facing climate policies, especially around cost and fairness. The most important questions are no longer whether people support climate action, but how to navigate issues of cost, fairness and convenience. There is support for spending more on climate change but it is significantly influenced by party affiliation, with 58% of 2019 Labour voters and 39% of 2019 Conservative voters agreeing this is needed (Money Talks Research, 2023). Voters on the right, while sharing many of the priorities of other groups in relation to protecting nature or valuing energy security, are more likely to support delays to near-term targets.

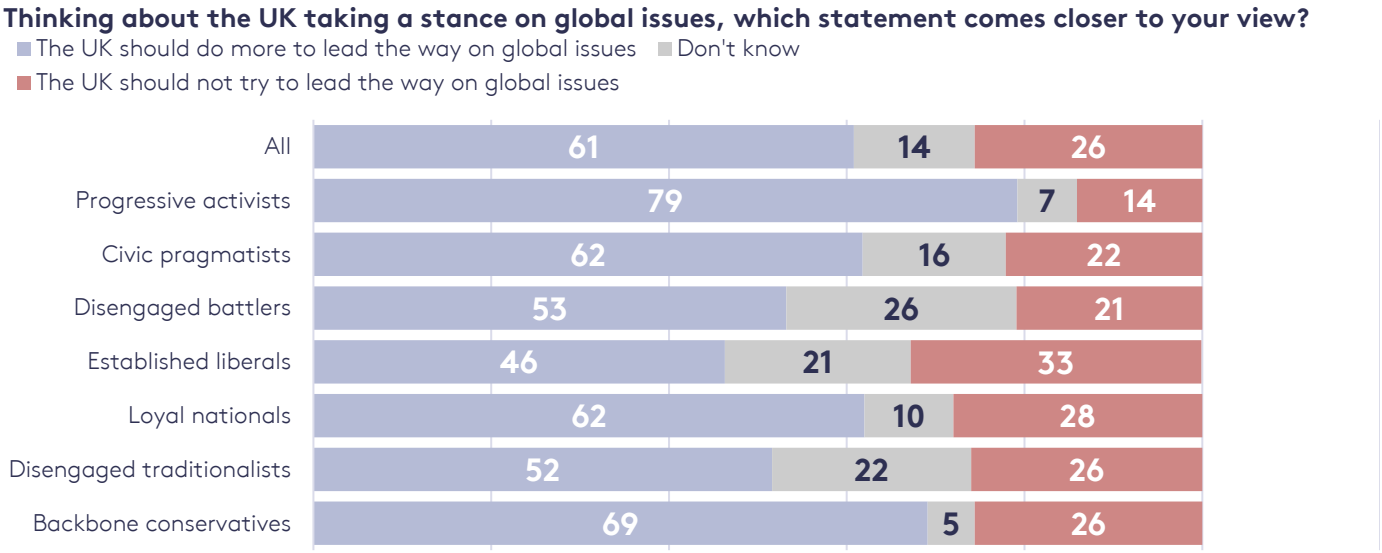
This matters for policy and political choices. Centre and centre-right voters are important to both of the UK's main political parties. And while their concerns relate primarily to domestic measures, they are also relevant to international climate action because it will be hard to maintain support for international action without there being support for domestic action. And if the UK is to improve its offer to developing countries, it will not only need to make better use of the resources it has, but also increase the finance it provides and consider new means of raising revenue – which will be harder to achieve or sustain without public support.

Drilling down into British public attitudes to climate action

In terms of public attitudes in the UK to international climate action, a number of elements in the recent research by More in Common merit attention.[10]

First, the public see climate-related action at home and abroad as a potential source of national pride. There is strong public support for the UK doing so in cooperation with other countries and with the UK playing a leading role (see Figure 3.1).

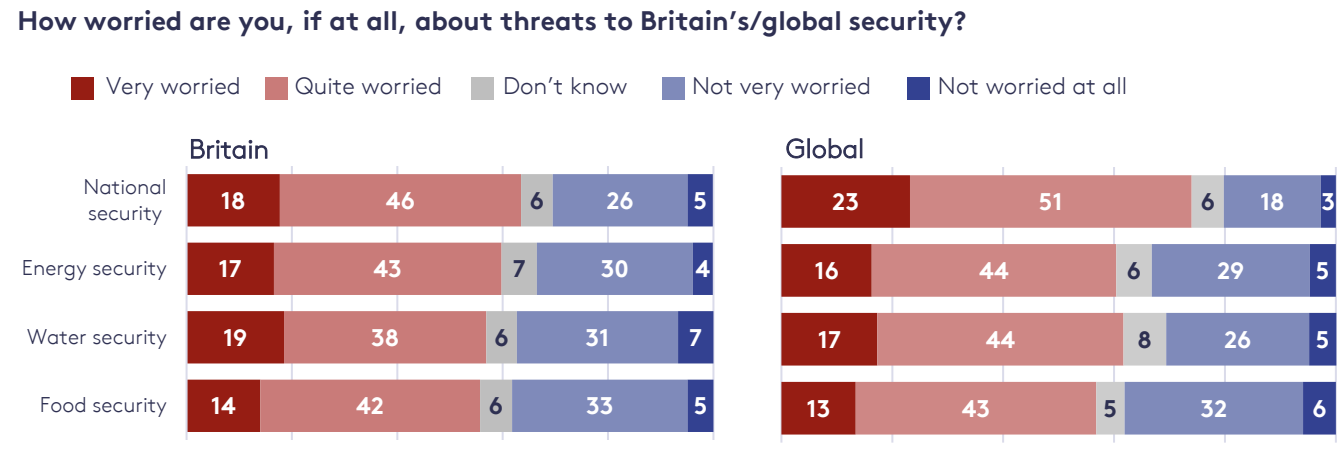
Figure 3.1. Public's expectation for British leadership on the world stage



Source: Rajah and Burns (2024)

Second, the public are concerned about the national and international security context and take a broad view of the security risks facing the UK (see Figure 3.2). While the public do not generally respond to threat-based reasons for taking action on climate based on second-round effects – such as the risk of increased migration, conflict or health insecurity – they do have an intrinsic understanding of the geopolitical aspects of climate and the broad and interlinked nature of climate and national security threats.

