



TOO HOT TO HANDLE?

THE BANK OF ENGLAND'S ROLE
IN STABILISING THE ECONOMY
IN A WARMING WORLD

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About this report and acknowledgements

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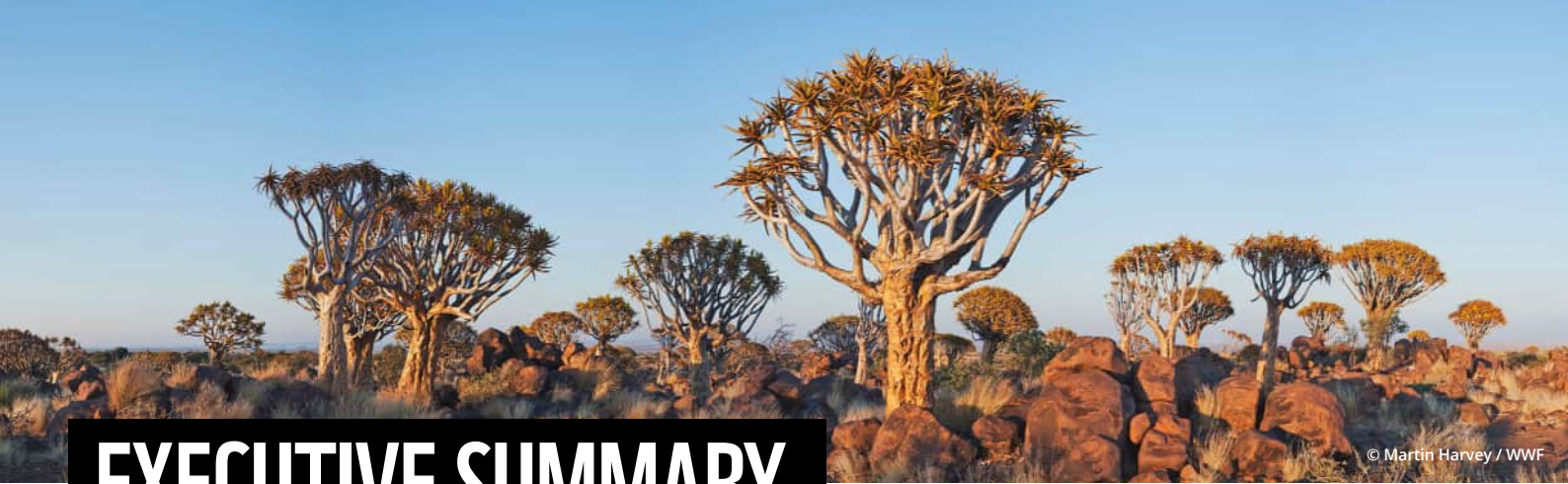
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EXECUTIVE SUMMARY

A. CLIMATE CHANGE AND NATURE LOSS ARE ECONOMIC THREATS TO THE UK

Climate change and nature loss are having, and will continue to have, increasingly negative impacts on price stability, financial stability and growth – bedrocks of the UK economy and the living standards of British people.

Negative impacts on key infrastructure, labour productivity, food security, rising private and public debt, and migration and conflict will contribute to economic instability. Financial stability is directly threatened by the withdrawal of insurance from areas exposed to high physical risk and subsequent asset repricing¹ (one in four UK homes are at risk of flooding by mid-century)². The combined effects of climate change and nature loss in the UK alone are estimated to decrease UK GDP by 4.7% by 2030 relative to baseline GDP growth without environmental degradation.³ This potentially wipes out any gains from the government's growth agenda. Impacts have already been felt: climate change was responsible for a third of the UK's high street food price inflation in 2023, and is expected to cause annual increases in global food prices of 3.23%.⁴

Despite the consensus on the widespread impacts of climate change and nature loss, modelling has struggled to meaningfully quantify the resulting economic damages. Models don't yet fully capture the

multidimensional and non-linear dynamics of interconnected climate- and nature-related risks and have therefore been biased toward surprisingly low values. This has reduced the urgency felt by economic policymakers to stop the build-up of these risks – against a growing consensus that an early green transition yields the best economic outcomes.

B. THE BANK OF ENGLAND'S ROLE IN ADDRESSING AND RESPONDING TO THESE THREATS

An operationally independent Bank of England can and should play a key role in facilitating the net-zero, nature-positive transition, given the direct implications of climate change and nature loss on price and financial stability. First, as the foremost independent economic agency in the UK, the Bank should support a sophisticated understanding of these risks to the macroeconomy among government, parliament and financial services, taking a longer-term perspective than the political cycle allows. Second, in alignment with the Bank's own conclusion that an early and orderly transition helps mitigate financial stability risks, it should align its own policymaking with an orderly transition. This has been reinforced by the recent opinion of the International Court of Justice that failure by 'any organ of the state' to protect the climate from greenhouse gas emissions

could render a state liable in international law.⁵ In aligning its policymaking with an orderly transition, the Bank can, as it is legally required to, support the government's economic strategy, subject to its primary objectives, which currently includes a transition to a net-zero, nature-positive economy.

Despite important actions by the Bank in the last decade and speeches by senior individuals, staff reports and public statements by Bank leadership suggest that attention given to climate- and nature-related risk has waned recently.

Other central banks such as the European Central Bank, Banque de France, De Nederlandsche Bank and the Monetary Authority of Singapore have moved ahead in attempts to grasp climate- and nature-related risks.

C. LAYING ANALYTICAL FOUNDATIONS

At a minimum, the Bank should ensure it has an ongoing, sophisticated understanding of climate- and nature-related risks to the economy and communicate this publicly. The Bank should:

1. **Build diverse technical expertise and capability on climate- and nature-related risk at working and committee level** to analyse the physical and transition scenarios it uses to assess climate- and nature-related risks, and to scrutinise and diversify the models based on these scenarios. For example, the Bank's 2021 Climate Biennial Exploratory Scenario exercise was a positive step but it's likely that the range of physical risk scenarios explored underestimated the severity of climate damages.
2. **Conduct a revised climate exercise within the next year and implement a regular timetable for future scenario analyses and stress testing.** The Bank's intention to integrate climate-related risks into regular financial system stress testing is welcome and essential, but regular standalone climate and nature exercises

will offer time horizons and methodological advances better suited for analysing the forward-looking and uncertain aspects of climate- and nature-related risk.

3. **Conduct a nature stress test in the next 18 months to respond adequately to the Financial Policy Committee's 2024 remit letter.** A 2024 study, in which Bank staff participated, highlighted that nature-related risks (such as soil erosion and pollution) can have economic impacts distinct from climate-related risks. It's been almost a year since HM Treasury asked the Bank to consider the materiality of nature-related risk. However, the Bank has not produced any work in response or publicly communicated on nature since 2022.
4. **Enhance supervisory expectations for climate- and nature-related risks.** The increased detail in the Bank's proposed revised set of climate expectations via CP10/25 was welcome.⁶ They could be improved by ensuring firms use sufficiently long timeframes, include nature-related risks, and support a wider economic transition (rather than only decarbonising balance sheets).

D. MANAGING CLIMATE- AND NATURE-RELATED RISK

Analysis is a necessary foundation, but to deliver on its mandate long-term, the Bank should align its policymaking with an orderly transition, in particular by:

1. Adapting microprudential and macroprudential capital requirements to reflect an entity's exposure to riskier assets, and their contribution to systemic climate- and nature-related risks.
2. Adapting market operations to better align with and support an orderly transition, including targeted term lending schemes, greening its collateral framework, or greening its corporate bond purchase scheme.

3. Coordinating with government fiscal policy to ensure that the Bank's inflation targeting framework can more effectively respond to climate change-induced supply-side shocks (e.g. energy and food price increases).

