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An agenda for UK–China climate cooperation

Why joint action can and should transcend political challenges

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Contents

Summary

— Joint UK–China action on climate change could make a vital contribution at a time when climate multilateralism is under severe strain. As the UK government reviews its approach to relations with China, this paper makes the case for deepening and institutionalizing climate cooperation, examines the complementary capabilities that the UK and China each bring to different dimensions of the climate challenge, and highlights specific areas where the two countries can focus future joint efforts. By working together on climate action, the UK and China could better advance towards their own climate goals, provide much-needed international leadership, and maintain a constructive relationship even where the wider security and geopolitical context is increasingly fractious. The commitment to continuing bilateral collaboration on climate change that was made during the visit to Beijing by the UK chancellor of the exchequer, Rachel Reeves, in January 2025 is a positive step.

— We identify four principal arguments for closer UK–China climate cooperation. First, with the expected retrenchment in US climate action under the incoming Donald Trump administration, there is a need and opportunity for countries that are committed to addressing climate change to play a more influential role internationally. Both the UK and China are serious players in this field. The UK and Chinese governments share a respect for science- and evidence-driven environmental policymaking. The two countries also have ambitious climate change mitigation goals: the UK was the first major economy to commit to net zero greenhouse gas emissions by 2050, while China has pledged to achieve 'carbon neutrality' by 2060; the latter, if realized, would constitute the most significant contribution to mitigating climate change by any country in history. China and the UK have also been actively developing comprehensive frameworks for climate change adaptation.

— Second, there are substantial synergies to be gained from closer engagement. From the UK's perspective, a key rationale for working with China is the latter's sheer size and share of global greenhouse gas emissions. China accounts for around 30 per cent of current global emissions, and is the world's largest emitter. The UK is one of the biggest emitters in cumulative terms, but today accounts for less than 1 per cent of global emissions, having managed to reduce emissions by over 50 per cent since 1990. Arguably, therefore, the biggest contribution the UK can now make to tackling climate change is not just to further cut its own emissions, but to contribute its know-how to supporting China's decarbonization efforts.

— Complementary technical capacities are an important consideration. The UK aims to obtain at least 95 per cent of its electricity from zero-carbon sources by 2030, which will require scaling up deployment across all clean technologies. China's remarkable success in deploying clean technologies at speed and at scale could offer lessons for the UK as it seeks to rapidly expand the use of renewables, electric vehicles (EVs) and other low-carbon infrastructure. China, for its part, can learn much from the UK's experience as a pioneer in counting carbon,

particularly emissions trading and the use of 'carbon budgets' in national planning. The UK's record of balancing the managed phase-out of coal with the introduction of renewables also offers lessons for China.

— A third rationale for a closer climate partnership is that the UK and China already have extensive experience of joint research and policy consultation on climate change. Although many projects have ended or lapsed since the COVID-19 pandemic and due to the impact on climate-related work of the UK's 2021 cuts to official development assistance to China, the two countries would not be starting from scratch. One past initiative that offers lessons for future engagement is the UK–China Cooperation on Climate Change Risk Assessment programme, which ran between 2013 and 2021. This programme generated research and tools for assessing and addressing climate risk which achieved high-level political impact in both countries.

— Fourth, there is the political dimension. What the government of David Cameron hailed as a 'golden era' of UK–China diplomacy a decade ago is firmly over, and bilateral tensions have increased in recent years. The Labour government under Keir Starmer is conducting an 'audit' of the relationship, which could provide an opportunity for a new and more strategic approach. The UK government will likely seek to balance areas of contention, such as security concerns and Russia's war on Ukraine, with efforts to boost the relationship in other spheres. Action on climate change is frequently cited at the highest political levels as an area of mutual interest on which the two countries can and should cooperate, irrespective of other areas of tension.

— But insulating climate engagement from politics is by no means a straightforward proposition. In the past, China has warned the US that climate cooperation cannot be separated from bilateral relations more widely, and Beijing may adopt a similar approach in its relationship with the UK. If the incoming US administration pressures the UK to take a harder line on China, this could derail UK–China climate cooperation. Some politicians, media and other prominent voices in the UK have been critical of engagement with China, and may seek to discredit any deepening of cooperation.

— If climate cooperation between the UK and China is to withstand inevitable political shocks, we argue, it needs to be institutionalized through the establishment of a formal bilateral cooperation framework. Cooperation should be grounded in well-defined, practical activities of common interest, with clear outcomes that can be tracked and evaluated. A bilateral, government-to-government agreement to cooperate on climate change should underpin this mechanism. This would provide a degree of political cover for those involved, enabling bolder and more confident engagement by UK entities and individuals with their counterparts in China, and vice versa. A formal agreement would also elevate the status of policy proposals produced by the partnership; this would be important for increasing the likelihood of their adoption and implementation in China's top-down policymaking hierarchy.

Introduction

With 2024 recently confirmed as having been the hottest year on record, the climate crisis is undeniably here.[1] And yet, despite significant technological, policy and diplomatic advances – such as the explosive growth of low-carbon technologies in China, the successful implementation of carbon pricing in the UK, and the landmark Paris Agreement in 2015, signed by nearly every country in the world – planet-warming emissions continue to rise and to accumulate in the atmosphere.

China and the UK understand the urgent need to tackle the causes of climate change, and to adapt to its effects. They share ambitious climate change mitigation goals: the UK was the first major economy to commit to net zero greenhouse gas emissions by 2050, enshrining this target into law in 2019.[2] In 2020, China pledged to achieve peak carbon emissions by 2030 and carbon neutrality by 2060; the latter, if realized, would constitute the most significant contribution to mitigating climate change by any country in history.[3] China and the UK have also been actively developing comprehensive policy frameworks for climate change adaptation, as illustrated by China's National Adaptation Strategy, launched in 2022, and by the UK's series of climate change risk assessments and national adaptation programmes.

China is recognized as an important partner for the UK in tackling global issues, especially in the post-Brexit era.[4] However, recent shocks such as the COVID-19 pandemic and Russia's 2022 invasion of Ukraine have fused with longer-term trends, such as the growth of right-wing nationalism in wealthy countries, to destabilize global politics. Part of the fallout from this has been a marked deterioration in the relationships between China and the West, especially the US and increasingly the EU. The UK–China relationship has not been unaffected by this turbulence, and much has changed since the 'golden era' of the mid-2010s (see Box 1). The new Labour government in the UK is 'auditing' every aspect of the bilateral relationship, and while details had not been released at the time of writing, the process can be expected to emphasize the dilemma between pursuing closer economic ties and maintaining a measure of diplomatic distance – the latter to manage security threats and other risks associated with China's political system and increasingly assertive regional and global agenda.

Nevertheless, climate change cooperation between China and the UK has continued over many years, albeit at varying intensities. Climate action is frequently cited at the highest political levels as an area of mutual interest on which the two countries can and should cooperate, irrespective of differences in other areas. In a 2021 Chatham House assessment of G20 countries as 'partners', 'neutral' parties or 'rivals' to the UK across six identified global goals, China was identified as a 'partner' to the UK

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1 Mooney, A., Tauschinski, J. and Bernard, S. (2025), 'World breaches 1.5C global warming target for first time in 2024', *Financial Times*, 10 January 2025, https://www.ft.com/content/fd914266-71bf-4317-9fdc-44b55acb52f6.
2 Department for Business, Energy & Industrial Strategy and The Rt Hon Chris Skidmore (2019), 'UK becomes first major economy to pass net zero emissions law', 27 June 2019, https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law.
3 Climate Action Tracker (2020), 'China going carbon neutral before 2060 would lower warming projections by around 0.2 to 0.3 degrees C', press release, 23 September 2020, https://climateactiontracker.org/press/china-carbon-neutral-before-2060-would-lower-warming-projections-by-around-2-to-3-tenths-of-a-degree.
4 O'Sullivan, O. and Maddox, B. (2024), *Three foreign policy priorities for the next UK government: A case for realistic ambition*, Research Paper, London: Royal Institute of International Affairs, https://doi.org/10.55317/9781784136062.

on climate change (alongside France, Germany, Italy, the US and the EU), making it the only non-G7 country to be categorized thus.[5] Senior Chinese officials have often approvingly cited the UK's science-driven approach to climate policy and success in reducing emissions.[6]

According to a recent UK study, 46 per cent of the British public favour working with China on climate change, while 24 per cent do not.[7] Although the UK is one of the largest emitters in cumulative terms, today it accounts for less than 1 per cent of global emissions, having reduced them by 53 per cent since 1990.[8] Arguably, therefore, the biggest contribution the UK can now make to tackling climate change is not only to further reduce its own domestic emissions but to cooperate effectively with China, which accounts for around 30 per cent of current global emissions, a greater share than any other country's.[9] Recognition of the fact that climate change cannot be tackled without China is likely to be a factor in the British public's degree of support for cooperating with China on the issue, despite other misgivings.[10] China's impressive recent progress in deploying renewable energy and electric vehicles (EVs) suggests its emissions reduction pledges are more than mere rhetoric. However, awareness of this among the UK public appears to be limited: the study cited above also showed that China is perceived as 'not pulling its weight' in addressing climate change.[11]

Arguably, the biggest contribution the UK can now make to tackling climate change is not only to further reduce its own domestic emissions but to cooperate effectively with China, which accounts for around 30 per cent of current global emissions.