Figure 3.2. Public's view on tackling climate change and the UK's national security



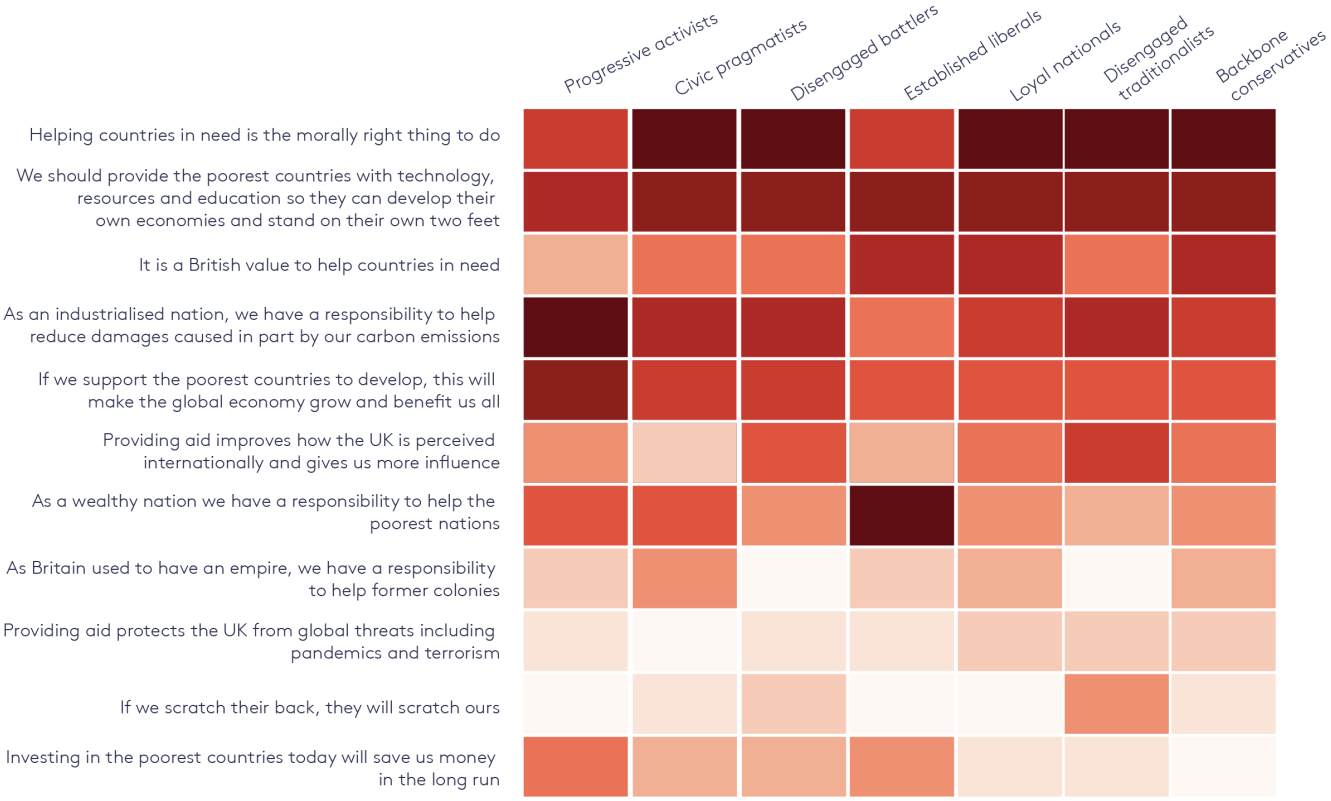
Source: Rajah and Burns (2024)

[10] This section, including the graphics, draws further on Rajah and Burns (2024), whose research for More in Common is informed by polling of more than 12,000 people in the UK and focus group conversations with more than 120 people.

Third, the most powerful argument for providing overseas aid with all sections of the public is a moral rather than a utilitarian argument. The most persuasive arguments about the *terms* on which the UK should engage with other countries relate to reciprocity (both sides need to get something out of the relationship); and self-sufficiency (the need to build capacity so partners can stand on their own) (see Figure 3.3). While most of the public prefer to maintain aid spending rather than increase it, they also significantly overestimate how much is spent. There are also high levels of public support for the costs of climate action being met from revenue-generating measures based on emissions.

Figure 3.3. Public's view on arguments for the UK investing in overseas aid

Below are some arguments in favour of the UK spending public money on foreign aid. How convincing do you find the following arguments?
Colour indicates rank of net support (% convincing minus % unconvincing)



Source: Rajah and Burns (2024)

The research also shows that as far as climate change is concerned, there is broad-based public recognition that the UK has a responsibility to support less developed countries to reduce emissions and adapt to climate change.

Fourth, the public's main priorities for spending on climate change action at home and overseas are broadly similar, with spending on technology and nature ranking highest (see Figures 3.4a and b).

Figure 3.4a. Public's view of priorities for spending on climate change within the UK*