The Bank describes its job as dealing with the consequences of environmental risks on the financial system, leaving it to government to lead the net-zero, nature-positive transition. While government leadership is undoubtedly essential, this strict delineation ignores the fact that the financial system itself is a driver of climate- and nature-related risk. As a result, the Bank's current policymaking acts against an orderly transition – the very thing it says would support financial stability. The Bank's existing capital and collateral requirements reflect and support the economy's inherent carbon bias and the ongoing financing of environmentally harmful activity. Furthermore, the current inflation targeting regime is ill-suited to addressing the root causes of supply-side inflationary pressures (such as food and fuel price increases) and can indeed have the perverse effect of increasing costs of green investment and the green transition.

Ultimately, economic policymakers and the Bank will need to pull several policy levers together to navigate climate- and nature-related risks to the economy. At the very least HM Treasury and parliament should require the Bank's policymaking to align with (rather than hinder) the green transition, as this is consistent with its core objectives. Such political reassurance would alleviate concerns about the Bank overstepping government action. Furthermore, as climate- and nature-related risks make it increasingly difficult for central bankers to maintain price and financial stability, the coordination of monetary, fiscal and industrial strategy measures becomes an economic imperative.

Precedents exist: policy levers have been used by other central banks to manage climate- and nature-related risks and support the green transition. The Bank and HM Treasury have also coordinated before to support their mutual objectives, such as during the 2020 pandemic to deliver stimulus to targeted parts of the economy. The current government's focus on making the net-zero transition a pillar of its growth strategy creates a particularly valuable opportunity for coordinated action.



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INTRODUCTION

The current government is right to recognise the net-zero, nature-positive transition as a key part of its growth strategy. The net-zero economy expanded by 10% in 2024, with the number of net-zero businesses numbering 22,800.⁷ Future investment in net-zero, nature-positive technologies can stimulate further growth, improvements in productivity and new market opportunities. Continued reliance on fossil fuels and environmental degradation will not lead to sustained growth and rising living standards, as the effects of climate change and nature loss cascade and compound, changing fundamental planetary systems.

Climate- and nature-related risks pose direct challenges to UK inflation and financial stability (core objectives of an operationally independent central bank). Yet the financial system, which the Bank supervises and regulates, continues to finance high-emitting, environmentally destructive economic activity. Climate change and nature loss also pose significant threats to economic growth (the government's economic priority, which the Bank is required to support).

To deliver on its mandate, the Bank can and should be an important ally in supporting an 'early and orderly' green transition – which it has also acknowledged will be most conducive to financial stability. To navigate the significant economic implications of climate change and nature loss, the Bank and the government should be pulling in the same direction to accelerate the transition, while enhancing system-wide resilience to weather these risks. However, this is not our assessment of the status quo.

This report sets out how economic policymakers in the UK government and parliament can ensure that the Bank of England is supporting a transition to a net-zero, nature-positive economy. It outlines:

Section 1 The evidential basis, drawing the links between climate- and nature-related risks, and UK price stability, financial stability and growth (the Bank's objectives).

Section 2 The challenges environmental risks (and particularly quantifying them) have posed for central banking.

Section 3 The progress that the Bank has made so far – particularly on climate-related risk.

Section 4 Recommendations around actions the Bank should take, including:

- 4.1** Foundational assessments that should be conducted to ensure that its understanding of environmental risks to the economy keeps up to date with the science and latest methodological advances.
- 4.2** The policymaking tools that the Bank has, and should be using, to regulate for environmental risk and align with, rather than undermine, the transition.
- 4.3** The challenges central banks face in taking unilateral action and how better forms of coordination between the government and the Bank are necessary to ultimately address climate- and nature-related risks to the UK economy.

SECTION 1: HOW CLIMATE- AND NATURE-RELATED RISKS THREATEN UK GROWTH, PRICE STABILITY AND FINANCIAL STABILITY

The Bank of England is responsible for laying the foundations for a thriving UK economy through its primary objectives of ensuring price stability, financial stability, and the safety and soundness of regulated financial institutions.⁸ These objectives are executed respectively by the Monetary Policy Committee (MPC), the Financial Policy Committee (FPC) and the Prudential Regulation Authority (PRA). The Bank also has a secondary objective to support the government's economic policy, including the transition to a climate-resilient, nature-positive and net-zero economy.^{9 10} That climate change and nature loss threaten the achievement of these objectives is now widely

acknowledged within the central banking community.¹¹

The Bank has itself said: "Climate change and the transition to a net-zero economy are relevant to the Bank of England's mission to promote the good of the people of the United Kingdom by maintaining monetary and financial stability."¹² Drawing from the substantial body of work on this topic by the Network for Greening the Financial System (NGFS), Figure 1 summarises the multiple transmission channels through which climate change and nature loss could undermine economic prosperity.

Climate- and nature-related risk transmission channels

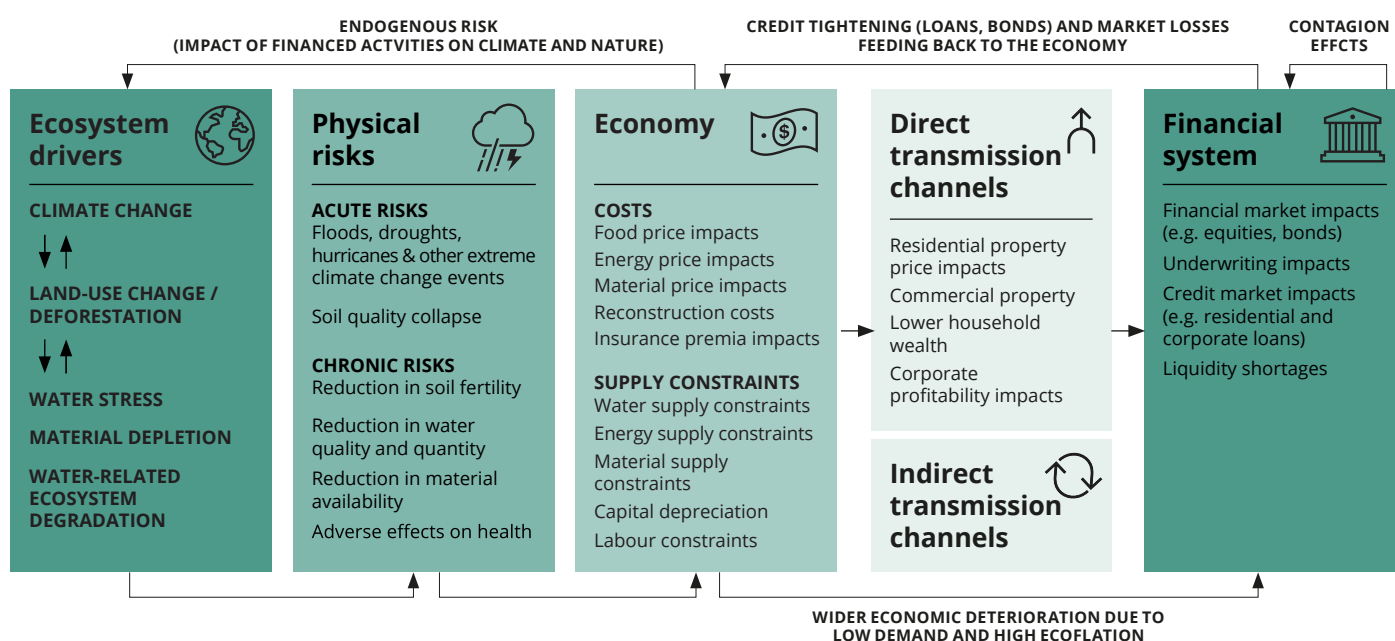


Figure 1 Climate- and nature-related risk transmission channels
(Source: WWF adaptation¹³ of NGFS Conceptual Framework 2024¹⁴)