Notwithstanding the need for political caution in the relationship with China, the Labour government in the UK has declared itself 'back in the business of climate leadership'[12] and, partly to this end, says that it seeks 'serious, stable and pragmatic re-engagement' with China.[13] High-level political signalling is being accompanied by calls from scientific advisory bodies in the UK and China to consider the opportunities for deeper bilateral cooperation on climate change. This is not only

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5 Niblett, R. (2021), *Global Britain, global broker: A blueprint for the UK's future international role*, Research Paper, London: Royal Institute of International Affairs, p. 50, https://www.chathamhouse.org/2021/01/global-britain-global-broker.
6 Remarks made during various meetings of the UK–China Cooperation on Climate Change Risk Assessment programme and the UK–China Climate Policy Dialogue, held under the Chatham House Rule, 2020–24.
7 More in Common (2024), *Green and Global Britain: Navigating public opinion on climate foreign policy*, London: More in Common, https://www.moreincommon.org.uk/media/ie2l0r02/green-and-global-britain-september-2024.pdf.
8 Carbon Brief (2024), 'Analysis: UK emissions in 2023 fell to lowest level since 1879', 11 March 2024, https://www.carbonbrief.org/analysis-uk-emissions-in-2023-fell-to-lowest-level-since-1879.
9 European Commission Joint Research Centre (2024), *GHG Emissions of all World Countries*, Luxembourg: Publications Office of the European Union, https://data.europa.eu/doi/10.2760/4002897.
10 More in Common (2024), *Green and Global Britain*.
11 Ibid., p. 15.
12 Department for Energy Security and Net Zero and The Rt Hon Ed Miliband MP (2024), 'UK shows international leadership in tackling climate crisis', press release, 12 November 2024, https://www.gov.uk/government/news/uk-shows-international-leadership-in-tackling-climate-crisis.
13 Foreign, Commonwealth & Development Office and The Rt Hon David Lammy MP (2024), 'Foreign Secretary visits China', press release, 18 October 2024, https://www.gov.uk/government/news/foreign-secretary-visits-china--2.

to advance each country's respective climate goals but also to provide a much-needed strengthening of multilateral efforts, currently struggling for effectiveness and credibility.[14]

That climate multilateralism urgently requires better support was underscored by the weak outcome of the COP29 climate conference, held in Azerbaijan in late 2024. The conference's concluding agreement bitterly disappointed many participating national delegations and observers, in particular failing to satisfy developing countries that the New Collective Quantified Goal (NCQG) on climate finance will provide them with adequate funding to simultaneously transition their economies and cope with the increasingly severe effects of climate change. Concerns about the failure of climate multilateralism have become all the more pressing now that the US is expected once again to withdraw from international climate diplomacy under a second Donald Trump administration.[15] China has indicated a willingness to take on a greater role in this area,[16] and a common UK–China front could be a powerful diplomatic force in climate change negotiations at a time when concerted international leadership is more lacking – and more necessary – than ever.

With the above context in mind, this research paper makes the case for increased UK–China climate cooperation, and proposes the forms such activity could fruitfully take. Specifically, the paper sets out how the UK government might develop its scientific, technical and policy cooperation with China on climate change, and identifies policy options with the potential to accelerate emissions reductions, build resilience to climate impacts and support global climate governance. The paper also identifies potential challenges to bilateral cooperation given current and anticipated political and geopolitical constraints, and suggests how such challenges might be circumvented or addressed.

Background to this paper

In 1999, Chatham House hosted the UK prime minister, Tony Blair, and China's president, Jiang Zemin, for the launch of the UK–China Forum, a bilateral dialogue initiative. The initiative covered seven themes, among them the environment. In the years since then, Chatham House has continued to convene meetings and consultations with government officials, experts, academics and private sector representatives from the UK and China for dialogue on climate change and the energy transition, as well as for joint research and diplomatic initiatives.[17]

This paper is based on a series of in-depth dialogues in 2023 and 2024 between the two expert panels that, respectively, advise the UK and Chinese governments on climate change. The series, part of a decade-long relationship mediated

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14 Forster, P. and Wang, Y. (2024), 'UK, China can set example of joint climate action', *China Daily*, 28 November 2024, https://www.chinadaily.com.cn/a/202411/28/WS6747a854a310f1265a1cff63.html.
15 In June 2017, President Trump announced that the US would withdraw from the Paris Agreement. This formally took effect in November 2020 but was reversed in February 2021 by President Biden. Trump confirmed during the 2024 US election campaign that he would once again take the US out of the Paris Agreement. His incoming administration is reportedly considering removing the US from the underlying treaty, the 1992 United Nations Framework Convention on Climate Change.
16 Rowlatt, J. (2024), 'Will China step up if Trump takes a step back on climate change?', BBC News, 22 November 2024, https://www.bbc.co.uk/news/articles/c3rx2drd8x8o.
17 See, for example, Chatham House, Chinese Academy of Social Sciences, Energy Research Institute, Jilin University and E3G (2010), *Low Carbon Development Roadmap for Jilin City*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/r0310_lowcarbon.pdf.

by Chatham House, provided a level of access to government officials and advisers unique among think-tanks, enabling the formulation in this paper of timely, relevant and granular recommendations.

The paper does not reflect the positions of the British and Chinese governments or their officials.

Box 1. UK government relations with China, 2010–25

Under the government of David Cameron, the British prime minister between 2010 and 2016, the UK pursued close relations with China in what was dubbed a 'golden era' for UK–China diplomacy. The UK was notably, in June 2015, the first G7 country to sign up to the Beijing-based Asian Infrastructure Investment Bank (AIIB).[18] In a speech to the Shanghai Stock Exchange in September of that year, the then chancellor of the exchequer, George Osborne, urged: 'Let's stick together to make Britain China's best partner in the West.'[19] China's president, Xi Jinping, also made a state visit to the UK in 2015.

UK–China relations began to cool under Cameron's successor, Theresa May (prime minister from 2016 to 2019). China was reportedly disappointed when May declined to formally endorse China's Belt and Road Initiative (BRI) during a low-key visit to Beijing in February 2018.[20]

Under Boris Johnson's government (2019–22) there was a further cooling in relations with China. Huawei, a major Chinese telecoms and technology company, was excluded from participating in the UK's 5G network.[21] China's involvement in the UK's civil nuclear sector was also in effect blocked by the introduction of a new financing model.[22] The UK was not alone in toughening its approach to engagement with China at this time, but given the previously close relationship, this was a sharper turn.

In April 2021, in an abrupt change, the UK announced that it would cut its official development assistance (ODA) to China by 95 per cent – much of this funding had previously been spent on projects focused on (or associated with) climate change and environmental protection.[23] The only projects eligible for continued funding were those related to open societies and human rights.[24]

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18 HM Treasury and The Rt Hon George Osborne (2015), 'UK ratifies articles of agreement of the Asian Infrastructure Investment Bank (AIIB)', 3 December 2015, https://www.gov.uk/government/news/uk-ratifies-articles-of-agreement-of-the-asian-infrastructure-investment-bank-aiib.
19 HM Treasury and The Rt Hon George Osborne (2015), 'Chancellor: 'Let's create a golden decade for the UK-China relationship'', 22 September 2015, https://www.gov.uk/government/speeches/chancellor-lets-create-a-golden-decade-for-the-uk-china-relationship.
20 Mitchell, T. and Kynge, J. (2018), 'Lustre of Sino-UK 'golden era' fades after May's low-key China visit', *Financial Times*, 2 February 2018, https://www.ft.com/content/f7b441c4-07f2-11e8-9650-9c0ad2d7c5b5.
21 Department for Digital, Culture, Media & Sport, National Cyber Security Centre and The Rt Hon Oliver Dowden CBE MP (2020), 'Huawei to be removed from UK 5G networks by 2027', press release, 14 July 2020, https://www.gov.uk/government/news/huawei-to-be-removed-from-uk-5g-networks-by-2027.
22 Department for Business, Energy & Industrial Strategy, The Rt Hon Greg Hands and The Rt Hon Kwasi Kwarteng (2021), 'New finance model to cut cost of new nuclear power stations', press release, 26 October 2021, https://www.gov.uk/government/news/new-finance-model-to-cut-cost-of-new-nuclear-power-stations.
23 UK Parliament (2024), 'China: Development Aid: Question for Foreign, Commonwealth and Development Office', tabled on 16 April 2024 and answered on 29 April 2024, https://questions-statements.parliament.uk/written-questions/detail/2024-04-16/21923. It should be noted that only a relatively small amount of this was spent in China, with much of it going to UK universities to fund research initiatives with Chinese partners. See International Development Sub-Committee on the Work of the Independent Commission for Aid Impact (2021), 'Oral evidence: ICAI's information note on UK's aid engagement with China, HC 716', 22 September 2021, https://committees.parliament.uk/oralevidence/2774/html.
24 Foreign, Commonwealth & Development Office and The Rt Hon Dominic Raab (2021), 'UK Official Development Assistance (ODA) allocations 2021 to 2022: written ministerial statement', 21 April 2021, https://www.gov.uk/government/speeches/uk-official-development-assistance-oda-allocations-2021-to-2022-written-ministerial-statement.

The trend of cooling relations continued under the government of Rishi Sunak (2022–24), with the prime minister declaring in his first foreign policy speech on China that 'the so-called "golden era" is over'.[25] During Sunak's premiership, a government review of security, defence, development and foreign policies described China's rise as an 'epoch-defining and systemic challenge'.[26] However, Sunak had equally admitted that the UK 'cannot simply ignore China's significance in world affairs … to global economic stability or issues like climate change'.[27]

The Labour Party won a decisive majority in the UK general election of July 2024, ending 14 years of Conservative government. Labour's election manifesto had promised 'a long-term and strategic approach' to relations with China.[28] In a phone call in August 2024, the new UK prime minister, Sir Keir Starmer, and China's president, Xi Jinping, agreed on the need for a 'stable and consistent' China–UK relationship.[29]

During a visit to China in October 2024, Foreign Secretary David Lammy emphasized that the two countries, as permanent members of the UN Security Council, have a responsibility to increase bilateral engagement and collaborate on complex challenges, including 'the global green transition'.[30] Lammy's counterpart, Wang Yi, pointed to the deep history of UK–China relations, and stated that the two countries were 'at a new starting point'.[31]

Starmer and Xi met at the G20 summit in Brazil in November 2024 – the first face-to-face meeting of a Chinese president and a British prime minister since 2018. The two leaders agreed that climate change should be high on the bilateral agenda, with both countries having an important global role to play in the clean energy transition.[32] The UK's chancellor of the exchequer, Rachel Reeves, subsequently travelled to China in January 2025, marking the resumption of the UK–China Economic and Financial Dialogue last held in 2019. As part of the dialogue, Reeves and Chinese vice-premier He Lifeng agreed to further cooperation on climate and energy.[33]