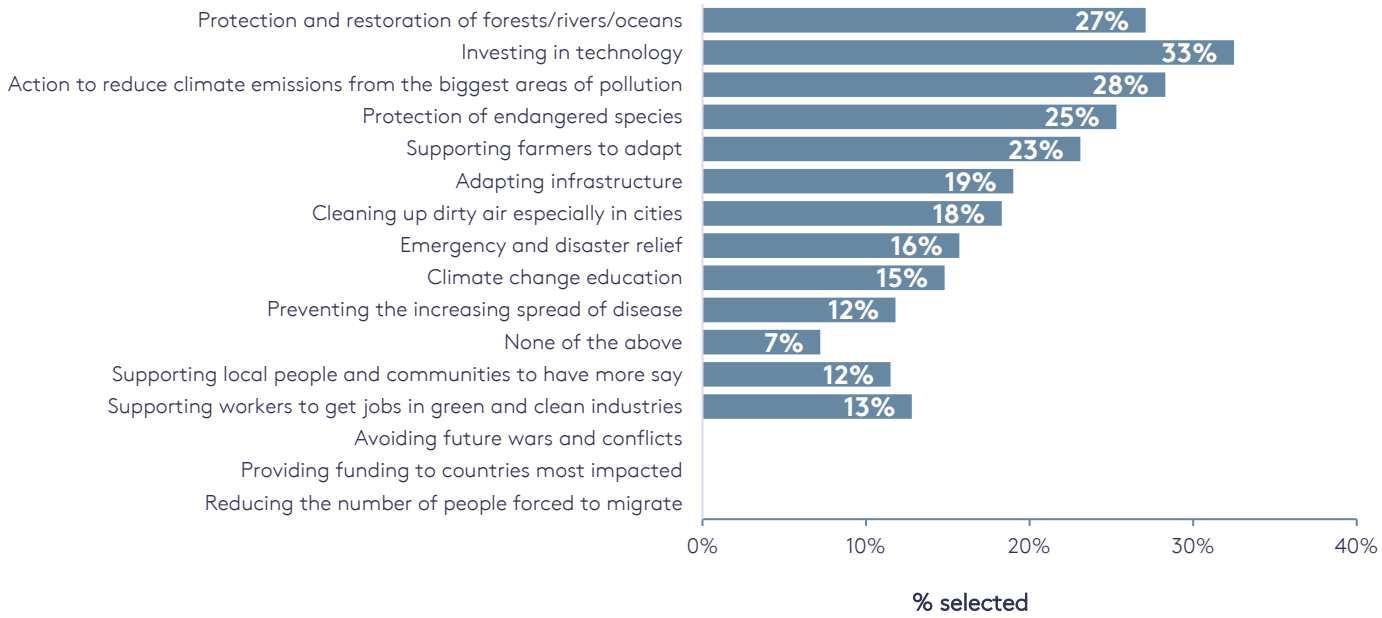
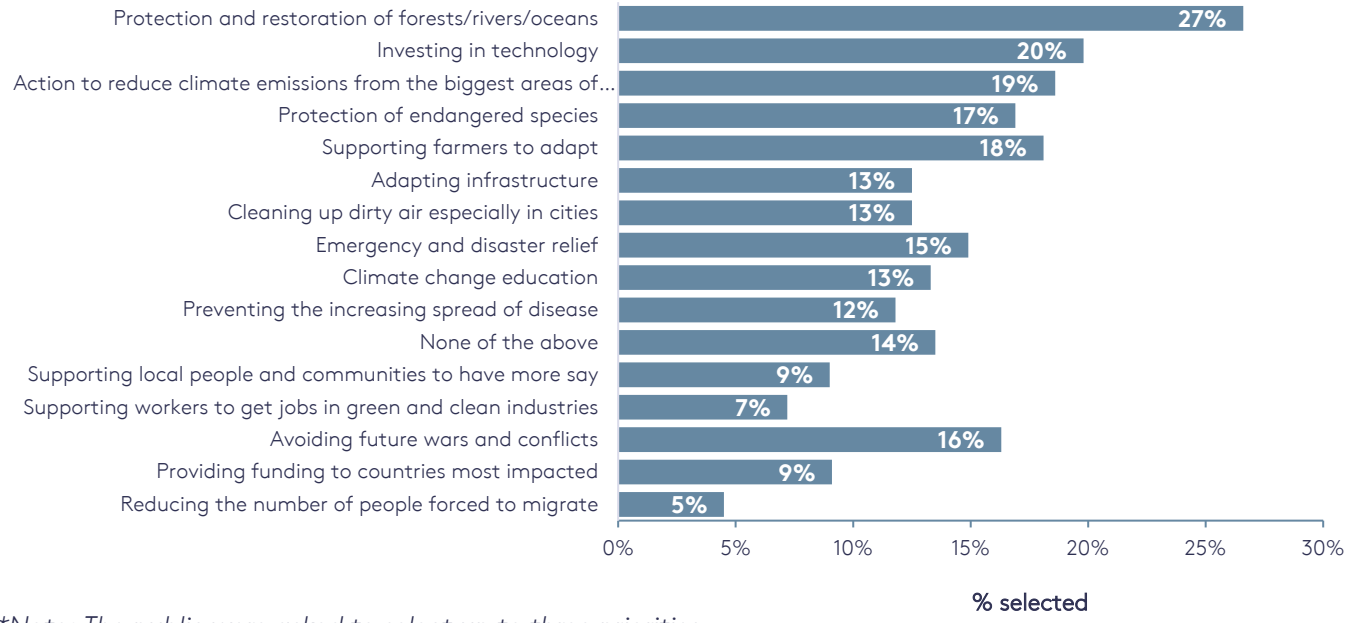


Figure 3.4b. Public's view of priorities for spending on climate change outside the UK*



**Note: The public were asked to select up to three priorities.*
Source: Rajah and Burns (2024)

The prospect of a 'green backlash' is the subject of much commentary and a common fear among some decision-makers, but to date there is little evidence of this happening in most countries. Although nationalist-populist parties in Europe tend to be climate change sceptics, immigration and anti-incumbency rather than a popular green backlash have been the main motivating factors for their strong performance in recent European Parliamentary elections. In the UK, the previous government's caution on climate change appears to have cost, not gained, votes in the recent General Election.

This tendency to overestimate hesitancy over climate action is also reflected in international studies. The study in *Nature* cited above (Andre et al., 2024) found that people systematically underestimate the willingness of their fellow citizens to act: actual support for climate policies is higher than people perceive it to be. This can provide misleading signals to politicians and decision-makers about voters' views, and can become a self-fulfilling prophecy: if the belief that others do not care takes hold, a rise in fatalism is the likely consequence.

Trends in public opinion provide indications for how opinion may evolve. While the public are primarily focused on the cost of living, the environment has remained a top-five concern for voters throughout the COVID-19 pandemic, Russia's invasion of Ukraine and rising inflation and interest rates, and support for the UK's long-term net zero targets has not wavered. Climate concern has become a core worry for voters and is unlikely to dissipate. With the proportion of the public who believe that we are already feeling the effects of climate change steadily rising (and now at around 72% [Climate Barometer, 2023]), the risk that climate change will drop off the public's radar is minimal.