IMPACT ON UK GROWTH

The Bank of England has said that the physical impacts of climate change will influence UK growth trajectories through various transmission channels over both the short and long term.¹⁵ For example, the increased frequency and severity of extreme weather events, such as flooding and heatwaves, may slow growth through damages to key infrastructure, losses in productivity and negative effects on the labour force. Recent analysis estimates that the chronic effects of climate change will lower global GDP by around 15% by 2050, under current climate mitigation policies.¹⁶ The latest estimates from the Office for Budgetary Responsibility (OBR) are that the UK's annual GDP will be 7.8% lower by 2073 under its core trajectory of under 3°C global warming.¹⁷

As shown in Figure 1, nature degradation adds multiple further physical impacts. Soil fertility decline, global food security risks, anti-microbial resistance and zoonotic disease outbreaks are all high-impact and high-likelihood nature-related risks facing the UK, which may materialise over shorter timescales than projected climate impacts. The Green Finance Institute estimates that the chronic effects of climate change and nature loss in the UK alone could lower UK GDP by 4.7% by 2030 relative to baseline GDP growth without environmental degradation, while further acute shocks of climate change and nature loss could compound these effects and lead to GDP losses of over 8% this decade.¹⁸ Importantly, climate- and nature-related risks are interconnected (with each driving and amplifying the other) and both are subject to unpredictable 'tipping point' dynamics, where high-magnitude, irreversible impacts may materialise very suddenly.¹⁹



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IMPACT ON PRICE STABILITY

The impacts of climate change and nature loss can be expected to increase prices and price volatility in the UK economy, via projected supply-side shocks to global food and energy supplies. The Bank references a growing body of literature suggesting that extreme weather events will have large supply side (and thus inflationary) effects, and that these shocks are likely to become more frequent and severe as temperatures rise.²⁰

Some effects are already evident: climate change was responsible for a third of the UK's high street food price inflation in 2023, and the price of foods hit by extreme weather are rising over four times faster than others in the average shop.^{21 22} Looking ahead, European Central Bank (ECB) researchers estimate that climate impacts could increase global food prices by 3.23% per year by 2035, primarily through negative effects on crop yields.²³ Chronic nature loss, such as declines in wild pollinators and soil fertility, may exacerbate food-related supply shocks, intensifying rising food prices and overall inflation for UK households and businesses. As an open economy, the UK is highly integrated into global trade and exposed to external shocks.²⁴

UK price stability is also significantly affected by the price volatility of fossil fuels bought on the global market, as was made evident by the energy price shock in the aftermath of the Russian invasion of Ukraine. An orderly

net-zero and nature-positive transition, facilitated by carefully considered policies that account for any potential price level impacts of supportive measures (e.g. carbon taxes or environmental regulations), will be essential to support long-term price stability. Ultimately, maintaining exposure to global fossil fuel markets poses growing risks to price stability.^{25 26} The Bank has said it is "likely that the drive to decarbonise, particularly in the power sector, will reduce the aggregate impact of carbon price shocks over the longer term".²⁷

The typical central banking inflation response of adjusting interest rates may be appropriate for 'demand-side' shocks (e.g. lower interest rates can help revive sluggish consumer spending). However, it is not as effective for controlling supply-side shocks that are expected from the physical impacts of climate change and nature loss (such as increasing food prices).²⁸ Increasing interest rates can also make the green transition more costly, due to the capital costs of renewable energy, housing retrofits and electrification.²⁹ Indeed, recent interest rate rises had the perverse effect of impeding the deployment of technologies that could shield the UK domestic energy sector from future inflationary price shocks.³⁰ This recent experience revealed the challenges central banks, including the Bank of England, face in controlling supply-side inflation, which will only become more pressing as climate- and nature- related risks mount.



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IMPACT ON FINANCIAL STABILITY

Climate change and nature loss also threaten the safety and soundness of individual financial institutions and the financial system as a whole. In the context of slower growth and rising inflation, banks may face higher credit risks if firms and households are unable to service loans, insurers may face higher underwriting risks caused by higher insured losses, and all financial institutions may be affected by disruptions or damages to their operations. Additionally, some unanticipated market or strategic risks could result in the rapid repricing of financial assets, threatening financial stability and in some cases triggering a financial crisis. For example, the withdrawal of insurance in flood zones could cause widespread repricing of mortgages.³¹ The ECB found that 72% of euro area firms are critically dependent on ecosystem services, and the same firms account for three-quarters of all corporate bank lending in the region, which makes it an issue for financial stability.³² Widespread, disorderly asset-price adjustments threaten savings and pensions of UK citizens and

financial instability makes it harder and more expensive for businesses to invest and for households to access mortgage credit, in turn exacerbating economic downturns. Research by the Bank concludes that an early, well-managed transition will minimise costs and maximise opportunities for the UK financial sector³³ and help mitigate financial stability risk.³⁴

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Importantly, the UK financial system is not only exposed to climate- and nature-related risks; it contributes to the emergence of these risks by providing finance, insurance and advisory services that enable environmentally unsustainable activities to persist.³⁵ HM Treasury's recent Financial Services Growth and Competitiveness Strategy placed the finance sector "at the heart of the government's plan to grow the economy and put more money in people's pockets",³⁶ yet the sector also facilitates negative outcomes by financing activities that exacerbate climate change and nature loss. For instance, a recent study found that UK financial institutions are major providers of financial services to companies implicated in deforestation in the Brazilian Amazon and Indonesian peatlands.³⁷ The UK's financial sector has, so far, not accelerated its support of green sectors or scaled down its support to unsustainable sectors at the pace required to meet international climate and biodiversity targets.³⁸ The persistent misalignment of financial flows with net-zero and nature-positive economic activities further contributes to the build-up of potential system-wide physical and transition risks.



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SECTION 2: CHALLENGES TO QUANTIFYING THE ECONOMIC AND FINANCIAL IMPACTS OF ENVIRONMENTAL RISKS

The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report estimates that under the emissions implied by current policies, global heating could reach 3.2°C by 2100, with significant and systemic negative impacts to the habitability of entire regions, human health, food production and social stability.^{39 40} The Institute and Faculty of Actuaries and University of Exeter point out that global warming may proceed far quicker than the IPCC's median estimates, due to the Earth being more sensitive to changes in greenhouse gases than previously thought, feedback loops between climate change and nature loss, and the related triggering of tipping points. As a result, they judge it "highly likely" that global temperature rise will exceed 2°C by 2050 on current trajectories, with "catastrophic" impacts on mortality, water stress, socioeconomic fragmentation and migration.⁴¹ It is difficult to imagine how the UK economy would be insulated from the wide-ranging socioeconomic impacts of these changes, given the criticality of ecosystem services such as stable weather, food and clean water.

Central banks and financial supervisors rely upon establishing evidence of economic risk

as a prerequisite to justifying policy interventions.⁴² They have accordingly dedicated substantial efforts in recent years to exploring the potential magnitude of economic and financial losses from environmental changes using scenario analysis approaches.⁴³ Developed in the context of the IPCC, scenario analysis describes the exercise of exploring future environmental and policy trajectories, often using integrated assessment models to quantify potential economic losses. While many central banks have undertaken climate scenario exercises, nature scenarios remain at an earlier and more experimental stage of development.

Both climate and nature scenario exercises have resulted in widely varying estimates of potential economic impacts, with a bias toward surprisingly low estimates. For example, one analysis looked at a small number of anonymised samples of public climate disclosures from regulated UK investors in 2023. Extrapolating from climate scenario modelling of effects on global and national GDP, this predicted very marginal impacts on their portfolios (ranging from -0.1% to -0.5%) in a 3°C world. In some cases predicted effects were lower in a 3°C world

than in the case of an orderly transition.⁴⁴ These marginal impacts contradict the scientific consensus about the widespread physical impacts of extreme climate change.⁴⁵

The NGFS has frequently revised the damage functions used in its climate scenarios, and the latest estimated global losses from climate change by 2050 are now three times higher than earlier projections.