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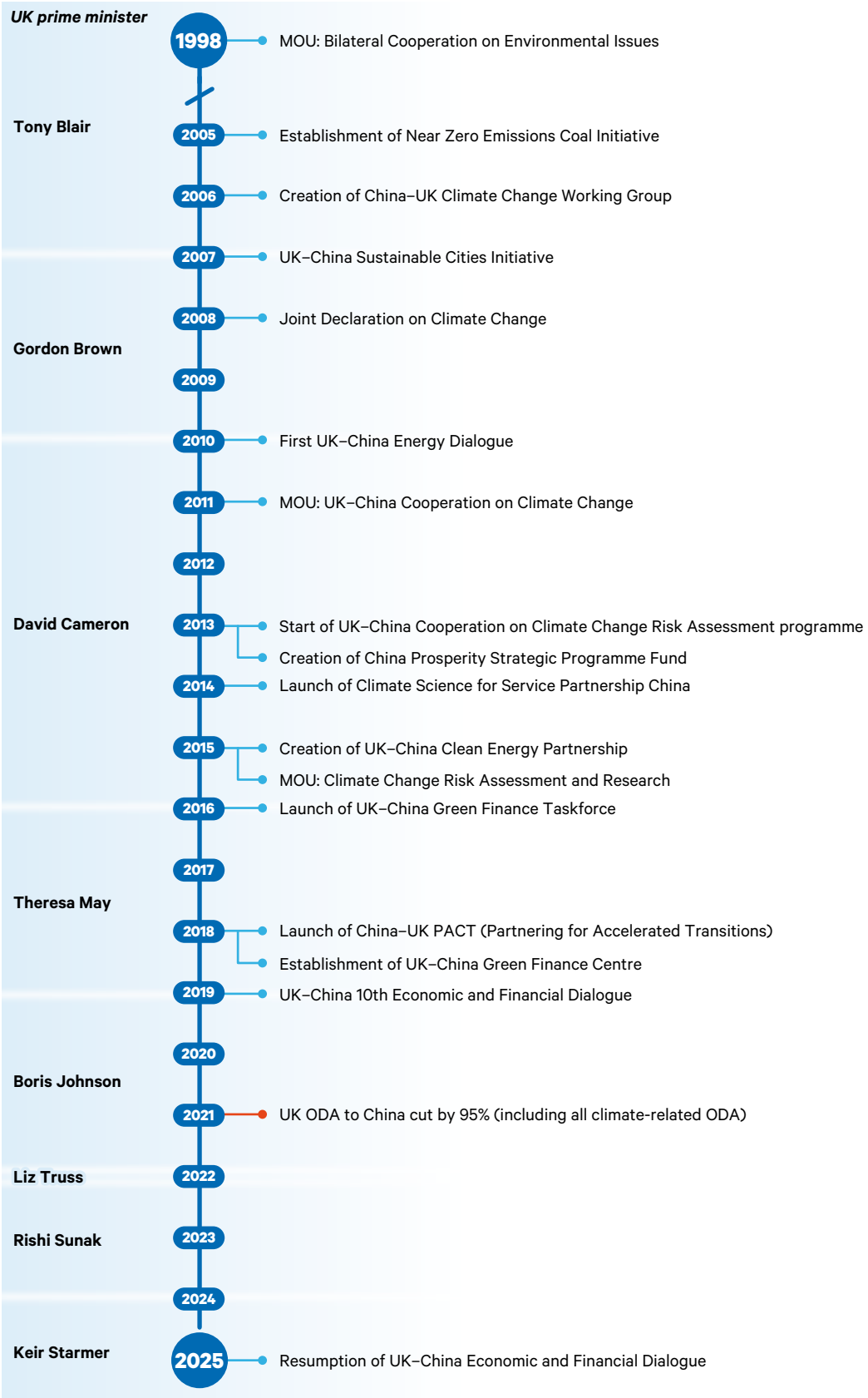
25 Prime Minister's Office, 10 Downing Street and The Rt Hon Rishi Sunak MP (2022), 'PM speech to the Lord Mayor's Banquet: 28 November 2022', 28 November 2022, https://www.gov.uk/government/speeches/pm-speech-to-the-lord-mayors-banquet-28-november-2022.
26 HM Government (2023), *Integrated Review Refresh 2023: Responding to a more contested and volatile world*, 13 March 2023, p. 6, https://www.gov.uk/government/publications/integrated-review-refresh-2023-responding-to-a-more-contested-and-volatile-world.
27 Prime Minister's Office, 10 Downing Street and The Rt Hon Rishi Sunak MP (2022), 'PM speech to the Lord Mayor's Banquet: 28 November 2022'.
28 Labour Party (2024), *Change: Labour Party Manifesto 2024*, p. 120, https://labour.org.uk/wp-content/uploads/2024/06/Labour-Party-manifesto-2024.pdf.
29 Prime Minister's Office, 10 Downing Street and The Rt Hon Sir Keir Starmer KCB KC MP (2024), 'PM call with President Xi Jinping of China: 23 August 2024', press release, 23 August 2024, https://www.gov.uk/government/news/pm-call-with-president-xi-jinping-of-china-23-august-2024.
30 Foreign, Commonwealth & Development Office and The Rt Hon David Lammy MP (2024), 'Readout: Foreign Secretary meeting with Chinese Foreign Minister', 18 October 2024, https://www.gov.uk/government/news/readout-foreign-secretary-meeting-with-chinese-foreign-minister.
31 Ministry of Foreign Affairs of the People's Republic of China via WeChat (2024), '王毅同英国外交发展大臣拉米会谈' [Wang Yi holds talks with British Foreign and Development Secretary Lammy], 18 October 2024, https://mp.weixin.qq.com/s/nRoczsSoe0YH7w-0t29khg.
32 Prime Minister's Office, 10 Downing Street and The Rt Hon Sir Keir Starmer KCB KC MP (2024), 'PM meeting with President Xi Jinping of China: 18 November 2024', press release, 18 November 2024, https://www.gov.uk/government/news/pm-meeting-with-president-xi-jinping-of-china-18-november-2024.
33 HM Treasury (2025), '2025 UK-China Economic and Financial Dialogue: policy outcomes', 11 January 2025, https://www.gov.uk/government/publications/2025-uk-china-economic-and-financial-dialogue-policy-outcomes.

Figure 1. Selected milestones in UK–China climate cooperation, 1998–2025



Source: Authors' compilation, drawing on Lewis, J. I. (2023), *Cooperating for the Climate: Learning from International Partnerships in China's Clean Energy Sector*, Cambridge, MA and London: MIT Press, https://mitpress.mit.edu/9780262544825/cooperating-for-the-climate.

Cooperating with China on climate action

China's greenhouse gas emissions have increased rapidly since 1990, with the country overtaking the US to become the largest annual national emitter of carbon dioxide (CO_2) in 2006.[34] The importance of China's own emissions trajectory for global efforts to tackle climate change has had a consequent impact on international relations: as it has become increasingly evident that any solution to climate change must involve China, more and more governments have signed cooperation agreements with China and initiated projects to support the country in containing its emissions.[35]

Recent agreements have broadened the scope of such cooperation, for example to include risk assessment, climate change adaptation and green finance. Some key recent examples of US, EU and bilateral European engagement with China on climate are outlined in Box 2. Meanwhile, the UK's own engagement with China on climate action has been extensive; a key example of joint work is the UK–China Cooperation on Climate Change Risk Assessment programme, which operated between 2013 and 2021 (see next subsection).

Box 2. Selected non-UK climate change cooperation arrangements with China

United States

The first meeting of the US–China 'Working Group on Enhancing Climate Action in the 2020s' took place in May 2024, following the signing in November 2023 of the Sunnylands Statement on Enhancing Cooperation to Address the Climate Crisis.[36] These developments allowed for the resumption of climate cooperation between the world's two largest emitters, China having suspended contacts in 2022 in retaliation for the visit to Taiwan of Nancy Pelosi, the then speaker of the US House of Representatives.[37] The Sunnylands joint statement followed meetings between Presidents Xi Jinping and Joe Biden, and between the US and Chinese climate envoys, John Kerry and Xie Zhenhua. Working groups on a range of topics, including methane reduction, were established to share experiences and exchange information on policies and technologies. The signing of the Sunnylands statement was, critically, a product of the close working relationship that had been forged over many years between Kerry and Xie. However, both envoys stood down in 2024. Their departure – combined both with the incoming Trump administration's anticipated reversal of efforts to address climate change and with the deterioration of US–China bilateral relations – makes it unlikely that cooperation at this level will continue.

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34 Our World in Data (2024), 'Share of global CO_2 emissions > China, US', https://ourworldindata.org/grapher/annual-share-of-co2-emissions?country=CHN~USA (accessed 16 Dec. 2024).
35 For a comprehensive list, see: Lewis, J. I. (2023), *Cooperating for the Climate: Learning from International Partnerships in China's Clean Energy Sector*, Cambridge, MA and London: MIT Press. https://mitpress.mit.edu/9780262544825/cooperating-for-the-climate.
36 U.S. Department of State, Office of the Spokesperson (2023), 'Sunnylands Statement on Enhancing Cooperation to Address the Climate Crisis', media note, 14 November 2023, https://www.state.gov/sunnylands-statement-on-enhancing-cooperation-to-address-the-climate-crisis.
37 Lo, J. (2022), 'US-China climate working group cancelled after Pelosi's Taiwan visit', Climate Home News, 8 August 2022, https://www.climatechangenews.com/2022/08/08/us-china-climate-working-group-cancelled-after-pelosis-taiwan-visit.

European Union

The EU–China High Level Environment and Climate Dialogue was established at the EU–China leaders' meeting in September 2020. Five dialogues have so far been held, initially under the joint leadership of Frans Timmermans, executive vice-president of the European Commission (2019–23), and Han Zheng, China's vice-president (and previously, until March 2023, first-ranked vice-premier).[38] The fifth dialogue, in June 2024, included the signing of a memorandum of understanding (MoU) on cooperation on emissions trading.

The high-level dialogue builds on the 2005 EU and China Partnership on Climate Change agreement, the ambition of which was to 'strengthen cooperation and dialogue on climate change' with focused action on 'the development and deployment of clean energy technology'.[39] Over two decades, this partnership has been the basis of practical cooperation and joint research on topics beyond clean energy. The commitment has been renewed several times through joint statements reaffirming the two sides' willingness to work together.

Germany

The Memorandum of Understanding between China and Germany on the Establishment of the Dialogue and Cooperation Mechanism on Climate Change and Green Transition was signed in June 2023.[40] This high-level agreement builds on a long history of technical cooperation dating back to the 1980s. The five-year agreement covers high-level dialogues, expert exchanges, engagement of businesses and the building of joint demonstration projects. The MoU supports existing working groups and creates new groups in eight thematic categories, including industrial decarbonization and the multilateral climate agenda. The initiative is co-led by Germany's federal minister for economic affairs and climate action and by the chair of China's National Development and Reform Commission (NDRC).

The UK–China Cooperation on Climate Change Risk Assessment programme

The UK has a long history of working with China on climate change. There have been many bilateral projects, announcements and cooperation agreements over the last few decades, including a successful scientific collaboration on climate risk supported by the Foreign and Commonwealth Office (later the Foreign, Commonwealth and Development Office) of the UK and by the Ministry of Ecology and Environment of China.

38 China's First Vice Premier Ding Xuexiang succeeded Han from the fourth dialogue in 2023, and Executive Vice-President Maroš Šefčovič succeeded Timmermans from the fifth dialogue in 2024.
39 European Union and People's Republic of China (2005), 'EU and China Partnership on Climate Change', 2 September 2005, https://climate.ec.europa.eu/system/files/2016-11/joint_declaration_ch_eu_en.pdf.
40 Federal Republic of Germany and People's Republic of China (2023), 'Memorandum of Understanding between The Government of the Federal Republic of Germany and The Government of the People's Republic of China on the Establishment of the Dialogue and Cooperation Mechanism on Climate Change and Green Transition', 20 June 2023, https://www.bmwk.de/Redaktion/DE/Downloads/P-R/paper-ger-chn-climate-and-transformation-dialogue.pdf?__blob=publicationFile&v=2.