As attention focuses more on the conditions under which consumer-facing climate policies are rolled out, three broad issues may influence public opinion:

- **The costs of net zero.** The public blame government, the energy system and conflict in Ukraine for high bills, with green policies viewed as least responsible. There is a widespread public view that the impacts of climate change will be costly and damaging, and that it would cost too much not to tackle climate change now (Climate Barometer, 2023). But the UK Government's public attitude tracker shows that 69% of people believe that the transition will increase their living expenses (DESNZ, 2023), while other polling shows a majority think the transition will be expensive for the country as a whole (Climate Barometer, 2024). When asked to select from a number of statements, 44% in the Money Talks Research in 2023 chose *'Climate change funding is important. It may be difficult in the short term but it is a requirement and we definitely need to do it in the long term'*, while 26% chose *'Climate change funding is an opportunity and a good investment in our future'* (Money Talks Research, 2023). This indicates that the public are not yet persuaded that the transition represents an economic opportunity. Where costs and benefits fall and how they are addressed will be important to maintaining support.
- **Polarisation.** The UK's broad political consensus on climate change of the last 30 years has provided a stable basis for regulation, governance and investment. Research confirms that the public wants and expects political leadership on this matter. The recent General Election results show that there is little political return from scepticism on climate. But public opinion, particularly on the right, cannot be taken for granted and the trajectory will determine whether climate becomes a wedge issue in UK politics.
- **Worsening climate impacts.** As climate impacts worsen, the connection that people in the UK feel to climate change will change. How it does will depend on a range of factors, including how policymakers communicate the risks of a changing climate; the types of changes the public are asked to make in their lives; and where costs and risks are perceived to fall. A shared experience of climate impacts could strengthen the public's link with people in other countries, and their sense that climate change is a global problem in which the UK must play its part in addressing; or it could undermine it as voters resent money that could be used at home going elsewhere. Research by More in Common suggests that the former is more likely to be the case – the public see the need for action abroad in the face of the same impacts they see at home, such as flooding.

Overall, there is enduring public support for action on climate change in the UK and internationally. The UK public have a broad conception of and concern about international security issues, including climate and energy security. They know there will be greater risks in failing to address climate change than in doing so but have legitimate concerns about where those costs will fall. They see a fundamental moral case for supporting other countries but have concerns about the effectiveness of spending overseas, and prioritise support that leads to self-sufficiency. They see climate change as an issue on which the UK can and should show international leadership, working in partnership with others. In short, the public appear to have a clear-sighted and balanced view about the need to address climate change at home and to support others in doing so.

3.5. Domestic and international policy coherence

The UK's international influence will stem from the effectiveness and ambition of the policies it pursues at home; and coherence between what it does at home and abroad. But as advanced economies accelerate action domestically, they are paying insufficient attention to the implications for the rest of the world. This has been the case with industrial policies such as the Inflation Reduction Act in the US,

and with policies such as the EU's (and now UK's) carbon border adjustment mechanism and regulations such as the Corporate Sustainability Reporting Directive, Corporate Sustainability Due Diligence Directive and Regulation on Deforestation-free products. It is inevitable that such measures privilege domestic interests. But greater consideration of the rest of the world could lead to measures being better designed, and reduce some of the hostility to the spillover effects.

The UK should promote abroad measures it takes at home, and take the international context into account in its domestic climate-related policies, including the interests of and impacts on EMDCs.

On the former, the UK may introduce a number of relevant measures in the coming years which it should promote internationally:

- As the UK makes transition plans aligned with 1.5°C mandatory for major businesses, it should promote a similar approach through the G7, G20 and standard-setting bodies. Done well, transition plans can help EMDCs to mobilise finance, including behind NDCs, and support the resilience of the financial system.
- If the UK makes nature-related financial disclosure mandatory at home, it should encourage others to do so.
- If the UK requires businesses to have nature impact and remediation plans, it should promote these in international fora.
- If the UK regulates the voluntary carbon market, it should seek to agree a common set of rules or principles internationally, e.g. through the OECD. The UK may regulate the voluntary carbon market in the near future in order to help restore confidence in the market and scale it up. The US has introduced guidelines for the voluntary market and other jurisdictions are likely to follow. It will be important to ensure that as regulations develop they are compatible.

In parallel, the UK should consider the scope for domestic measures to generate revenue for international climate action. Further climate-related policies, subsidies, regulations and levies are likely in the coming years and many, particularly in traded sectors, are likely to have an international dimension. In its domestic measures, the UK should consistently take the external dimension into account, including considering whether a proportion of funds raised through domestic climate-related measures should contribute to international climate finance. It should become the norm that a share of proceeds from these measures is allocated to international climate finance, and accounted as such in climate finance programmes (in order to address concerns about whether such finance is additional). Finance ministries tend to be sceptical about hypothecation but without greater willingness to take such measures, the UK and other donors will be unlikely to meet their reasonable share of the investments required to address climate change, and resentment from those EMDCs that cannot readily access other finance, e.g. private finance or near commercial loans from development banks, may grow.

As an immediate priority, the UK should commit to use revenues from its CBAM to support climate and nature programmes in EMDCs. As the introduction of the UK's border measures approaches, it will come under more scrutiny. The UK will be expected to show what it is doing to help exporters in EMDCs decarbonise in order to avoid border taxation. Devoting border measure receipts to transition programmes would show the UK is responding to concerns among EMDCs and provide reliable if modest funding – about £200m per year according to assessments for the measures as currently constructed (UK Government, 2024g), potentially more if they are extended. Research by More in Common shows this would have broad-based public support (Rajah and Burns, 2024). As importantly, it would establish a precedent and encourage others who introduce them to do likewise. The EU's CBAM may raise €1.5–2bn per year when fully implemented, potentially more when it is extended. Other countries are likely to introduce border adjustment measures in time.

If the UK regulates the voluntary carbon market, it should ensure this increases climate finance for EMDCs. There is a risk that as the UK and other advanced economies tighten rules on carbon markets, domestic offsets will be seen as safer and so funding for EMDCs reduces further. In regulating the domestic market, the UK should include provision for 10% of proceeds to be used to fund climate and nature programmes

through approved providers, including UN Funds. It is unclear how large a regulated voluntary carbon credit market would be, but a share of proceeds could be a significant and reliable source of climate finance.

3.6. Financing climate action abroad

Public finance is important in addressing climate change, whether in derisking private finance or investing in essential measures that do not attract private finance. The UK has committed to providing £11.6bn of international climate finance between 2021 and 2026 within a wider ODA budget of £15.4 bn in 2023 or 0.58% of GNI (the UK's legislated commitment is 0.7%). Stripping out £4.3bn spent on refugees, the figure for overseas spending in 2023 was around 0.4% of GNI. The new Labour Government said when in Opposition that it would return to 0.7% when economic conditions allow.