On the one hand, these unrealistic results are partly a consequence of particular assumptions within the underlying economic models themselves. For example, models often assume that technological solutions (which may not yet exist) can compensate for losses of ecosystem services – and even, perversely, that this will have a positive impact on GDP, as these technological solutions will need to be paid for, replacing ecosystem services that were once free for all.⁴⁶ Lack of historical precedent for many climate and nature impacts means that some important aspects of models, such as climate damage functions, can only ever be calibrated in an arbitrary way, despite having a huge effect on the magnitude of results. The NGFS has frequently revised the damage functions used in its climate scenarios, and the latest estimated global losses from climate change by 2050 are two to four times higher than earlier projections.⁴⁷

On the other hand, uncertain results are also a reflection of the inherent uncertainties involved in adequately capturing the multidimensional and non-linear dynamics associated with interconnected climate- and nature-related risks, regardless of the modelling approach used. For instance, the representation of tipping points (unpredictable yet high-magnitude shifts in climate systems or ecosystem functioning)

within economic models remains enormously challenging.⁴⁸ This, and the omission of important factors such as sea level rise, and other dynamics such as migration and conflict induced by environmental crises, will likely also lead to underestimates.

This inherent uncertainty presents problems for central banks.^{49 50} First, projections of potential economic losses resulting from both climate- and nature-related risks remain mispriced in financial markets. For example, many pension funds are still assuming that 2-4.3°C of global warming will have only a minimal impact upon their portfolios.⁵¹ Rapid asset repricing once risks materialise may seriously undermine financial stability. Second, central banks – as depoliticised institutions – rely on modelled and quantified risk estimates to justify their involvement in topics that could be seen to be political, and hence highly uncertain results fail to legitimate further action. At the Bank of England, this appears to have resulted in a sense of complacency about the extent to which climate- and nature-related risks threaten the Bank's objectives.⁵²

However, challenges to quantifying the potential magnitude and timing of risks should not excuse inaction when there is clear scientific consensus on the likely negative impacts of continuing business-as-usual trajectories. Central banks thus require a shift in perspective to tackle materialising, but hard to quantify, economic and financial risks.⁵³ In recent years, some have argued that the established scientific consensus on these catastrophic impacts provides a sufficient evidence basis for financial policymakers to act to proactively increase the resilience of the economy and financial system to climate- and nature-related risks. This requires not only tackling potential risks to financial institutions, but also preventing financial institutions from enabling negative impacts upon climate and nature. Where the financial sector decides to invest influences the future direction of economic activity, and

its continued misalignment with broader government goals on climate and nature also contributes to the build-up of systemic risk.

Acting on unquantifiable risks would require central banks to supplement current quantitative modelling with more discretionary and qualitative forms of risk assessment.⁵⁴ This approach would facilitate safety and resilience, even in the face of radical uncertainty.⁵⁵ While this alternative approach is clearly justified by the Bank's mandate to preserve long-term financial and price stability, acting upon this alternative evidential basis will also require more strategic coordination between the Bank of England and wider government to ensure democratic legitimacy. The next sections assess the Bank's current progress on assessing and managing climate- and nature-related risks, before presenting our own recommendations for improvement, and reflections upon future avenues for policy coordination.



SECTION 3: THE BANK OF ENGLAND'S PROGRESS SO FAR ON CLIMATE- AND NATURE-RELATED RISKS

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The Bank of England was an early pioneer in climate risk analysis and made significant initial progress. However, its work on the topic has since slowed, accompanied by very limited public sharing of its thinking on nature risks. Despite the growing body of evidence outlined above, the Bank's current integration of climate and nature considerations into its work is not commensurate with the potential severity of the risks posed.

The Bank of England's progress on climate and nature risks

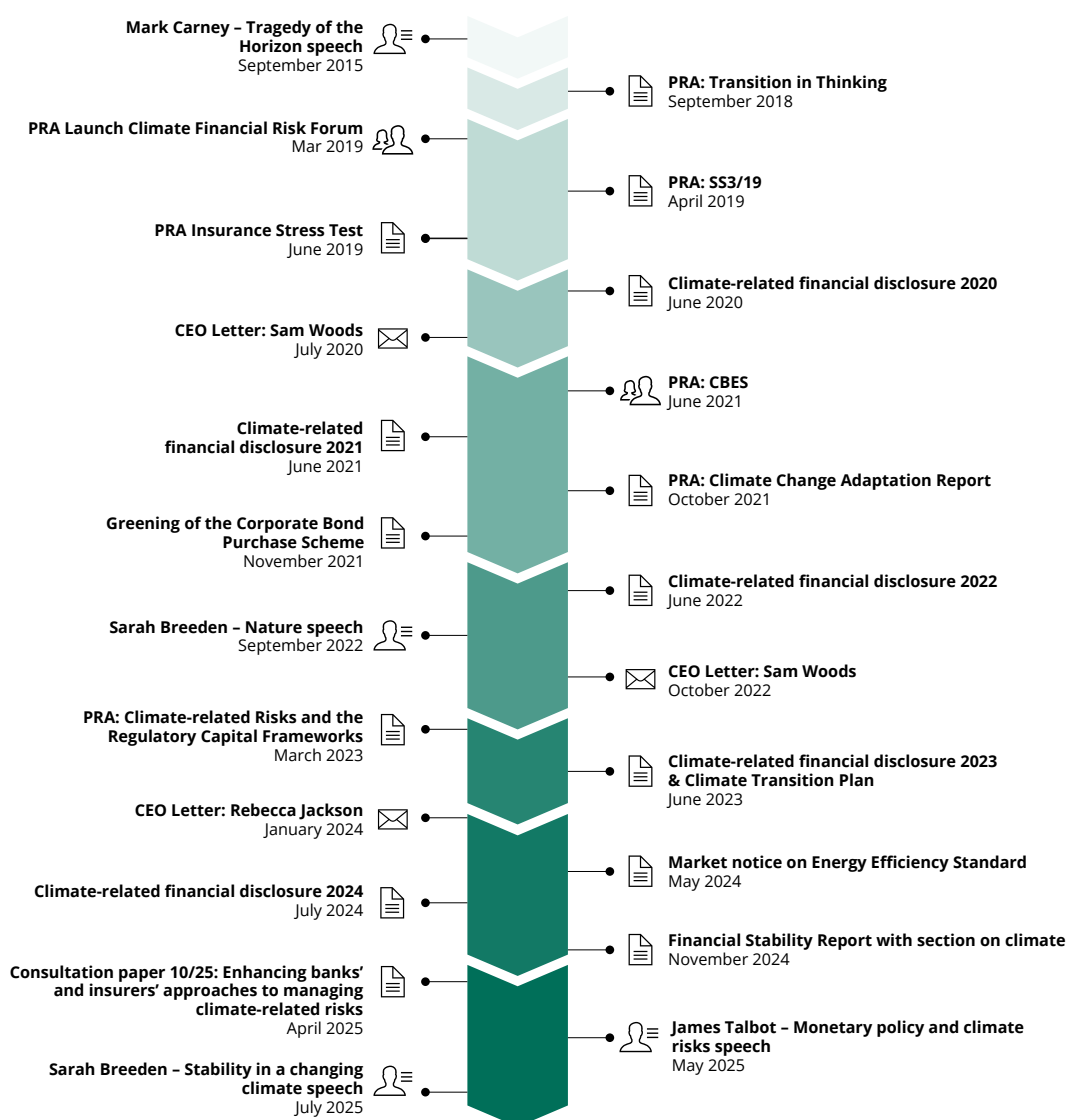
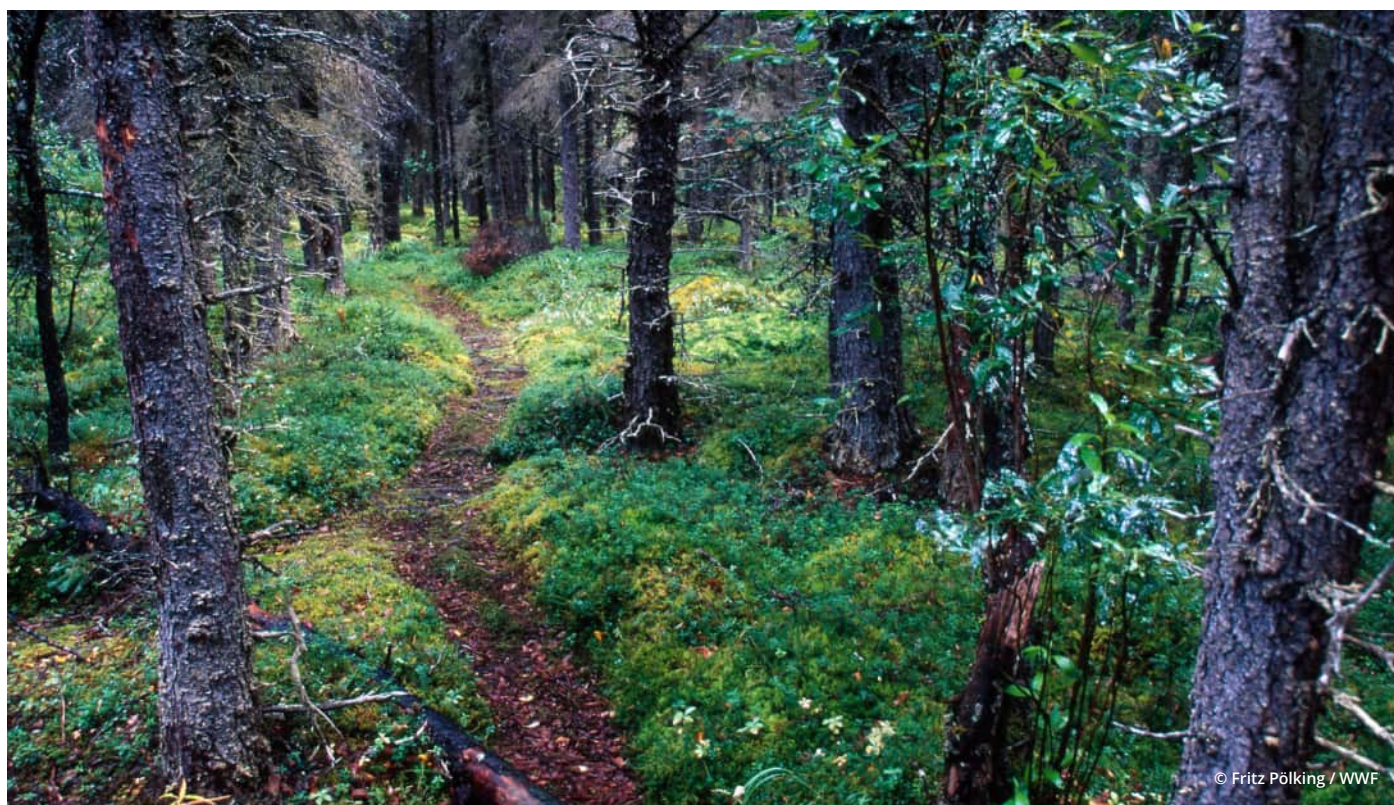