Between 2013 and 2021, scientists and policy analysts in the UK and China carried out joint research into the risks of climate change, in a programme entitled UK–China Cooperation on Climate Change Risk Assessment. The aim of the programme was to ensure that emissions reduction and resilience strategies, policies and decision-making were supported by an evidence-based perspective on the risks posed by climate change.

The first phase of the programme (2013–15) brought together experts from the UK, China, India and the US. Insights from workshops in each country informed a 2015 report, *Climate Change: A Risk Assessment*.[41] Researchers evaluated the risks of climate change and proposed a new model for climate change risk assessment, based on principles and best practice in other fields (such as protecting national security and financial stability) where significant interests are at stake. The report proposed three categories of risk for assessment: the trajectory of global emissions ('emissions risks'); risks resulting from these emissions ('direct risks'); and consequent risks of climate impacts interacting with complex human systems ('indirect risks').

The second phase of the programme (2015–18) began with the signing of a two-year Working Agreement on Climate Change Risk Assessment and Research between the China National Expert Committee on Climate Change (since renamed the China Expert Panel on Climate Change – CEPCC), and its counterpart in the UK, the Committee on Climate Change (now called the Climate Change Committee – CCC).[42] The agreement focused on the three risk categories identified previously.[43] This second phase of work resulted in the publication in 2018 of another report, *Developing Indicators of Climate Risk*,[44] which proposed a proof-of-concept framework of indicators for tracking climate risks. The purpose of the framework was to strengthen the scientific basis of climate policymaking.

Building on the risk assessment model and indicator framework introduced in the first two phases, the programme's third phase (2019–21), coordinated by Chatham House, moved towards implementation of a climate risk assessment indicator system. Work in this phase explored how climate risks could be integrated into governance frameworks. Decision-makers at various levels were targeted, including within international organizations aiming to incorporate appropriate climate risk indicators in the planning, conduct and monitoring of their work.[45]

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41 King, D. et al. (2015), *Climate Change: A Risk Assessment*, Cambridge: Centre for Science and Policy, University of Cambridge, https://www.csap.cam.ac.uk/projects/climate-change-risk-assessment.
42 The Committee on Climate Change was renamed the Climate Change Committee (CCC) in 2020; the China National Expert Committee on Climate Change was renamed the China Expert Panel on Climate Change (CEPCC) in 2021.
43 British Embassy Beijing (2015), 'UK-China agree to promote cooperation on climate change risk assessment at COP 21', 9 December 2015, https://www.gov.uk/government/news/uk-china-agree-to-promote-cooperation-on-climate-change-risk-assessment-at-cop-21.
44 Committee on Climate Change and China Expert Panel on Climate Change (2018), *UK-China Cooperation on Climate Change Risk Assessment: Developing Indicators of Climate Risk*, https://www.theccc.org.uk/publication/indicators-of-climate-risk-china-uk.
45 Brown, O. and Dimsdale, T. (2021), *Climate risk management for international organizations: Ideas for improving strategic planning*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/2021/06/climate-risk-management-international-organizations.

Senior Chinese officials have highlighted the programme's role in supporting climate policy decision-making. The first legislation in China specifically to address climate risk and its governance, published by the Shenzhen municipal government in July 2021,[46] followed the submission of a series of policy recommendations and extensive stakeholder engagement by the programme.

The first legislation in China specifically to address climate risk and its governance followed the submission of a series of policy recommendations and extensive stakeholder engagement by the programme.

A Chatham House research paper, entitled *Climate change risk assessment 2021*, was also published under the third phase of the programme.[47] This paper, which set out the likely consequences of the world failing to meet the Paris Agreement goals, had impact at the highest levels. It was championed by the UK government's Cabinet Office, was widely circulated prior to COP26 in 2021, and formed the basis of a series of high-level workshops that aimed to build understanding of climate risk among G20 governments.

In addition to a range of comprehensive and rigorous policy-relevant research outputs, the UK–China Cooperation on Climate Change Risk Assessment programme yielded new ideas, understandings and ways of working, and forged productive and trust-based relationships between colleagues in different countries. In this sense, it potentially provides a partial template for a wider-ranging bilateral cooperation framework in the future (see 'Institutionalizing future UK-China cooperation').

Confronting the inevitable challenges

Although this paper argues that it is both possible and desirable for the UK and China to expand their cooperation on climate change, pursuing such a path will not be free from challenges. Efforts may, in particular, be derailed by geopolitical tensions. From early 2025, with Donald Trump's return to the White House, the US is expected to take a more confrontational approach to China than was the case under the administration of Joe Biden. Foreign policy under Biden has been characterized by deepening tensions with China, especially over trade, but also by cautious engagement on climate change (see Box 2). This engagement is unlikely to continue. Moreover, the incoming US administration may put the UK and other allies under pressure to follow its own harder line on China. In short, the risk is that the Trump administration could take a dim view of UK–China cooperation, including on climate change.

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46 Shenzhen Municipal People's Congress Standing Committee (2021), 'Regulations on Ecological and Environmental Protection of Shenzhen Special Economic Zone', 8 July 2021, https://www.sz.gov.cn/cn/xxgk/zfxxgj/zcfg/content/post_8941834.html.
47 Quiggin, D., De Meyer, K., Hubble-Rose, L. and Froggatt, A. (2021), *Climate change risk assessment 2021: The risks are compounding, and without immediate action the impacts will be devastating*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/2021/09/climate-change-risk-assessment-2021.

At the same time, China will not be an easy partner for the UK despite common interests around climate change and the energy transition. Positions and actions taken by the UK in contentious areas could easily derail climate cooperation. China has previously warned the US that cooperation on climate change cannot be separated from bilateral relations more widely, and the same could apply to China's view of its relationship with the UK.[48]

Trade is a likely flashpoint, and certainly a point of vulnerability for the UK. China is the world's leading supplier of clean technologies such as solar panels, wind turbines and EVs. The UK will need such goods in large quantities if it is to meet its own ambitious decarbonization targets. While the purpose of this paper is to identify scientific, technical and policy avenues for cooperating with China on climate change – rather than making recommendations for UK trade policy – there is no ignoring the fact that trade with China is a highly sensitive issue in the current geopolitical context. When the UK's chancellor of the exchequer, Rachel Reeves, visited Beijing in January 2025, pledges were made at the resumed UK–China Economic and Financial Dialogue to 'continue to exchange views on industrial policy' and to 'strengthen dialogue on standards, regulations and policies in the fields of automobiles, green and low-carbon development'.[49] Even so, developments in the bilateral trading relationship, whether positive or negative, may well have knock-on effects for climate cooperation.

Joint climate action may also be impeded by politicians, media and other prominent voices in the UK who have warned against working with China in any capacity. The UK and Chinese governments have starkly different views on many issues,[50] and cooperation on climate change may be cast by these voices not so much as bilateral action on a specific challenge of shared (and global) concern, but as an implicit endorsement of China's positions and actions in other areas. Some sceptics may seek to discredit joint climate action by arguing that the development of any aspect of the bilateral relationship represents an unacceptable threat to UK national security.

Still others may cast UK efforts to work more closely with China on climate action as tacit approval of China's ongoing development of new coal-fired power plants. Notwithstanding China's ambitious emissions reduction targets and record deployment of low-carbon technologies, the country accounted for two-thirds of new coal-fired power generation capacity worldwide in 2023.[51] China's expanding coal fleet may not alter the rationale for concurrent climate cooperation, but it could make it more vulnerable to political attack.

To be successful, any new phase of UK–China climate cooperation must therefore account for these challenges and be designed in such a way that it is resilient to the inevitable political turbulence it will encounter. (See next section, as well as the 'Recommendations' section at the end of this paper.)

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48 Stanway, D. (2021), 'U.S. climate envoy Kerry urges China to keep politics out of global warming', Reuters, 2 September 2021, https://www.reuters.com/world/asia-pacific/china-holds-virtual-climate-meeting-with-us-describes-environment-policy-oasis-2021-09-02.
49 HM Treasury (2025), '2025 UK-China Economic and Financial Dialogue.
50 Taylor, R. (2024), 'In Focus: UK government policy towards China', House of Lords Library, 12 December 2024, https://lordslibrary.parliament.uk/uk-government-policy-towards-china.
51 Global Energy Monitor (2024), 'Boom and Bust Coal 2024', April 2024, https://globalenergymonitor.org/report/boom-and-bust-coal-2024.

Institutionalizing future UK–China cooperation

With deepening diplomatic tensions between the UK and China in recent years, and with the COVID-19 pandemic having reduced the scope for in-person exchanges, many joint projects ended or lapsed (see Figure 1). Notably, the UK–China Cooperation on Climate Change Risk Assessment programme discussed above was curtailed after the UK government almost entirely cut its ODA to China in April 2021 (see Box 1).

As the Labour government 'audits' all aspects of the UK relationship with China, and seeks to build a new era of UK–China relations on a foundation of consistency, predictability and pragmatism,[52] it must consider precisely how it wants to work with China on climate change in the future, and what sort of cooperation framework would enable this. China, for its part, is keen for a closer climate change relationship that would draw on lessons from past experience of collaboration and enable the country, by joining forces with the UK, to support global efforts more effectively. This was emphasized at the meeting between the UK prime minister, Sir Keir Starmer, and China's president, Xi Jinping, at the G20 summit in November 2024.[53]

One way to advance both countries' agendas, this paper argues, would be for the UK and China to establish a bilateral cooperation mechanism dedicated to technical, scientific and policy exchange on climate change – an arrangement that the two sides have agreed to discuss.[54] This would institutionalize existing ad hoc collaboration and help make joint initiatives on climate more resilient to political shocks. A formal mechanism of this nature would also allow for better coordination of different workstreams, and provide a structure for robust monitoring and evaluation of their progress.

A bilateral, government-to-government agreement to cooperate on climate change should underpin this mechanism. This would provide a degree of political cover for those involved, enabling bolder and more confident engagement by UK entities and individuals with their counterparts in China, and vice versa. A government-to-government agreement would also elevate the status of policy proposals produced by the partnership; this would be important for increasing the likelihood of their adoption and implementation in China's top-down policymaking hierarchy.