A shrinking ODA budget has led to trade-offs and tensions between climate and other development programmes, although in practice there is significant overlap between objectives; and many of the challenges that climate finance programmes face are familiar to and can learn from development practice.

In 2023, the UK made changes to its definitions of climate finance, effectively reallocating £450m towards meeting its climate finance target (Gabatiss, 2023). The changes may have brought the UK into line with the practice of other donors but the timing gave the impression that the Government was changing its methodology to meet a target that reductions in ODA were making unattainable.

The UK's first priority for its international climate and nature finance should be to deliver on its commitments. There are understandable concerns, shared by the UK's Independent Commission for Aid Impact, about the UK's ability to meet its commitments. It is important to the country's international credibility that it delivers on the targets it has set.

The UK's approach to multilateral institutions – namely to increase their lending by injecting more capital and changing how they operate – applies also at home. Without an increase in real overseas development spending, there are severe limits to the UK's ability to increase climate action to meet the growing demands of the transition, deal with climate impacts and address the UK's geopolitical interests.

The Government should in the next Spending Review put development finance spent overseas on a pathway towards its legislated 0.7% of GNI commitment. If the Government is not willing to set out a path to meeting its legislated commitment, it should nevertheless set a path to increase its development finance, for example by removing domestic refugee support costs from the ODA budget while maintaining overall spending at the current levels.

The UK should significantly increase the use of guarantees to support climate and nature programmes in EMDCs. The country has increased the use of guarantees in its climate and development programmes over the last five years. These offer one of the most immediate means for donors and MDBs to scale up support to climate investments, particularly in middle-income countries, without increasing their use of grant finance, which will increasingly be needed for programmes that are not revenue-generating (i.e. for adaptation, nature and loss and damage).

The use of guarantees is constrained by the risk the Foreign, Commonwealth and Development Office (FCDO), under the Treasury's direction, is willing to carry. A significant loan guarantee for Ukraine has effectively exhausted the UK's ability to offer further guarantees. The various routes to address this range from taking the Ukraine guarantee off the FCDO's books, to expanding the agreed risk framework, to consolidating government guarantees and holding them on the public balance sheet. A fivefold increase in the UK's guarantee capacity, which removing the Ukraine guarantee would enable, would make a significant difference to the UK's ability to support MDB lending, including leveraging private finance, debt-for-climate swaps and other derisking tools. It could also enable British International Investment to provide more guarantees to instruments focused on the private sector.

The UK should progressively move concessional climate finance towards adaptation, loss and damage and nature over the next decade. Of the UK's climate finance, 55–60% is devoted to reducing emissions. As MDBs and DFIs scale up their lending and more transition projects in EMDCs become investible, a greater proportion of concessional UK climate finance should be directed to those countries and objectives that do not have access to alternative finance, in particular adaptation, nature and loss and

damage in lower-income countries. This cannot be a lurch – mitigation needs are too great and markets are still developing; but the UK should set out the direction of travel.

The UK should rebalance towards multilateral channels in its climate and nature finance. In 2020, the Government said that bilateral aid would be the default, and set an ambition to reduce multilateral aid to 25%. The majority of UK funding is currently bilateral, although this target has been met only in 2022. The scale of the climate challenge and the time available mean the UK should rebalance towards multilateral routes that are generally better able to crowd-in other finance and provide policy support to EMDCs. This would also strengthen the UK's hand in arguing for reforms in how MDBs, in particular the World Bank, operate: for example, in developing a broader range of tools beyond sovereign lending.

While support to multilateral organisations is not perceived to provide the national profile or influence of bilateral lending, the UK public actually supports providing aid through multilateral rather than bilateral channels (Rajah and Burns, 2024). Multilateral organisations may also be a more effective strategic response to declining support for the international order. The World Bank and other MDBs have higher levels of transparency and accountability, and lower interest rates than those provided by other countries such as China and the Gulf states.

All UK development programmes should be consistent with the Paris Agreement and contribute to the country's nature objectives on a comply or explain basis. As climate impacts worsen, it is inevitable that development programmes will be affected by and respond to climate change. The UK should also ensure its programmes are 'nature-positive' and set out what this means in practice: for example, it could extend its Biodiversity Net Gain requirements to export finance and relevant external programmes (such as those that involve construction or land-use change) on a comply or explain basis.

The UK should increase its development and climate programmes devoted to food and water security. The impact of climate change on food and water systems will be a growing issue for all countries, in particular the most vulnerable; and a growing feature of relations between countries. These issues may be underweighted in national development priorities. This would be consistent with a progressive shift of funding towards resilience programmes.

The UK should before COP29 set out its plans for the next five years of international climate investment. This would clearly signal the UK's intention to play a leading international role on climate change and strengthen its position going into COP29.

These elements could enable the next climate finance programme to better reconcile climate and development, emission reduction and nature objectives and enable the UK to tell a clearer story about the purpose of its international climate investments.

The main elements of the UK's next climate finance package could be to:

- Rebalance towards multilateral funding channels and focus bilateral funding where it offers the strongest comparative advantage to MDBs. It will be important to leverage greater support to MDBs for necessary policy reforms.
- Significantly scale up the use of guarantees, particularly to support emission reduction programmes.
- Use grant finance to enable and leverage other investments wherever possible.
- Progressively move the UK's most concessional funding to adaptation, nature and loss and damage, which are less likely to receive private financing.
- Increase climate grant finance while aligning with OECD rules and targeting grant resources for greatest impact. Aligning with OECD rules will increase the proportion of funding that counts as climate finance but the UK's credibility will suffer if the next climate finance programme does not represent a substantive increase on a comparable basis. The UK should commit to not changing accounting during the term of the next climate finance programme.
- Include a share of proceeds (e.g. from CBAMs or the voluntary offset market) in climate financing, clearly accounting for such revenue streams to ensure that they are additional.

- Make the next climate finance programme a proportion of total ODA spend, rather than a headline figure.
- Consider a rebrand of International Climate Finance (ICF), the UK's ODA specifically dedicated to supporting emissions reduction and responding to the causes and impacts of climate change in developing countries. ICF is well known in the climate and finance communities but relatively little attention has been given to explaining its objectives or how it serves UK interests to wider audiences.