Figure 2
The Bank of England's progress on climate and nature risks

The Bank of England once led the central banking agenda on climate-related risks. In 2015, its then governor, Mark Carney, presented his Tragedy of the Horizons speech to insurers at Lloyd's of London, on the financial stability risks of climate change. In the following few years, the Bank of England and the PRA took the lead in conducting analysis and implementing policy measures, including becoming the first prudential regulator to set supervisory expectations for climate risk management;⁵⁶ launching the Climate Biennial Exploratory Scenario (CBES) exercise in 2021;⁵⁷ and taking steps to green its quantitative easing programme.⁵⁸ It also set up various forums to discuss climate-related risks (such as the Climate Financial Risk Forum, established by the PRA and FCA), explored new approaches through discussion papers, and engaged actively with international bodies such as the NGFS and the Financial Stability Board on developing conceptual frameworks for climate risks. From time to time, working level bank employees have also authored articles and research pieces through the 'Bank Underground' series and senior figures speak publicly on the topic of climate change.^{59 60}

However, there appears to have been a decline in work on environmental topics since Mark Carney's departure in 2020, his replacement by Andrew Bailey, and the sharp uptick in inflation over 2021-22. This decline is reportedly due to reduced capacity and ambition on these important topics, despite the presence of interested and high-quality expertise inside and outside the Bank and the mounting evidence for the relevance of nature and climate measures. For example, governor Andrew Bailey publicly stated in February 2024 that the Bank's work and resources on climate change would be "trimmed back".⁶¹ On the ground, officials who previously worked in climate and nature risk roles confirmed that investments in regulatory capacity have remained low in recent years, with staff hours being cut by a third in some areas between 2022 and 2024.⁶² These former insiders have suggested that the Bank now faces major blind spots around sources of financial and price stability risk from climate change and nature loss, with nature a particular cause for concern. While the Bank continues to engage through speeches and within groups such as the



NGFS, former officials are concerned that its technical climate risk modelling and supervisory capabilities have fallen behind other central banks and, crucially, behind the private sector that it is supposed to supervise.⁶³ On nature, the Bank's limited work to date was last communicated in 2022 via its Financial Stability Report⁶⁴ and a speech⁶⁵ by the now deputy governor Sarah Breeden. Responding to the 2021 FPC remit letter asking the Committee to consider the relevance of broader environment-related financial risks, Breeden suggested that more research was needed to demonstrate how nature loss and degradation give rise to sufficiently distinct threats – aside from their direct connection to climate risk – to merit dedicated analytical and policy focus from the Bank outside of current practices. Yet recent academic evidence shows that nature risks such as pollution, soil erosion, pests and pollination losses – can impact the economic and financial system in ways that are not captured within current climate risk assessments.⁶⁶ Recent reports suggest that whilst the Bank collaborated on this research, it ultimately declined to put its name to it.⁶⁷

Former insiders have suggested that the Bank now faces major blind spots around sources of financial and price stability risk from climate change and nature loss, with nature a particular cause for concern.

These rollbacks have not occurred in a vacuum but relate to the changing politics of the green transition. In 2023, the then chancellor Jeremy Hunt removed climate change as a critical area of government policy that the Bank's financial policy committee should support alongside financial stability (although more recent letters have attempted to re-focus the Bank's work on climate- and

nature-related risk). The UK government has also generally favoured voluntary initiatives by industry in the area of climate- and nature-related risk.⁶⁸ Both these factors led to scrutiny from some over whether the Bank's climate work was overstepping its mandate. Relatedly, whilst the Bank has taken action in recent years including through incorporating climate into its stress testing work and its bank operations (as detailed below), it continues to take a narrow view of its role with respect to climate- and nature-related risks to the economy: that it deals with the consequences of these risks to its objectives but doesn't play a role in reducing the build-up of these risks.

However, such a position is not serving the UK economy or public. By not sufficiently reflecting climate- and nature-related risks in its policy instruments, the Bank is supporting the continued financing of carbon-intensive and environmentally damaging activities, and in turn contributing to the build-up of risks that threaten its own objectives. Equally, siloed fiscal and monetary interventions are not effective in dealing with the inflationary effects of climate- and nature-related shocks such as food price increases.