These new arrangements could build on the long-standing working relationship between the two countries' expert bodies on climate change, the UK's CCC and China's CEPCC respectively.[55] As mentioned, their relationship was formalized in the 2015 Working Agreement on Climate Change Risk Assessment and Research and in the subsequent establishment of a steering committee for phase 3 of the UK–China Cooperation on Climate Change Risk Assessment programme.

The next section outlines promising areas for cooperation that could be included under our proposed new mechanism. In several cases, collaborative research already occurs between Chinese and UK institutions. Bringing such work under

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52 Prime Minister's Office, 10 Downing Street and The Rt Hon Sir Keir Starmer KCB KC MP (2024), 'PM meeting with President Xi Jinping of China: 18 November 2024'.
53 Ministry of Foreign Affairs of the People's Republic of China (2024), 'Xi Jinping Meets with UK Prime Minister Keir Starmer', 18 November 2024, https://www.mfa.gov.cn/mfa_eng/xw/zyxw/202412/t20241218_11495913.html.
54 HM Treasury (2025), '2025 UK-China Economic and Financial Dialogue'.
55 Forster and Wang (2024), 'UK, China can set example of joint climate action'.

a single umbrella, protected by top-level political backing, could enable productive coordination between different entities and workstreams, and boost the visibility and utility of the research and its findings for policymakers.

Areas for cooperation

Carbon budgeting and control

The UK is a world leader in counting carbon. In 2002, it became the first country to introduce a national emissions trading scheme (ETS), as a pilot for the EU's Emissions Trading System which subsequently launched in 2005. In 2008, the UK's Climate Change Act put into law a system of caps on emissions under a series of five-year 'carbon budgets', designed to ensure a smooth trajectory towards meeting long-term climate targets. In 2021, following the UK's exit from the EU, the UK re-established its own standalone ETS.

China is developing its 15th Five-Year Plan, to be finalized in March 2025, covering the period 2026–30. In line with China's pledge to achieve peak CO_2 emissions before 2030, all levels of government, sectors and industries must formulate action programmes in 2025 showing how they will achieve this in their respective domains, with each action programme required to have a timetable, roadmap and mission statement.[56]

As China looks past its projected peak in emissions and designs a framework for achieving carbon neutrality by 2060, it can benefit from the UK's ample expertise in carbon budgeting and control.

Carbon budgeting

Both countries have committed to long-term net zero emissions targets, with the UK aiming for 2050 as its deadline for achieving net zero and China aiming for 2060. Meeting these targets requires a sophisticated planning and monitoring framework. In the UK, this is provided by the system of carbon budgets and the progress reports to parliament prepared by the CCC.

China, meanwhile, is moving from a system based on controlling energy use to one focused on controlling emissions. In August 2024, a work plan to accelerate the establishment of a 'dual carbon' control system was approved by the State Council. The plan states that between 2026 and 2030, targets limiting carbon emissions and carbon intensity will replace those limiting energy use and energy intensity.[57] While

56 National Development and Reform Commission of the People's Republic of China (2021), 'Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy', updated 24 October 2021, https://en.ndrc.gov.cn/policies/202110/t20211024_1300725.html; National Development and Reform Commission of the People's Republic of China (2021), 'Action plan for carbon dioxide peaking before 2030', updated 27 October 2021, https://en.ndrc.gov.cn/policies/202110/t20211027_1301020.html.

57 State Council of the People's Republic of China (2024), 'Work plan to accelerate the establishment of a dual control system for carbon emissions', 2 August 2024, https://www.gov.cn/zhengce/content/202408/content_6966079.htm.

China already has carbon intensity targets, this will be the first time that the country has imposed an absolute limit on CO_2 emissions.[58] Once emissions peak, and with the cap in place, China will need to 'budget' for carbon much as the UK does.

With over 15 years of carbon budgeting experience, and all its carbon budgets to date successfully met, the UK can provide valuable support to China as the latter seeks to integrate a carbon budget mechanism in its emerging dual carbon framework.

China's nationwide cap will be disaggregated to the provincial and municipal levels, with local governments required to develop their own carbon budgets. This will be an enormously complex task, technically and politically, as the national government will need to strike the right balance between enabling local ownership of emissions reduction policies and ensuring the consistency of local emissions with the nationwide cap. The UK's CCC has valuable experience to impart here, having proposed budgets and assessed progress for different sectors and for the four nations of the UK.

China's dual carbon work plan states that establishing a measuring and monitoring system, including emissions accounting rules and carbon-footprint standards, will be a priority in 2025, and a specific work plan on this system was issued by the National Development and Reform Commission (NDRC) in November 2024.[59] The UK's well-established carbon accounting system could provide a useful reference for Chinese officials as they develop their own system.

China's development of its first ever carbon budget, and the preparation of the 15th Five-Year Plan, coincides with an important stage in the UK carbon budgeting cycle. In February 2025, the CCC will publish its advice to the UK government for the Seventh Carbon Budget (for the period 2038–42), and for much of the year the committee will be engaged in outreach to explain and promote its proposals. This provides an excellent window of opportunity for practical UK–China cooperation, with potential for high and lasting impact.

Emissions trading and border adjustment

China announced plans for its own ETS in 2011. Pilot schemes in eight cities and provinces during the 2010s led to a domestic carbon trading system entering operation in 2021. The UK, a pioneer in emissions trading, has provided expertise and guidance to China throughout the ETS development process, including on aspects such as market design, regulatory oversight and linking to international systems.[60]

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58 The limit will be a 'non-binding supplement' for the 15th Five Year Plan period (2026–30), but will be enforced for subsequent periods, in alignment with China's 2030 peaking target.
59 National Development and Reform Commission of the People's Republic of China (2024), 'Work plan for improving the carbon emission statistics and accounting system', 24 October 2024, https://www.ndrc.gov.cn/xxgk/zcfb/tz/202410/P020241024402418106950.pdf.
60 Department of Energy & Climate Change and Foreign & Commonwealth Office (2014), 'UK information note: background to the UK-China joint climate change statement', https://assets.publishing.service.gov.uk/media/5a7e0ac7e5274a2e8ab4576d/Climate_change_statement_information_note_on_cooperation.pdf.

On its launch in 2021, China's ETS became the largest carbon market in the world despite applying only to the power sector, which accounts for 40 per cent of the country's total carbon emissions.[61] When, as planned, the steel, aluminium and cement sectors are added, the ETS is expected to cover 60 per cent of China's emissions.[62]

There is clear value in continued cooperation between China and the UK as China develops its ETS and seeks to make it an effective tool for reducing emissions. Aspects that will have a major impact on the trajectory of Chinese – and therefore global – emissions include expanding the scheme to new sectors, phasing out free allocations of emissions permits, shifting from an intensity-based system to total emissions caps (see also 'Carbon budgeting' above), and aligning the scheme with the above-mentioned carbon budgets under dual carbon control.

There is also a strong rationale for bilateral technical cooperation on the UK's Carbon Border Adjustment Mechanism (CBAM), which will take effect on 1 January 2027. Prior cooperation on methodologies and reporting, in advance of the entry into force of the CBAM, would be beneficial both for the UK, which will want to ensure the smooth introduction of this complex new measure, and for China, which is keen to better understand both the carbon content of its products and the CBAM's implications for Chinese exporters.

Practical exchanges of this nature could also help to ease trade tensions over the CBAM by enabling the UK to demonstrate that its objective is not 'green protectionism' but rather to encourage trading partners to decarbonize in pursuit of shared global climate goals. Presenting and explaining plans for developing the UK CBAM, including the schedule for enlargement to other sectors, could be an effective trust-building measure.

Emissions modelling

Technical modelling plays a vital role in informing climate policy decision-making. It is through modelling the impact of different transition pathways on greenhouse gas emissions and economic performance that governments can credibly commit to emissions reduction targets, and so provide important long-term policy signals to domestic industries as well as to international counterparts.

In the absence of models that capture the full range of factors likely to determine future emissions, governments may lack the confidence to commit to ambitious targets. It follows that more accurate and comprehensive models could therefore reduce this reluctance and encourage greater ambition. This is of particular salience given that both countries put considerable emphasis on meeting the climate targets they set for themselves and share a commitment to climate policymaking grounded in the best available scientific evidence.

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61 Liu, H. (2021), 'In-depth Q&A: Will China's emissions trading scheme help tackle climate change?', Carbon Brief, 24 June 2021, https://www.carbonbrief.org/in-depth-qa-will-chinas-emissions-trading-scheme-help-tackle-climate-change.
62 Ministry of Ecology and Environment of People's Republic of China (2024), 'Explanation on the preparation of the Work Plan for the National Carbon Emission Trading Market to Cover the Cement, Steel and Electrolytic Aluminium Industries (Draft for Comments)', 9 September 2024, https://www.mee.gov.cn/xxgk2018/xxgk/xxgk06/202409/W020240909573355424966.pdf.

In the UK, the CCC is developing methods to quantify the uncertainty in its models, accounting for variables such as economic growth, population growth and the impact of weather on electricity generation. In China, better modelling is needed to manage the considerable uncertainty that exists around measuring methane emissions from coal mines, including the extent to which it will be possible in practice to mitigate methane leakage from such mines.[63]

Given these challenges, experts from China and the UK could usefully work together to scrutinize the assumptions in their emissions modelling, thereby helping to put ambitious climate policy on a firmer footing. The two governments share an interest in improving their modelling capabilities, and have expertise to offer each other in this domain, notwithstanding restrictions on data sharing that may limit cooperation in sensitive areas such as energy.[64]

Climate change mitigation

The UK's success in integrating low-carbon technologies into its energy system, and China's success in deploying these technologies at speed and at scale, present opportunities for mutual learning that could drive emissions reductions in both countries.

Low-carbon integration

China is adding variable renewable energy sources to its electricity grid at an unprecedented rate. At the same time, electricity consumption has grown rapidly as the economy has expanded, with the wide-scale deployment of EVs also significantly adding to power demand. Increasingly, too, climate change is emerging in its own right as an important driver of electricity consumption, as heatwaves lead to spikes in the use of air-conditioning.