The UK should review its climate and development finance tools to maximise their comparative advantage, ensure they are working coherently with each other and the multilateral development system and address any gaps. The UK's main international financing tools are its ODA (including climate finance) delivered primarily but not exclusively by the FCDO; British International Investment (BII), which invests in the private sector in developing countries; and UK Export Finance (UKEF), its export credit agency.

The investment and lending capacity of BII and UKEF should be increased, as both have capacity to increase their activity at low and temporary cost, with the uplift enabling greater support for commercial investment in decarbonisation projects in emerging markets and middle-income countries. BII should be encouraged to use an uplift to increase early-stage capital to originate projects that can be attractive to private sector investors seeking to decarbonise their portfolios, and to step up partnerships with asset managers and UK pension funds to mobilise capital at scale, particularly to accelerate the transition in more mature emerging markets.

The UK should take a mission-based approach to its international climate investments to better coordinate and mobilise all the tools available. This would involve setting clear missions for its international climate investments on a sectoral basis – for example, on the energy transition or food security – and on a regional basis, while respecting the independence of each organisation. It could also enable the UK to manage better the different elements of its offer to respond to the priorities of partners in EMDCs.

Mission boards should provide access to a small fund of concessional finance for the UK's financing instruments, including UKEF and BII, to leverage private sector investment. A small fund could be created with the UK's CBAM receipts to enable investments by UKEF, BII or others: for example, through targeted technical assistance. This could prioritise those investments that would both increase industrial capacity in EMDCs and diversify UK supply chains.

The requirement for projects supported by UKEF to contain 20% UK content should be dropped. Tying UKEF support to UK content is generally counter-productive. Given the UK's limited green economy supply chains, this tied requirement reduces the ability of UKEF to compete with other export credit agencies that offer untied support, and discourages third countries from investing in UK supply chains.

3.7. Governance

While many countries recognise the growing role of climate change in international relations, few yet organise or act accordingly. Assessments of geopolitical trends address the growing importance of climate change and its contribution to other risks such as conflict and a growing number of studies are addressing the geopolitics of the energy transition. But most countries treat climate change as distinct from the traditional business of international relations and are not yet consistently addressing the interaction between the competitive transition to a net zero economy, the impacts of climate change and relations between states; identifying and acting on the risks, opportunities and trade-offs; or organising their administrations and actions accordingly. National and international financial authorities have generally moved more consistently and systematically than foreign policy practitioners to understand the risks associated with climate change.

Over the last 20 years, the UK has built and dismantled climate and nature expertise according to the preferences of the government of the day. This is not a serious approach to a significant global challenge. The UK will need to put in place governance and capabilities able to integrate the levers of government behind a coherent strategy and bring long-term consistency to the UK's approach.

The National Security Council (NSC) should commission an annual international climate, nature and energy security assessment, and on this basis set the UK's annual strategy. A regular assessment

would encourage the foreign policy, development and national security communities to better understand the complex and interconnected issues, and link these to domestic priorities and choices. This should include an assessment of the UK's transition dependencies, including but not only in critical materials, to inform its international priorities and programmes. That assessment should draw on expertise from outside government, including the Climate Change Committee. A version should be shared with the relevant Parliamentary committees.

The UK should establish a standing sub-committee of the NSC to direct the country's international climate, energy, nature and transition materials policies. The sub-committee should have a clear mandate to advise on the international implications of the UK's domestic climate-related policies and vice versa.

Government climate and nature analysis and assessment capabilities should be strengthened, either as a standalone team or within an international economic function. A small team would help the Government analyse, assess, advise and coordinate. It would not be sufficient to increase resources in existing structures as these would always be at risk of being redeployed to tasks that are more apparently urgent.

The UK should expand the role of the Climate Change Committee to monitor and advise on the Government's international climate, energy and nature policies. The CCC provides essential advice to government on the latter's domestic targets, policies and programmes but advises only occasionally on the Government's international policies, e.g. its nationally determined contribution (NDC). A clear statement from the Government that it wished the CCC to do so would enable the Government to benefit further from the CCC's expertise and increase transparency over the UK's international actions. The CCC could, *inter alia*, provide advice on the assessment proposed above, and report annually on the implementation of the Government's strategy.

The UK should establish an international climate, nature and transition advisory group to provide advice to the NSC and proposed NSC sub-committee. The Government should, as it did during its COP26 Presidency, draw on external expertise, and in sharing its thinking, extend its influence. Any body should include expertise from academia, science, economic and international relations and civil society.

The UK should increase its international capability by appointing envoys covering climate change, nature and sustainable finance. Ministerial responsibilities to Parliament and their broad portfolios limit their ability to prioritise international engagement. Senior officials similarly have wide-ranging responsibilities. The UK Government, like many other governments, has previously had an international climate envoy. Mobilising finance for the transition, climate impacts and nature and reforming the international financial system will require significant international coordination in the coming years.

Whether these roles are separate or combined, and whether they report to departments or the Prime Minister, is less important than the credibility of individuals.

The UK should ensure there is senior expertise on climate change at the centre of government. The Prime Minister needs direct access to senior expertise, and decision-making at the centre of government needs to take climate change properly into account. Number 10 should have a senior climate adviser covering domestic and international issues.

The UK should consider the scope for greater efficiency and impact by bringing together climate and nature teams in government. Pressures to reduce headcount are likely to be a feature of government in the coming years. The UK should consider whether further integration of those working on climate and nature issues could bring efficiencies while increasing impact. This could include international climate teams in the FCDO and the Department for Energy Security and Net Zero (DESNZ) (a joint energy unit exists already); and international nature teams in the FCDO, DESNZ and the Department for Environment, Food and Rural Affairs (Defra) (a joint Forests unit was established in 2022).

Part 4: Conclusions and recommendations

The contours of a world transformed by the transition to a net zero economy and the impacts of climate change are taking shape. There are positive possibilities to that new world and significant risks, the balance of which will be determined in good part by the nature of the journey to get there.