The current government's strategy of transitioning to a net-zero, nature-positive economy provides a renewed opportunity for improved collaboration between the Bank and government to address these risks more effectively. HM Treasury and parliament should expect and support the Bank to align its policymaking with a green transition – which is consistent with the Bank's core mandate and the government's strategy. Equally the Bank should ensure it has a robust grasp of these risks, communicate this to government and parliament, and work to coordinate the use of its tools with other economic policymaking to prevent the build-up of risk.

SECTION 4: RECOMMENDATIONS

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Our framework for how the Bank of England can step up to the task of managing climate- and nature-related risk is illustrated in Figure 3. Appropriate prioritisation and staffing of technical risk assessment and supervision is an immediate step needed to ensure the Bank has a solid handle on these sources of risks to price stability, financial stability and the safety and soundness of firms, as is public communication of this analysis. While these assessments are essential and valuable, due to the deep complexity of environmental risks they remain a means to explore

risks rather than precisely manage them. Considering this, the Bank's policy tools to *manage* climate- and nature-related risks will need to be deployed on a more qualitative and discretionary basis that in many cases requires increased strategic coordination with government economic and environmental policy. In other words, challenges with quantitative modelling of economic impacts should not prevent further action from being taken to prevent the build-up of these risks, given the strength of the scientific evidence on the potential scale of these risks.

The integration of climate- and nature-related risk into the Bank's policymaking

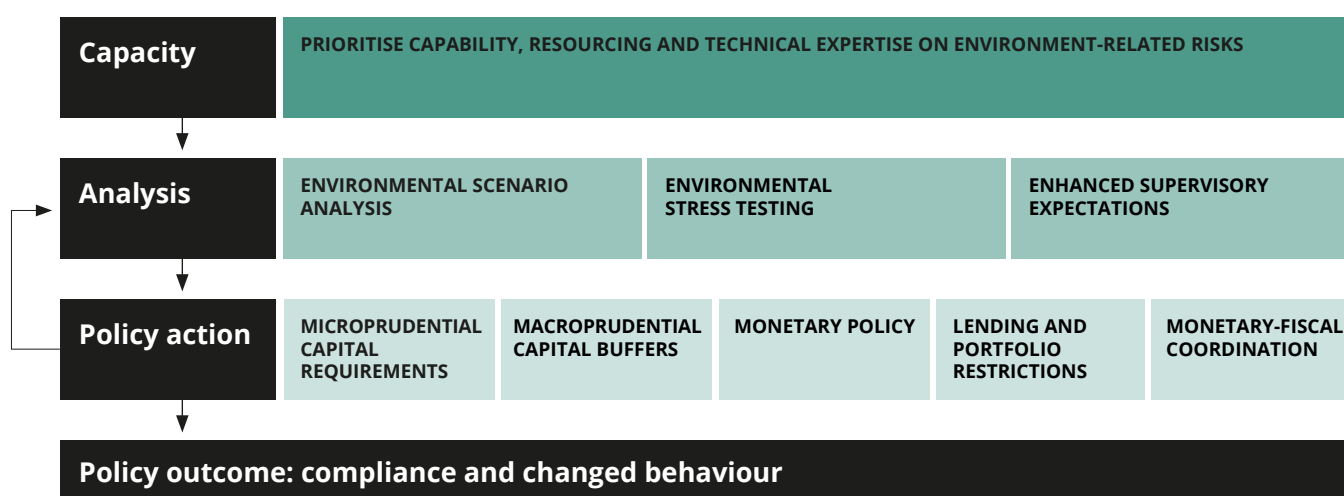


Figure 3 The integration of climate- and nature-related risk into the Bank's policymaking

SECTION 4.1:

WHAT SHOULD THE BANK DO TO ASSESS CLIMATE- AND NATURE-RELATED RISKS?

1. CAPACITY

An immediate step is for the Bank to a) acknowledge the renewed emphasis of climate and nature in its remit, as relevant to its core mandate, and b) resource the examination of these risks appropriately. As novel sources of risk – and drivers of structural economic change – climate change, nature loss and the green transition require the Bank to develop and draw on significant technical expertise, including from a range of disciplines.

RECOMMENDATION

Build capability and adequate resourcing on climate- and nature-related risk internally, ensuring diverse technical expertise at working and committee-level.

Current progress: The Bank has a centralised Climate Hub which coordinates its policy response to climate change, as well as dedicated staff time within other departments such as financial supervision. Despite climate and nature being reinstated into the FPC’s remit, the Bank has not publicly reversed Governor Bailey’s 2024 statement that it would “trim back” work on climate change. Indeed, Section 3 outlined how staff hours have been reduced over recent years. Several former employees confirmed that robust risk reviews of banks and insurers have been held back on capacity grounds, indicating technical expertise is currently going in the wrong direction. The Bank appears to access academic and other specialist expertise on a relatively ad hoc basis for climate- and nature-related risks (for example, to support the CBES exercise).

Action by other central banks and supervisors:

Other central banks have made sustained commitments to resourcing technical climate and nature expertise internally, as well as building up networks of external experts. For example, ECB board member Frank Elderson publicly stated in 2024 that all colleagues needed to understand what climate- and nature-related risks meant for their work and the ECB also recruited a full-time climate scientist to support its work.⁶⁹ The Banque de France recently launched a French nature risk macroeconomic modelling consortium, collaborating across both policy and academic research institutions.⁷⁰

Changes needed: The Bank should demonstrate renewed capacity on climate and nature-related risks. This includes dedicated technical expertise within the Climate Hub, as well as wider Bank divisions such as macroeconomic modelling teams and support for the FPC and MPC.⁷¹ The Bank needs this expertise to: a) scrutinise the physical and transition scenarios it is using for assessing climate- and nature-related risks; and b) scrutinise and diversify the models it is inputting these scenarios into. The Bank should establish a scientific advisory committee, recruit expertise internally and/or conduct external collaborations to access this diverse expertise. Particularly important for assessing scenarios will be representation from climate and environmental sciences – as recently recommended by the Institute and Faculty of Actuaries. For modelling, diverse methodological approaches to economic analysis – as recommended by the NGFS – will be essential, since these have relevant tools for exploring the distinct risks posed by climate change and nature loss.⁷²

2. STRENGTHENING THE BANK'S OWN RISK ASSESSMENTS THROUGH SCENARIO ANALYSIS AND STRESS TESTING

The Bank should renew its own technical analysis of climate- and nature-related risks facing individual financial institutions, the financial system and the overall UK economy. The central component of this risk assessment will be scenario analysis and stress testing. As explained in Section 2, forward-looking scenarios are an essential tool for the Bank to explore the range of possible risks facing the UK macroeconomy under high uncertainty and longer time horizons than traditional economic forecasting. Stress-testing exercises ask banks (and other financial market participants) to estimate potential impacts to their balance sheets from hypothetical future shocks, often based on the aggregate and granular economic results of scenario exercises. Exercises such as the 'System-Wide Exploratory Scenario' also incorporate interconnections between financial market participants, a key driver of systemic risk. While they still face a range of challenges in generating precise risk estimates (discussed in Section 2), regularly applying these exercises to climate- and nature-related risks will help the Bank assess the system-wide risks to the UK economy, keep pace with the complex evolution of these risks, and communicate them.

RECOMMENDATION

Undertake a revised climate exercise within the next year and implement a regular timetable for future scenario analysis and stress tests. Undertake an initial nature exercise in the next 18 months.

Current progress: On climate-related risk, the Bank conducted an insurance stress test in 2019 – which included an exploratory exercise

related to climate change – and launched the CBES in 2021, which made it a frontrunner at the time. While widely accepted as a good first step on climate analysis, the CBES exercise had shortcomings that were acknowledged by the Bank itself, which led to both overestimates and underestimates in potential losses for banks and insurers.