This wholesale and simultaneous transformation of both supply and demand requires a new electricity management system. This is a major undertaking, and key to decarbonizing China's power sector: if successful, it will allow China to fully realize the potential of its renewable energy resources while accelerating the retirement of coal power, in line with the principle of 'building the new before discarding the old'.[65] Coal remains dominant in China, accounting for 60.5 per cent of power generation in 2023,[66] and President Xi has pledged to reduce the use of coal over the period of China's 15th Five-Year Plan (2026–30).[67]

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63 Khanna, N., Lin, J., Liu, X. and Wang, W. (2024), 'An assessment of China's methane mitigation potential and costs and uncertainties through 2060', *Nature Communications*, 9694, https://doi.org/10.1038/s41467-024-54038-y.
64 In August 2023, the director of China's National Energy Administration called for 'a confidentiality culture that keeps secrets and is cautious'. See Kemp, J. (2023), 'China calls for more secrecy on sensitive energy issues', Reuters, 17 August 2023, https://www.reuters.com/markets/commodities/china-calls-more-secrecy-sensitive-energy-issues-2023-08-16.
65 Langston, R. (2022), 'China: 'building the new before discarding the old'', Net Zero Investor, 5 November 2022, https://www.netzeroinvestor.net/news-and-views/china-building-the-new-before-discarding-the-old.
66 Ember (2024), 'China: Power sector overview', last updated 2 October 2024, https://ember-energy.org/countries-and-regions/china.
67 Reuters, Stanway, D. and Cadell, C. (2021), 'President Xi says China will start cutting coal consumption from 2026', Reuters, 22 April 2021, https://www.reuters.com/world/china/chinas-xi-says-china-will-phase-down-coal-consumption-over-2026-2030-2021-04-22.

Chinese electricity system designers and grid managers could learn valuable lessons from the UK's experience of smoothly phasing out coal and introducing renewables. The UK has successfully struck a balance between, on the one hand, maintaining a liberalized and competitive power market and, on the other, using policy tools such as contracts-for-difference for renewables to lower emissions.[68]

Chinese electricity system designers and grid managers could learn valuable lessons from the UK's experience of smoothly phasing out coal and introducing renewables.

The UK is embarking on a new phase of power market reform and system governance, with its review of electricity market arrangements (REMA) set to conclude in mid-2025.[69] If UK planners were to share their experiences of this process with counterparts in China, and collaborate with China on new digital tools for enabling system flexibility and efficiency, this could help China better integrate renewable sources of energy into its grid. In so doing, China would be better placed to maximize the emissions reduction potential of its remarkable success in deploying low-carbon technologies.

Deployment of low-carbon technologies

Until relatively recently, the dominant model of climate change and clean energy cooperation between developed countries (including the UK) and China has involved the former providing the latter with technological know-how, with the goal of accelerating the Chinese energy transition and/or obtaining commercial benefits such as access to the Chinese market. Now, however, the world is learning from China. Other countries are seeking insights from China's domestic innovation in areas such as EV batteries and from its experience of deploying low-carbon technologies at speed and at scale.[70]

Gaining an in-depth understanding of how China has been so successful in developing and deploying low-carbon technologies would help to accelerate the UK's own energy transition. The UK government has set a target of obtaining at least 95 per cent of its electricity from zero-carbon sources by 2030. This will require scaling up deployment of all clean technologies.

One way in which the UK could usefully benefit from China's insights is in the widespread deployment of rooftop solar panels. China's Whole County PV programme has had considerable success in boosting uptake of solar photovoltaic (PV) systems in the east of the country, where land is scarce, thereby reducing

68 MacDonald, P., Lee, U. and Candlin, A. (2023), 'The UK's coal to clean journey', Ember, 24 March 2023, https://ember-energy.org/latest-insights/the-uks-coal-to-clean-journey.
69 Department for Energy Security and Net Zero (2024), 'Review of electricity market arrangements (REMA): autumn update, 2024', 13 December 2024, https://www.gov.uk/government/publications/review-of-electricity-market-arrangements-rema-autumn-update-2024.
70 Lewis (2023), *Cooperating for the Climate*, p. 6.

demand for energy from the coal-dominated grid and lowering bills for residents.[71] The UK's secretary of state for energy security and net zero, Ed Miliband, has spoken of his desire to 'unleash a UK solar rooftop revolution'.[72]

Technical exchange with China would also be valuable for the UK in supporting an expansion of EV charging infrastructure, a sector in which China leads the world by a significant margin.[73] In order to meet a UK government target of providing 300,000 public charging points by 2030, annual installation rates in the UK will need to have trebled by the end of the decade.[74]

Climate risk and climate change adaptation

China and the UK face different sets of climate-related vulnerabilities. Nevertheless, assessing the risks and putting in place governance practices to tackle them is a shared challenge, and has been an important component of UK–China climate cooperation for more than a decade, notably under the UK–China Cooperation on Climate Change Risk Assessment programme that began in 2013 (see above).

Risk assessment

The governance frameworks of both the UK and China make provision for systematic assessment of the risks of climate change. In the UK, this is done through the climate change risk assessment (CCRA), published every five years since 2012. In China, it is done through periodic national assessment reports, published every four to six years since 2002.

Risk assessment is a dynamic process: understanding of climate risks continually develops and evolves. For example, growing appreciation of 'cascading' climate risks from abroad led the UK to incorporate the category of 'risks to the UK from climate change impacts overseas' in its assessment framework for the third CCRA in 2022.[75] The rising profile of cascading risks in international climate policy thinking underscores the importance of ongoing bilateral exchanges on climate risk assessment.

In terms of specific potential exchanges of information, expertise and tools, it would be valuable for the UK and China to compare the instruments each currently uses to assess climate risks and their impacts. For example, the instruments China used in its 2020 comprehensive national survey on natural disaster risk could be instructive for UK planners.[76] This comparison process could be extended to technical definitions of individual risks, such as heatwaves and floods, and the tools used to measure them.

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71 Ye, Y. (2023), 'Are rooftop solar panels the answer to meeting China's challenging climate targets?', *Nature Index*, 21 November 2023, https://www.nature.com/articles/d41586-023-02991-x.
72 Helm, T. and McKie, R. (2024), 'Labour's 'rooftop revolution' to deliver solar power to millions of UK homes', *Guardian*, 13 July 2024, https://www.theguardian.com/environment/article/2024/jul/13/labours-rooftop-revolution-to-deliver-solar-power-to-millions-of-uk-homes.
73 International Energy Agency (2024), 'Global EV Outlook 2024', https://www.iea.org/reports/global-ev-outlook-2024.
74 Climate Change Committee (2024), '2024 Progress Report to Parliament', 18 July 2024, https://www.theccc.org.uk/publication/progress-in-reducing-emissions-2024-report-to-parliament.
75 Department for Environment, Food & Rural Affairs (2022), 'UK Climate Change Risk Assessment 2022', https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2022.
76 China Meteorological Administration (2024), 'Dr. Zheng Guoguang: 1st National Comprehensive Survey on National Disaster Risk in China', press release, 18 April 2024, https://www.cma.gov.cn/en/special/20230406/2023040604/202304/t20230418_5445477.html.

China and the UK could also develop their existing joint work on risk assessment to consider risks to nature, building on research into the links between climate change and biodiversity loss carried out under the UK–China Cooperation on Climate Change Risk Assessment programme. This could tie in with pursuit of the goals of the 2022 Kunming-Montreal Global Biodiversity Framework (GBF), which China played a key role in delivering.

China and the UK could collaborate on further research on the co-governance of climate and nature, developing methods and indicators for assessing, quantifying and addressing nature-related risks and impacts, developing standards for nature finance, and identifying new possibilities for investing in nature.

Adaptation finance

As climate change impacts increase, countries around the world are grappling with the question of how to pay for climate change adaptation. The UK and China are no exception, although at their respective levels of economic development they are comparatively better equipped to do so than are many other countries.

By providing a clear economic justification for public and private investment in climate change adaptation, attributing a monetary value to adaptation actions can increase financial flows to the relevant sectors and initiatives. This can allow adaptation measures to be presented not simply as a cost, but as an investment with a range of 'dividends' – from the avoidance of financial losses to the provision of economic, development, social and environmental co-benefits that are enjoyed whether or not the climate risk comes to pass.[77]

The CCC's independent assessment of climate risk, which will be delivered in 2026 and will inform the UK government's fourth CCRA, will focus on the economics of adaptation. Meanwhile, China is keen to establish a scientifically rigorous approach to a policy area it sees as increasingly critical.[78] As such, China and the UK have a shared interest in joint research to develop the economic rationale for adaptation finance. There would also be benefit in examining the sources of adaptation finance and tools of delivery available to the two governments, and in reflecting on what can be learned from the features and operations of the mechanisms planned or in use.

Measuring adaptation progress

China is keen to better understand how climate risk governance can be devolved to local authorities and specific sectors. The UK is seen as one of the most advanced countries in this regard. As China implements its National Adaptation Strategy, it is looking to develop mechanisms to ensure that actors at different levels do what is required to address the climate risks identified in risk assessment processes. In the UK the CCC, for its part, is in the process of defining metrics and targets for adaptation progress, to answer the question of what a UK well adapted to climate

77 Heubaum, H. et al. (2022), *The Triple Dividend of Building Climate Resilience: Taking Stock, Moving Forward*, Washington, DC: World Resources Institute, https://doi.org/10.46830/wriwp.21.00154.
78 Remarks made at a meeting between the CCC and the Ministry of Ecology and Environment of China, held under the Chatham House Rule, Beijing, September 2024.

change looks like.[79] Joint research on metrics, targets and accountability mechanisms for adaptation is thus an area of mutual interest, and presents an opportunity for practical exchange.

Integrating mitigation and adaptation

Despite the clear logic of taking an integrated approach to climate change mitigation and adaptation, the two are often treated separately. There is, however, appetite on the parts of the UK and China to pursue these two dimensions of climate action in a holistic way. In the UK, the CCC has recently been restructured to reflect this priority. In 2023, notably, it prepared a series of recommendations for the Welsh government on integrating mitigation and adaptation agendas.[80]

Since the release of its National Programme to Combat Climate Change in 2007, China has consistently emphasized the need to place equal emphasis on mitigation and adaptation. As the country faces worsening climate impacts, and accelerates its low-carbon transition, officials are keen to understand what pursuing the two together looks like in practice.[81]

At a minimum, integrating mitigation and adaptation requires that the infrastructure relied on to mitigate climate change, such as electricity pylons, be made resilient to physical climate risk. However, integration can also encompass less obvious measures, such as requiring that houses are systematically made resilient to future climate change, for example through water-efficiency devices or property-level flood protection, at the same time as emissions-reducing devices such as heat pumps are fitted. Efficient, integrated strategies such as these minimize disruption and lower costs.

China and the UK could usefully consider jointly developing the systems-thinking needed for the successful and effective integration of mitigation and adaptation.