The coming decade could see growing competition between major powers to dominate the green economy leading to protectionist industrial policies, trade restrictions and the fragmentation of supply chains that slow down the transition, raise costs and exclude some countries and groups. Competition within and between states for land, water and food could increase poverty, violence and forced migration. Disruptive energy transitions with spikes and shocks may hit the poorest hardest, with change coming faster than expected, destabilising under-prepared oil and gas producers. Climate change costs and impacts may dominate politics within countries and relations between them, undermining support for climate action and spilling out across the wide range of issues that govern relations between states. Some countries will be courted or exploited for their land, water, food or materials while others may be marginalised in the new economy. A world of disrupted societies could be a boon for authoritarians and a poor nursery for democracy and human rights. For Western countries, these compounding failures would further undermine relations with emerging markets and developing countries (EMDCs), accelerating the decay of multilateral organisations and the decline of the rules-based international order.

The risks are real, but it is not inevitable that they materialise. It is possible to accelerate the transition, minimise the unavoidable impacts and increase the chances that climate change is a greater force for cooperation than for confrontation.

In recent years, the world has been hit by the worst pandemic in a century. It has faced the most serious land war on the European continent since the end of WWII. Conflict has flared up in the Middle East. US–China relations have deteriorated and nationalist-populists have gained ground in Europe. But in that time costs of key technologies have continued to tumble faster and further than predicted. It has become clearer with each passing year that more of the global economy will be electrified than thought; and more of that power will come from renewables. Estimates of the costs of addressing climate change have fallen; and of failing to do so risen. The world's three largest economies are competing to decarbonise as it becomes clearer that a clean energy system will for most countries be more resilient. China has committed to a dual carbon target and has delivered its 2030 renewables targets six years early. In large part due to China's actions, some parts of the transition – solar, batteries and EVs – are on a pathway broadly consistent with 1.5°C of temperature rise.

The EU has passed a major package of legislation under the Green New Deal; European countries have increased clean investment significantly; and the European Commission has proposed a target of 90% emissions reduction by 2040 compared with 1990. The US has started to implement the Inflation Reduction and the Bipartisan Infrastructure Acts, together the most significant package of climate measures in history. And while India's emissions may within the decade surpass those of the US, it is determined to join the race to decarbonise. The UK has made decarbonising the grid by 2030 one of its five major national missions.

The momentum towards a net zero global economy is now all but unstoppable, even if the pace and nature of the journey are not clear. Many countries, including the most powerful, have a shared understanding of the need to transition. All accept the science and understand what a failure to respond means for their economies and societies. They agree, at least in principle, that those most affected by climate change must receive the most support. They recognise, to varying degrees, that international cooperation is important.

The elements therefore exist for a set of competitive and cooperative policies and relationships, which, if well managed, can encourage rather than undermine the action necessary to address climate change; support rather than marginalise the most vulnerable; and contribute to a functioning international system rather than fragmenting and weakening it. For this to happen, all countries and particularly the most powerful will need to treat climate change as an issue central to the wellbeing of people around the world, to relations between states and the future of the international order.

Summary of recommendations

Below is a summary of the recommendations from throughout this report. They are not intended to be exhaustive but to be necessary, feasible (politically, economically and institutionally) and meaningful in terms of impact.

1. The UK's international role

- For the UK, the demands of strategy and justice are broadly aligned as far as climate change is concerned.
- In its declaratory policy, the UK should make clear that it understands measures to address climate change in the broader context of sustainable development.
- The UK should also make clear that its climate policies are guided by who is contributing and has contributed most to the problem; who is benefiting and has benefited most from activities that cause climate change; and who has the greatest ability to address it.
- The UK should make the strengthening and reform of multilateral institutions a cornerstone of its international climate policies.
- The UK should convene a representative panel to recommend changes to multilateral organisations and governance.
- In the immediate term, the UK should seek to ensure that all international organisations play their full part in addressing climate change.
- The UK can help address the governance gap on water and food security by convening, in partnership with others, a summit to address issues of food security and water access and security, funding and markets.
- The UK should seek to host a nature summit in the course of the next Parliament to maintain international momentum.
- The UK should join the Beyond Oil and Gas Alliance.
- By 2035 the UK will need to reduce greenhouse gas emissions by around 78% compared with 1990 levels to meet its Sixth Carbon Budget and it should set its 2035 NDC to around this level.

2. The UK's international relationships

- The UK's climate and energy relations with the EU and European countries will be its most important over the next decade.
- The UK and EU should seek a comprehensive energy and climate agreement to promote consistent regulatory approaches, increase investment in technologies and infrastructure of common interest, and deepen international cooperation.
- The UK would benefit from working with the US – and with European countries and the EU – to diversify supply chains and access to critical minerals, including through the G7.
- The UK should work with others to diversify supply in the technologies and materials of the transition where that is feasible.
- The UK, with allies and partners, should compete with China in third countries by making a stronger positive offer rather than trying to constrain or counter China's offer in green technologies, as that is unlikely to be successful.
- The UK has a role, working with its partners, in ensuring that competition with China is managed as predictably as possible, and is balanced by areas of cooperation.
- The UK can apply constructive pressure to the next US Administration by setting out what steps are needed to better support sustainable development in EMDCs.

- The UK is underweighted on India given its growth prospects and role in the transition: it may not have many of the technologies or materials India needs, but its expertise in grids and finance could be the basis of a stronger offer.
- The UK should support countries neighbouring Russia in their transition, monitor and expose Russia's disinformation operations and closely monitor Russia's approach to international climate negotiations.
- The UK has an interest in supporting countries in the Middle East to diversify their economies while not creating new dependencies; and in cooperating where possible in Africa and South Asia while remaining clear-eyed where interests do and do not align.
- The UK's most concessional finance will need to be progressively reweighted to Africa over the next decade, as climate impacts on Africa and the continent's share of emissions grow.
- The UK should bring the Just Energy Transition Partnerships back to leader level following elections in many participating countries in order to assess progress and provide direction.
- The UK should work to enable the Pacific region to continue playing its influential role in international climate negotiations in the face of mounting geopolitical pressures.
- The UK should continue to support Caribbean countries in encouraging international organisations and programmes to take vulnerability into account while working for changes to the way OECD rules account for vulnerability.
- The UK should give particular attention in its diplomacy and cooperation programmes to building the capability of regional organisations to manage the transition and deal with climate impacts.