Overestimates of potential losses were possible because fixed balance sheet assumptions were used – assuming banks would keep financial portfolios fixed over the 30-year time horizon and not dynamically adjust their activities to manage risks. Underestimates were possible because of missing risk transmission channels (e.g. climate risk drivers such as sea-level rise were not included) and amplification mechanisms (for example, it failed to account for how negative impacts can cascade from directly affected sectors, like oil and gas production, to other sectors that rely on them for demand or supply, like electricity). Over 40% of scenario participants felt that the range of physical risk scenarios explored was too narrow, underestimating how severe climate damages could become.⁷³ The CBES also did not account for how declining profitability and capital levels within banks can lead to declining macroeconomic performance, which in turn can amplify the financial risks banks themselves face (i.e. second-order macroeconomic feedback effects).

There are currently no plans to remedy these shortcomings and take advantage of significant methodological developments over recent years – including comprehensive updates of long-term scenarios and the publication of new short-term scenarios by the NGFS.⁷⁴

Action by other central banks and supervisors:

The ECB has conducted two economy-wide climate stress tests – the first as a joint learning exercise conducted in a 'bottom-up' fashion with participating banks, the second as a centralised 'top-down' stress test.^{75 76} These exercises included short-term (three years) scenarios that assumed fixed

balance sheets, and long-term scenarios (30 years) where banks were allowed to adjust their balance sheets dynamically. The second exercise included innovations such as supply chain amplification and was recently used by ECB researchers to explore how the results could calibrate a macroprudential capital buffer.⁷⁷

While nature scenarios remain at an earlier stage of development, with subsequent stress tests even more so, several central banks have conducted exploratory nature or integrated climate-nature exercises. De Nederlandsche Bank ran a series of three transition and one physical risk scenarios, also analysing implications for credit losses (banks) and market losses (insurers and pension funds) for transition risks.⁷⁸ The ECB, in partnership with others, recently modelled four scenarios considering physical and transition risks from both climate change and nature loss.⁷⁹ The Banque de France recently announced a French modelling consortium dedicated to macroeconomic modelling of nature-related risks.⁸⁰ The NGFS has published a technical document detailing several avenues for the development of exploratory nature scenarios within central banks.⁸¹

Changes needed: The Bank should:

- **Conduct a revised climate scenario exercise/climate financial system stress test within the next year.** This is to understand potential climate impacts on the UK macroeconomy and identify priority areas for policy action. The Bank should build on previous exercises by using a wider range of scenarios, including those reflecting more severe physical risks, and more diverse models, to reflect the deep uncertainty associated with quantifying climate-related risks (Section 2). As emphasised in our recommendation on capacity, it is critical that the Bank accesses relevant expertise (internally and externally) to design these exercises, to interrogate scenario choice (e.g., capturing sufficiently severe physical risk scenarios⁸²) and model choice (e.g., ensuring chosen models do not inadvertently 'mute' macroeconomic impacts).

- **Conduct an exploratory nature scenario exercise within the next 18 months.**

This is a core element to adequately respond to the FPC's 2024 remit letter from HM Treasury to consider the materiality of nature-related financial risks for its primary objective of financial stability.⁸³ Again, the Bank should ensure it uses a diverse set of scenarios and models to capture the wide uncertainty associated with nature risks (Section 1). It should take account of NGFS guidance regarding nature-economy modelling, by ensuring that the models it uses take account of the distinct characteristics of nature-related risks (e.g., multidimensionality, limited adaptation possibilities). It should also clearly communicate any model and scenario limitations that might lead to an underestimation of risks,⁸⁴ supported by appropriate expertise (see our first recommendation). This exercise can form the basis of future nature or integrated climate-nature stress tests.

- **Publish a forward schedule of climate scenario analysis and stress testing.**

This is so that banks know when their involvement will be required with future work. It can be incorporated into the Bank's latest approach to overall stress testing of the banking system, which is designed to create space to assess and address evolving risks facing the banking sector.⁸⁵

Where relevant to the time horizon, we encourage the Bank to include climate and nature risks into regular stress testing linked to the financial cycle,⁸⁶ and within exploratory exercises – such as its recent System-Wide Exploratory Scenario.⁸⁷ However, this should remain complementary to, not preclude, a regular schedule of climate/nature scenario exercises and stress tests, as above. This is because nature/climate exercises can explore a wider set of time horizons and narratives to help deal with the forward-looking and highly uncertain aspects of these risks (Section 1).

3. ROBUSTLY SUPERVISING FINANCIAL INSTITUTIONS' ASSESSMENTS OF CLIMATE- AND NATURE-RELATED RISKS

The Bank supervises how individual financial institutions – specifically banks and insurers – manage financial risks such as credit and market risks, and issues guidance on this agenda. The Bank's own assessments remain central for understanding system-wide risks under various scenarios.

However, supervision helps to identify gaps in financial institutions' procedures around risk management so is an important complementary form of risk assessment.

RECOMMENDATION

Enhance supervisory expectations on both climate- and nature-related risks.

Current progress: The introduction of Supervisory Statement 3/19 (SS3/19) was a milestone, outlining the Bank of England's expectations for banks and insurers to manage financial risks arising from climate change.⁸⁸ The Bank recently issued a revised set of climate supervisory expectations – CP10/25 – but has not set out any supervisory expectations on nature-related risks, including in its recently updated guidance.⁸⁹

Action by other central banks and supervisors: Equivalent measures at the ECB or the Monetary Authority of Singapore (MAS) are more detailed. The MAS has issued guidelines in environmental risk management for banks, asset managers and insurers, including loss of biodiversity and setting an expectation for financial institutions to have transition planning processes in place.⁹⁰ The ECB also incorporated other environmental

risk drivers – such as water stress, resource scarcity, biodiversity loss and pollution – into its supervisory expectations for banks.⁹¹

Changes needed: The proposals in CP10/25 are welcome, but we highlight three main areas for improvement. The PRA should i) integrate nature-related risk (rather than a sole focus on climate risk) into its supervisory expectations, ii) clarify expected timeframes to be used by firms (by setting out the number of years, rather than relying on their own interpretation of 'short', 'medium' and 'long' term), and iii) specify that firms take a strategic and rounded approach to risk management, which considers their place in the net-zero transition (and planning for such a transition, as per the Transition Plan Taskforce's guidance).⁹² This update could also impose particular requirements such as for financial institutions to require counterparties to have a transition plan in place (building upon current guidance that "firms should seek to understand potential current and future impacts of physical and transition risk of their clients").⁹³ Beyond this, the PRA should use published transition plans to consider the transition risk profile of surveyed financial institutions and entities.⁹⁴



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SECTION 4.2: HOW SHOULD THE BANK ACT TO MANAGE CLIMATE- AND NATURE-RELATED RISKS?

Consistent, public analysis of climate- and nature-related risks, which includes the appropriate expertise and analytical methods, is a critical foundation for policymakers within the Bank, and beyond, to manage these risks. But clearly, analysis and supervisory expectations alone will not manage the risks appropriately.

The Bank has several potentially powerful policy tools at its disposal that it should adapt and deploy to reduce risks and increase the resilience of the UK financial system to those risks that do ultimately materialise. Ensuring financial institutions are aligned with climate and nature targets in the UK and internationally will help to manage potential transition risks,⁹⁵ as well as the potentially catastrophic physical risks which present the greatest threat to price and financial stability if the transition does not happen at the necessary speed and scale.⁹⁶ The Bank's toolkit will be most effective in this regard in support of government policy towards an orderly green transition.

This section discusses how the Bank could adapt various parts of its toolkit to manage the transition, physical and systemic risks associated with climate change and nature loss. Some tools require a shift in the evidential basis the Bank currently uses for decision-making (i.e., a more discretionary approach), while others carry potentially significant spillover effects and trade-offs that need to be carefully considered. While this risk management is clearly justified by the Bank's mandate to preserve price and financial stability in the long term, it will likely require more strategic coordination between the Bank and government to ensure alignment with wider government policy initiatives (e.g., on transition planning and the direction of the green transition), and manage any short-term trade-offs.