City-level policymaking, in particular, provides opportunities for this type of bilateral cooperation. Already there has been collaboration on sustainable urban development initiatives, beginning in 2007 with the UK–China Sustainable Cities Initiative, which facilitated expert exchanges and fostered business collaboration in cities such as Wuhan and Chongqing.[82] Recent projects such as that between Tsinghua University and University College London on low-carbon buildings could provide a basis for further cooperation.[83]

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79 Ibid.
80 Climate Change Committee (2023), *Adaptation and decarbonisation*, https://www.theccc.org.uk/publication/adaptation-and-decarbonisation.
81 Remarks made at a meeting between the CCC and the Ministry of Ecology and Environment of China, held under the Chatham House Rule, Beijing, September 2024.
82 Department of Energy and Climate Change (2012), 'Written evidence submitted to the Energy and Climate Change Committee on Energy Low-Carbon Growth Links with China', https://publications.parliament.uk/pa/cm201213/cmselect/cmenergy/529/529we02.htm.
83 UCL Institute for Environmental Design and Engineering (2016), 'TOP ('The Total Performance of Low Carbon Buildings in China and the UK')', 1 January 2016, https://www.ucl.ac.uk/bartlett/environmental-design/research-projects/2023/sep/top-total-performance-low-carbon-buildings-china-and-uk.

Supporting international climate action

Plurilateral cooperation

The UK and China could boost the impact of their bilateral climate cooperation by bringing in strategically chosen third countries. A clear candidate in the near term for this sort of 'plurilateral' arrangement is Brazil, with which both the UK and China enjoy good bilateral relations. During the visit of President Luiz Inácio Lula da Silva to Beijing in April 2023, the Chinese and Brazilian governments committed to 'broadening, deepening and diversifying' their bilateral cooperation on climate change.[84] Meanwhile, under the Keir Starmer government in the UK, climate change has quickly become central to the UK–Brazil relationship.[85] Brazil, which will host the UN's COP30 climate summit at the end of 2025, is a respected and constructive international actor on climate and the environment.

The UK and China could boost the impact of their bilateral climate cooperation by bringing in strategically chosen third countries. A clear candidate for this sort of 'plurilateral' arrangement is Brazil.

One area of focus for potential China–UK–Brazil collaboration could be nature. Protecting and restoring natural systems is integral to limiting global temperature rises: terrestrial and marine ecosystems, such as forests and oceans, absorbed 54 per cent of greenhouse gas emissions from human activities in 2012–22.[86] Biologically 'megadiverse' Brazil counts more forest within its borders than any country other than Russia.[87]

China is Brazil's largest trading partner by far, and growing Chinese demand for soybeans and beef has been linked to illegal deforestation in the Amazon.[88] President Xi and his Brazilian counterpart, Lula, have committed to work together to combat illegal logging and deforestation.[89]

The UK, which appointed Ruth Davis as its first ever special representative for nature in October 2024,[90] to work alongside Rachel Kyte as climate envoy, plans to spend at least £3 billion of its £11.6 billion international climate finance commitment between 2021/22 and 2025/26 on the protection, restoration and sustainable

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84 Ministry of Foreign Affairs of Brazil (2023), 'Brazil-China Joint Statement on combating climate change', press release, 14 April 2023, https://www.gov.br/mre/en/contact-us/press-area/press-releases/brazil-china-joint-statement-on-combating-climate-change.
85 Cooper, C. (2024), 'Post-Brexit Britain has a new best friend: Brazil', *Politico*, 23 December 2024, https://www.politico.eu/article/post-brexit-britain-new-best-friend-brazil.
86 WWF (2022), 'Our climate's secret ally: Uncovering the story of nature in the IPCC Sixth Assessment Report', 14 November 2022, https://wwf.panda.org/wwf_news/?6811966/climate-nature-secret-ally.
87 United Nations Environment Programme (2019), 'Megadiverse Brazil: giving biodiversity an online boost', 28 February 2019, https://www.unep.org/news-and-stories/story/megadiverse-brazil-giving-biodiversity-online-boost.
88 Borges, A. (2024), 'Tackling deforestation in the Brazil-China agricultural trade', Dialogue Earth, 7 June 2024, https://dialogue.earth/en/business/tackling-deforestation-in-the-brazil-china-trade.
89 Ministry of Foreign Affairs of Brazil (2023), 'Brazil-China Joint Statement on combating climate change'.
90 Department for Environment, Food & Rural Affairs, Foreign, Commonwealth & Development Office, The Rt Hon David Lammy MP and The Rt Hon Steve Reed OBE MP (2024), 'Special Representative for Nature appointed in landmark first', press release, 21 October 2024, https://www.gov.uk/government/news/special-representative-for-nature-appointed-in-landmark-first.

management of nature.[91] During a visit to Brazil by the UK secretary of state for energy security and net zero, Ed Miliband, in August 2024, he and his Brazilian counterparts pledged to deepen cooperation on tackling deforestation.[92]

A further area of potential collaboration between China, the UK and Brazil is industrial decarbonization. Since December 2023, the UK and Brazil have been cooperating on policy 'hubs' designed to promote industrial decarbonization and support the development of hydrogen clusters (zones in which enterprises collaborate in the production and use of hydrogen for different purposes).[93] China and Brazil have been seeking to deepen and widen similar relationships in a variety of areas. During President Xi's state visit to Brazil in November 2024, the two countries signed 37 bilateral agreements covering sectors including industry, energy and sustainable development.[94]

Beyond working with Brazil alone, China and the UK could combine their respective resources, expertise and influence to assist a wider range of developing countries in decarbonizing electricity systems and building resilience to climate impacts. Projects under this sort of 'South–North–South' cooperation could build on China–UK complementarities or existing areas of cooperation to create capabilities and synergies that might not be achievable in isolation. Potentially interesting options might include initiatives on deploying and integrating distributed solar power systems, or joint capacity-building on climate risk management. This mode of cooperation is likely to be most effective in countries, regions or cities where the UK and China have their own existing projects.

Green finance

China and the UK have a shared history of collaboration on green finance. Important joint initiatives in recent years have been the UK–China Green Finance Taskforce and the UK–China Green Finance Centre.[95] At the 11th UK–China Economic and Financial Dialogue, in January 2025, the two countries reiterated their 'recognition of each other as primary partners in green finance'.[96]

The UK provided substantial support in helping China 'green' its Belt and Road Initiative (BRI), encouraging the financing of sustainable infrastructure projects across Asia, Africa and Europe. In 2018, the UK and China jointly published

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91 Department for Energy Security and Net Zero, Department for Environment, Food & Rural Affairs, Foreign, Commonwealth & Development Office and Department for Science, Innovation and Technology (2024), 'International Climate Finance', published 13 June 2018, last updated 18 November 2024, https://www.gov.uk/guidance/international-climate-finance.
92 Department for Energy Security and Net Zero (2024), 'Joint Brazil-UK statement on International Climate Cooperation', 22 August 2024, https://www.gov.uk/government/publications/international-climate-cooperation-joint-brazil-uk-statement/joint-brazil-uk-statement-on-international-climate-cooperation.
93 Government of Brazil and Government of the United Kingdom (2024), 'Industrial Decarbonisation Hub: Brazil-UK memorandum of understanding', memo, 16 November 2024, https://www.gov.uk/government/publications/industrial-decarbonisation-hub-brazil-uk-memorandum-of-understanding/industrial-decarbonisation-hub-brazil-uk-memorandum-of-understanding; United Nations Industrial Development Organization (2024), 'Brazil-UK Partnership Launches Call for Brazilian Low Emission Industrial-Hydrogen Clusters', press release, 4 October 2024, https://www.unido.org/news/brazil-uk-partnership-launches-call-brazilian-low-emission-industrial-hydrogen-clusters.
94 Office of the President of Brazil (2024), 'Brazil and China Expand Bilateral Relations During State Visit by President Xi Jinping', 20 November 2024, https://www.gov.br/planalto/en/latest-news/2024/11/brazil-and-china-expand-bilateral-relations-during-state-visit-by-president-xi-jinping.
95 UK-China Green Finance Centre (2025), 'About us | Staff and leadership', https://www.ukchinagreen.org/about-us/staff-leadership.
96 HM Treasury (2025), '2025 UK-China Economic and Financial Dialogue'.

a set of voluntary Green Investment Principles for the BRI.[97] To date, there are 49 signatories – mostly financial institutions – to these principles, along with 20 supporters and three observers.[98]

The UK and China also have experience of working together to promote multilateral agreements and standards in green finance. The two countries' central banks, the People's Bank of China and the Bank of England, co-chaired the G20 Green Finance Study Group (GFSG), established during China's G20 presidency in 2016.[99] After a hiatus, the group was re-established in 2021 as the Sustainable Finance Working Group (SFWG), with China and the US as co-chairs.[100] The UK and China could usefully consider how they might work together to increase the effectiveness of the G20 SFWG, as well as other multilateral finance forums of which the two countries are important members, such as the EU-led International Platform on Sustainable Finance.

As an early member of the China-headquartered Asian Infrastructure Investment Bank (AIIB), and a major contributor to the World Bank, the UK has an important bridging role to play as the two institutions look to strengthen their green finance standards.[101]

There may also be value in joint UK–China research on private sector climate finance. Developing a shared understanding of what should qualify as climate finance, and of the financial and non-financial barriers to investment, would be an important contribution at a time when public finance continues to fall far short of what is needed.

The resumption, in January 2025, of the UK–China Economic and Financial Dialogue, including the announcement that China's first renminbi-denominated sovereign green bond would be listed in London, should give fresh momentum to the two countries' work on green finance.[102]

Early-warning systems

The Climate Science for Service Partnership for China (CSSP) is a collaborative climate science initiative between the UK's Met Office, the China Meteorological Administration, and the Institute of Atmospheric Physics at the Chinese Academy of Sciences. Since its establishment in 2014, the CSSP has convened meetings and discussions involving more than 200 scientists from 20 research organizations in the UK and China, produced over 400 peer-reviewed studies, and enabled the development of prototype climate services to boost resilience to climate change.[103]

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97 City of London Corporation (2022), 'Greening the Belt and Road: A UK-China collaboration', updated 18 May 2022, https://www.cityoflondon.gov.uk/supporting-businesses/economic-research/research-publications/greening-the-belt-and-road-a-uk-china-collaboration.
98 Green Investment Principles (undated), 'Membership', https://gipbr.net/Membership.aspx?type=12&m=2.
99 United Nations Environment Programme (2016), 'G20 Green Finance Study Group Meets for the First Time in Beijing', press release, 9 February 2016, https://www.unep.org/news-and-stories/press-release/g20-green-finance-study-group-meets-first-time-beijing.
100 G20 Sustainable Finance Working Group (2021), 'Terms of Reference', June 2021, https://g20sfwg.org/wp-content/uploads/2022/12/ToR-SFWG-FINAL_June-2021.pdf.
101 Niblett (2021), *Global Britain, global broker*, p. 58.
102 HM Treasury (2025), '2025 UK-China Economic and Financial Dialogue'.
103 Chinese Academy of Sciences (2024), 'Chinese, British Scientists Call for Increased Cooperation to Combat Climate Change', 8 November 2024, https://english.cas.cn/newsroom/cas_media/202411/t20241111_694027.shtml; Met Office (undated), 'Climate Science for Service Partnership China', https://www.metoffice.gov.uk/research/approach/collaboration/wcssp/climate-science-for-service-partnership-china.