3. Trade and investment

- The UK should work with European, G7 and other close partners to develop a more coordinated approach to green energy and industrial policy; and with other countries to identify economic opportunities for EMDCs that promote diversity of supply.
- As a general rule, the UK's interests will be best served by remaining open to imports unless there are critical national capabilities to be protected.
- The UK should focus public support or protection on those sectors in which there are particular risks to critical national capabilities or security, rather than on mass-market products in which the UK is not competitive.
- The UK should be particularly cautious about introducing tariffs on green imports that are not related to carbon leakage or to protecting critical national capabilities.
- The UK should take a more prominent role in working to reduce and redirect fossil fuel subsidies.
- The UK should coordinate with partners on potential stockpiling of critical minerals; use UK Export Finance (UKEF) to support upstream exploration and processing; and channel public resources into research and development of alternatives.
- The UK should set out its trade policy objectives, including how UK and international trading systems can promote sustainable, inclusive and resilient growth.

4. The UK's approach to international finance issues

- The UK, working with partners in the G7 and G20, should promote coordinated domestic and international efforts to increase productive investment to drive sustainable growth.
- The UK should, before COP29, set out its position on the future size and role of the multilateral development banks (MDBs), including the World Bank; and convene relevant board members to agree a common approach to the timing and scale of a capital increase, the requirements of the MDBs and the political conditions that will be needed.

- The UK should prioritise a package of international climate investment measures in autumn 2024 that can have an immediate impact while enabling a more significant package in 2025.
- The UK's international climate finance priority in 2025 should be to putting more capital in and ensuring MDBs, in particular the World Bank, use it effectively, including to mobilise more private finance.
- As the scale of MDB lending increases, the UK and its partners will need to focus on the quality and effectiveness of spending, including on collaboration between MDBs and with development finance institutions and the private sector, and on the MDBs' approach to risk.
- The UK should set out that it is in favour of extending the role of special drawing rights (SDRs) in providing liquidity, by increasing the proportion that countries commit to recycle to 30%.
- The UK should channel part of its SDRs through the MDBs, most likely the African Development Bank, as hybrid capital that could be used for project finance rather than only fiscal support.
- The UK should start discussions with key partners about greater debt restructuring than is offered by the current international approach.
- The UK should seek the most ambitious outcome possible on a shipping emissions standard and levy in the short term; and build a coalition for the medium term to direct a share of levies to wider climate action.
- The UK should argue for 10% of proceeds from aviation offset funding to be directed to international climate programmes.
- Western governments should be open to discussions on an international levy that includes all major oil and gas producers.

5. The UK's international finance toolkit

- The UK's first priority for its international climate and nature finance should be to deliver on its commitments.
- The UK should in the next Spending Review put development finance spent overseas on a pathway towards its legislated commitment of 0.7% of GNI.
- The UK should significantly increase the use of guarantees to support climate and nature programmes in EMDCs.
- The UK should progressively move concessional climate finance towards adaptation, loss and damage and nature over the next decade.
- The UK should rebalance towards multilateral channels in its climate and nature finance.
- All UK development programmes should be consistent with the Paris Agreement and contribute to the UK's nature objectives on a comply or explain basis.
- The UK should expand its development and climate programmes devoted to food and water security.
- The UK should, before COP29, set out its plans for the next five-year international climate finance programme.
- The UK should review its climate and development finance tools to maximise their comparative advantage, ensure they are working coherently with each other and the multilateral development system and address any gaps.
- The investment and lending capacity of UKEF and British International Investment (BII) should be increased.
- The UK should take a mission-based approach to its international climate investments to better coordinate and mobilise all the tools available.

- Mission boards should provide access to a small fund of concessional finance for the UK's financing instruments, including UKEF and BII, to leverage private sector investment.
- The requirement for projects supported by UKEF to contain 20% UK content should be dropped.
- The UK should consider the scope for domestic measures to generate revenue for international climate action.
- As an immediate priority, the UK should commit to using revenues from its carbon border adjustment mechanism to support climate and nature programmes in EMDCs.
- If the UK regulates the voluntary carbon market, it should ensure this increases climate finance for EMDCs.

6. Domestic and international policy coherence

- As the UK seeks to strengthen its international standing, it should ensure that it is consistent in what it is delivering at home and advocating abroad.
- The UK should promote abroad measures it takes at home; and take the international context into account in its domestic climate-related policies, including the interests of and impacts on EMDCs.
- As the UK makes transition plans aligned with 1.5°C mandatory for major businesses, it should promote a similar approach through the G7, G20 and standard-setting bodies.
- If the UK makes nature-related financial disclosure mandatory at home, it should encourage others to do so.
- If the UK requires businesses to have nature impact and remediation plans, it should promote these in international fora.
- If the UK regulates the voluntary carbon market, it should seek to agree a common set of rules or principles internationally, e.g. through the OECD.
- The UK is right to seek to position itself as a leading player in the development and uptake of alternative proteins.
- Implementing policies on land use, agriculture and nature restoration while maintaining the support of farmers and the public would be an important contribution to the international debate on the future of agriculture.
- The primary contribution the UK can make to the development of biodiversity credits internationally is to show that its domestic scheme works.
- The UK should ask the Climate Change Committee to advise how carbon-equivalent pricing measures – and their international implications – could be addressed in relation to agriculture and land use.
- The UK should build its international offer in grid design, delivery and management and related services, technologies and supply chains, including as part of its offer to developing countries.

7. Government capabilities

- The National Security Council (NSC) should commission an annual international climate, nature and energy security assessment, and on this basis set the UK's annual strategy.
- The UK should establish a standing sub-committee of the NSC to direct the UK's international policies on climate, energy, nature and transition materials.
- Government climate and nature analysis and assessment capabilities should be strengthened, either as a standalone team or within an international economic function.
- The UK should expand the role of the Climate Change Committee to monitor and advise on the Government's international climate, energy and nature policies.

- The UK should establish an international climate, nature and transition advisory group to provide advice to the NSC and proposed NSC sub-committee.
- The UK should increase its international capability by appointing envoys covering climate change, nature and sustainable finance.
- The UK should ensure there is senior expertise on climate change at the centre of government.
- The UK should consider the scope for greater efficiency and impact by bringing together climate and nature teams in government.

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