The CSSP is an important example of how scientists can successfully work across borders to address shared challenges. As such, it could potentially serve internationally as a model for bilateral climate science collaboration.

As extreme weather events become more frequent and more severe, climate services of the sort developed by the CSSP are growing in importance. Early-warning systems have been identified as an effective way to limit the damage climate change causes to human societies, from destruction of infrastructure to loss of life. In recognition of this, UN secretary-general António Guterres launched the Early Warnings For All initiative in 2022, with the aim of ensuring that 'everyone on Earth is protected from hazardous weather, water, or climate events through life-saving early warning systems by the end of 2027'.[104] Rapid advances in forecasting and prediction, coupled with widespread penetration of mobile phones, are driving progress towards this goal.

With a history of cooperation on climate science and forecasting, and political will on both sides to share this expertise with countries on the front line of climate change, there is a clear rationale for China and the UK to coordinate more closely on early-warning systems.

At COP29 in November 2024, Chinese vice-premier Ding Xuexiang emphasized China's support for international cooperation on early-warning systems, and announced a series of measures to help establish a global early-warning network. These included improving interconnectivity between different early-warning systems and sharing China's system with developing countries.[105] For its part, the UK Met Office has developed early-warning services in countries including Tanzania and the Philippines.[106] At COP29, UK development minister Anneliese Dodds announced a new funding package for the Weather and Climate Information Services (WISER) Africa programme.[107]

China and the UK increasingly integrate disaster-risk reduction in their broader national climate adaptation strategies. The UK–China Cooperation on Climate Change Risk Assessment programme notably involved collaboration on flood forecasting and environmental monitoring, both of which are essential in improving disaster response times and protecting vulnerable populations.

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104 United Nations Climate Change (undated), 'Early Warnings for All', https://www.un.org/en/climatechange/early-warnings-for-all.
105 State Council of the People's Republic of China (2024), 'Chinese vice premier calls for strengthening early warnings for all at COP29', press release, 13 November 2024, https://english.www.gov.cn/news/202411/13/content_WS6733db69c6d0868f4e8ecdf7.html; World Meteorological Organization (2024), 'China announces major boost to Early Warnings for All', 13 November 2024, https://wmo.int/media/news/china-announces-major-boost-early-warnings-all.
106 Met Office (undated), 'National early warnings services', https://www.metoffice.gov.uk/services/sectors/international-development/drr-ews.
107 British High Commission Nairobi (2024), 'UK pledges Ksh 660 million to Kenya to boost weather and information services', 15 November 2024, https://www.gov.uk/government/news/uk-pledges-ksh-660-million-to-kenya-to-boost-weather-and-information-services.

With a history of cooperation on climate science and forecasting, and political will on both sides to share this expertise with countries on the front line of climate change, there is a clear rationale for China and the UK to coordinate more closely on early-warning systems and lead efforts to develop global coverage by such systems.

Multilateral processes

The coming year will be pivotal for global efforts to combat climate change. Ahead of COP30, which will take place in Belém, Brazil in November 2025, governments around the world are due to share the third iteration of their nationally determined contributions (NDCs), outlining their plans for reducing emissions and increasing adaptation and resilience by 2035.[108]

Increasing the ambition of these updated NDCs so that they better align with the Paris Agreement's temperature goals poses a significant challenge. The expected exit of the US from international climate diplomacy and the anticipated repeal of domestic climate policies under the second Trump administration will make this more challenging still. Under these circumstances, countries that are firmly committed to addressing climate change have a more important role to play.

This provides an opportunity for China and the UK to raise their profile. At COP29, both countries demonstrated their desire to show climate leadership, with the UK using the conference to announce a revised NDC, making it one of the first countries to formally update its climate targets. The UK's new NDC is ambitious, committing to reducing the country's greenhouse gas emissions by at least 81 per cent by 2035.[109] China also made its presence felt at COP29: early in the conference, Chinese vice-premier Ding made public, for the first time, details of China's climate funding for developing countries – more than RMB 177 billion (US$24.5 billion) since 2016 – constituting an important signal and providing a vital benchmark for climate finance negotiations.[110]

The UK and China should now consider how, together, they can provide bilateral leadership to support the multilateral climate process and push other countries to go further.

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108 Revised NDCs must be submitted no later than 10 February 2025, as required by the UN Framework Convention on Climate Change (UNFCCC). However, many governments have missed past deadlines for climate plans. See United Nations Framework Convention on Climate Change Secretariat (2024), 'Message to Parties of the Paris Agreement: Upcoming deadlines for the communication of nationally determined contributions (NDC), the submission of biennial transparency reports (BTR) and biennial communications of information related to Article 9, paragraph 5, of the Paris Agreement', 16 September 2024, https://unfccc.int/sites/default/files/resource/message_to_parties_to_paris_agreement_deadlines_ndcs_btrs_and_bc.pdf; International Institute for Environment and Development (2023), 'Countries missing deadlines to submit climate plans more than half the time', press release, 19 September 2023, https://www.iied.org/countries-missing-deadlines-submit-climate-plans-more-half-time.

109 UK Parliament (2024), 'The UK's 2035 Nationally Determined Contribution emissions reduction target under the Paris Agreement: Statement made on 12 November 2024', https://questions-statements.parliament.uk/written-statements/detail/2024-11-12/hcws206.

110 Rowlatt (2024), 'Will China step up if Trump takes a step back on climate change?'; State Council of the People's Republic of China (2024), 'Full Text: Address by Chinese Vice Premier Ding Xuexiang at World Leaders Climate Action Summit', 14 November 2024, https://english.www.gov.cn/news/202411/14/content_WS67352200c6d0868f4e8ecea3.html.

Recommendations

Institutionalizing future cooperation

- **UK–China climate cooperation should be strengthened and institutionalized through the establishment of a formal bilateral cooperation framework**, building on previous government-backed initiatives centring on scientific exchange.
- **A bilateral, government-to-government agreement to cooperate on climate change should underpin this mechanism**, enabling bolder and more confident engagement and elevating the status of policy proposals.
- **Cooperation should be grounded in well-defined, practical activities of common interest**, with clear outcomes that can be tracked and evaluated.

Areas for cooperation

Carbon budgeting and control

- **Carbon budgeting:** The UK can provide support and advice to China as the latter seeks to integrate a carbon budget mechanism in its emerging 'dual carbon' framework, thus helping China to achieve the steep emissions cuts needed for carbon neutrality by 2060.
- **Emissions trading:** The UK can continue to cooperate with China as the latter seeks to make its emissions trading scheme – the largest in the world – a more effective tool for decarbonization.
- **Border adjustment:** Bilateral technical cooperation ahead of the entry into force of the UK's Carbon Border Adjustment Mechanism in 2027 could smooth the introduction of this complex new measure and ease trade tensions.
- **Emissions modelling:** Experts from China and the UK could work together to scrutinize their emissions modelling, thereby helping to put ambitious climate policy on a firmer footing.

Climate change mitigation

- **Low-carbon integration:** The UK can convey to China lessons learned from its experience smoothly integrating low-carbon sources in its energy system. This could help China, and the world, gain the full emissions reduction benefit from China's record deployment of renewables.
- **Deployment of low-carbon technologies:** The UK can benefit from an in-depth understanding of the factors and policies behind China's success in deploying low-carbon technologies, thereby helping to accelerate the UK's own energy transition.

Climate risk and climate change adaptation

- **Risk assessment:** Experts from the UK and China could compare the instruments each country currently uses to assess climate risks, and develop existing joint work to consider risks to nature, to better address climate-related vulnerabilities.
- **Adaptation finance:** Researchers from China and the UK can collaborate to develop an economic rationale for adaptation finance, potentially increasing financial flows to the relevant sectors and initiatives.
- **Measuring adaptation progress:** Scientific advisers to the UK and China governments can together develop metrics, targets and accountability mechanisms for adaptation, ensuring the shared ambition to prepare for climate change is systematically reflected in action.
- **Integrating mitigation and adaptation:** Experts from the UK and China can jointly develop the systems-thinking needed for the holistic integration of mitigation and adaptation, increasing the effectiveness of climate action and generating co-benefits.

Supporting international climate action

- **Plurilateral cooperation:** The UK and China could collaborate with strategically chosen third countries, such as Brazil in the run-up to COP30, or with other developing countries ('South–North–South' cooperation), increasing the benefits from bilateral UK–China climate efforts.
- **Green finance:** The UK and China could reinvigorate their work together on green finance, including within the G20 Sustainable Finance Working Group, with a view to increase the flows of much-needed public and private climate finance.
- **Early-warning systems:** China and the UK can coordinate more closely on early-warning systems and lead efforts to develop global coverage by such systems, limiting the damage climate change causes to human societies around the world.
- **Multilateral processes:** The UK and China should consider how, together, they can provide bilateral leadership to support a multilateral climate process currently under severe strain, pushing other countries to do more to confront the urgent climate challenge.

About the authors

Chris Aylett is a research associate in the Environment and Society Centre at Chatham House. Chris has worked with partners in China and across Europe to increase understanding of the risks of climate change, in particular of 'cascading' risks that cross national borders. His current research focuses on the interactions between geopolitics, trade, climate policies and the energy transition. Previously, Chris worked for an international consortium researching the drivers of entrepreneurship in different contexts.

Antony Froggatt is a freelance researcher and writer specializing in climate change and the energy transition. Until 2024, he was deputy director and senior research fellow in the Environment and Society Centre at Chatham House, where his work focused on global energy policy and the geopolitics of climate change. With over three decades of experience, Antony has collaborated with environmental organizations, academic institutions and public bodies globally, particularly across Europe and Asia, contributing to a broad spectrum of projects addressing energy and environmental challenges.

Jiangwen Guo is a senior research fellow in the Environment and Society Centre at Chatham House. Her research interests are international and Chinese climate policy and governance, environment governance, sustainable supply chains, and green growth plans and implementation. She has 30 years' experience in related areas in developing countries, with involvement in significant policy deployment. Between 2019 and 2021, Jiangwen was the director of the UK–China Cooperation on Climate Change Risk Assessment programme, a role in which she provided strategic guidance on efforts to ensure effective climate risk management at the global, national and subnational levels. She currently leads the UK–China climate cooperation initiative at Chatham House, which seeks to consolidate bilateral cooperation through practical action and innovative research, accelerating emissions reduction, building resilience to climate impacts and supporting global climate governance.

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