RECOMMENDATION

The Bank should use its policy levers as an independent central bank to support, rather than undermine, a green transition, as this is consistent with its own and the current government's objectives.

Levers include:

- **Microprudential and macroprudential capital requirements**
- **Monetary policy including:**
 - **Interest rates**
 - **Market operations such as targeted term lending schemes, the collateral framework, the corporate bond purchase scheme**
 - **Monetary-fiscal policy coordination**
- **Limits on lending and portfolio restrictions.**



1. ADAPT MICROPRUDENTIAL CAPITAL REQUIREMENTS

From a microprudential perspective, the Bank is responsible for ensuring that the firms it regulates hold a sufficient amount of capital to avoid insolvency problems in the case of defaults by counterparties.

Adjustments to microprudential capital requirements under Pillar I of the Basel Framework – via changes to risk weight formulas – are typically calibrated on a very narrow single materiality basis, based on backwards-looking data over relatively short time horizons to establish quantitative risk differentials between specific types of assets.^{97 98}

The Bank so far has not implemented specific climate- or nature-related adjustments to its risk-weighted assets framework.⁹⁹ Other authorities have moved forward with climate-related adjustments – recently the European Insurance and Occupational Pensions Authority (EIOPA) voted in favour of higher capital charges for insurance companies when investing in fossil fuels to reflect their significantly higher transition risk, based on an analysis of risk differentials.¹⁰⁰ Given the inherent uncertainty of climate- and nature-related risks, the limits to quantifying them and the likely changes as the transition proceeds, the Bank should consider alternatives to calibrate risk weights.¹⁰¹ For example, the Bank could apply higher risk weights to ‘always harmful’ sectors

or activities since these pose the greatest transition risks, or even assess and put in place measures for particular assets or issuers.¹⁰²

Under Pillar II of the Basel framework, the Bank can also apply discretionary capital add-ons if risk management processes (evaluated against the supervisory statement and other areas) are perceived to be inadequate. Supervisory stress tests, while formally distinct from Pillar II, can also inform judgments about capital adequacy and risk management, leading to possible Pillar II capital adjustments. As explained in Section 2, these stress tests are unlikely to capture all material climate- and nature-related risks. Academic researchers have recently suggested that prudential supervisors could use financial sector transition plans as a forward-looking way to assess the ‘risks of misalignment’ between financial institutions and climate/nature transition pathways, with additional capital surcharges forming a possible corrective measure for inadequate plans via the Pillar II framework.¹⁰³ Shifting towards this alternative evidential basis likely requires greater coordination for the Bank with other economic policymakers to determine what constitutes alignment (see Section 3.3).

Beyond managing risks to individual firms through higher capital levels to cushion against losses, differentiated capital requirements can also play a meaningful role in influencing financial conditions for priority and high-emitting areas. They can therefore contribute to the Bank’s secondary objective to support government economic policy including a net-zero and nature-positive transition. Indeed, the Bank recently implemented some supporting capital measures (lowering capital requirements) for infrastructure projects including those related to the net-zero transition, a positive example of coordination with HM Treasury to support its economic policy objectives.¹⁰⁴ It is important that supporting measures do not increase financial fragility by reducing overall capital levels in the financial system; applying them jointly with penalising factors is one way to tackle this.¹⁰⁵



2. IMPLEMENT MACROPRUDENTIAL CAPITAL BUFFERS

Macroprudential policy aims to mitigate the build-up of sources of systemic risk – vulnerabilities within the financial system that can lead to and/or amplify shocks – as well as build resilience to systemic risk.¹⁰⁶ Under a macroprudential rationale, the Bank is better equipped to act in a precautionary way under uncertainty, which is particularly relevant for climate- and nature-related risks. In terms of resilience, the Bank may wish to consider groups of assets exposed to high physical or transition risks that could lead to correlated losses across different parts of the system, which can in turn impair its functioning. Regarding risk build-up, the Bank should consider the financing of environmentally harmful activities by UK financial institutions, as this contributes to the build-up of systemic risk from the physical effects of climate change and nature loss.¹⁰⁷ While these activities pose individual transition risks to firms, microprudential capital adjustments may not sufficiently incorporate their systemic importance.¹⁰⁸

Systemic risk buffers are one tool the Bank could adapt to reflect climate- and nature-related risks. The Bank already acknowledges that the potential build-up of risks across the financial system is likely not adequately captured by Pillar 1 or Pillar 2 microprudential capital requirements.¹⁰⁹ A capital buffer could be calibrated to ensure the resilience of the UK financial system to the emergence of systemic environmental risks, while also contributing to reducing the build-up of risks. This means having sufficient absorption capacity, while also incentivising transition efforts by financial institutions and their counterparties.¹¹⁰ In practice, this means individualised buffers that account for each financial institution's changing contribution to climate- and nature-related risks – such as by financing fossil fuels and deforestation – set at sufficiently high levels so as to influence capital allocation away from these activities.¹¹¹ This uses the Bank's tools to help target sources of systemic risk. However, other factors outside of the private financial system also clearly contribute to the emergence of systemic climate- and nature-related risks. This requires the Bank to coordinate with others to address the non-financial drivers of the systemic environmental risks that threaten its mandate.



3. ADAPTING MONETARY POLICY AND LIQUIDITY OPERATIONS

The Bank of England's main means of influencing inflation is via adjustments to the short-term interest rate, which is used to buy and sell central bank reserves in the inter-bank and wholesale money markets. The Bank has a 2% consumer price inflation target.

As discussed in section 1, climate change and nature loss are generating, and will continue to generate, inflationary pressures and price volatility via supply-side physical and transition shocks, in particular affecting the price of key commodities such as food and energy. But conventional monetary policy via interest rate adjustments is designed to reduce (or increase) demand across the whole economy to prevent self-reinforcing dynamics between rising prices and wages rather than prevent or ameliorate the impacts of supply shocks in particular sectors.

Central banks' focus on medium-term inflation horizons, inflation expectations and core inflation (excluding energy and food) mean they tend not to react to supply-side shocks affecting the prices of energy and food commodities. This was the case during the initial period that followed the Covid pandemic and the Russian invasion of Ukraine in 2021. But because these commodities are used as inputs in many other sectors, the decision not to intervene allowed these price shocks to propagate through the economy and generate amplificatory effects as firms raised prices to maintain or increase their mark-ups.¹¹²

Then, once core inflation had risen due these effects, central banks ramped up interest rates, impacting all sectors. This may have helped prevent further rises in core inflation, although equally the falls in energy and food prices in 2022 could be seen as the main contributor to this. However, higher rates also lead to higher costs of investment in the

green transition for both the government and private investors, resulting in a less resilient economy, as noted by Swati Dhingra, external member of the MPC.¹¹³ Empirical evidence suggests tightening monetary policy also has long-run negative effects on real productivity and growth.¹¹⁴

To deal with the future reality of price instability emanating from climate change and nature loss, the Bank will need to adjust its own inflation targeting framework and work more closely with other parts of government to coordinate policy responses in specific sectors. So far there is not much evidence of activity toward these goals. Indeed, the Bank's inflation targeting framework has not been updated since 2003. This contrasts with the Fed, which in 2020 shifted from a simple symmetric 2% inflation target to a flexible average inflation targeting (FAIT) regime, meaning it can now allow inflation to run moderately above 2% at certain times. The ECB also undertook a review in 2021 which led to a more flexible approach.



4. LENDING AND MARKET OPERATION

A more flexible inflation targeting regime could establish differential lending rates, with lower interest rates for assets defined as environmentally positive. This can be justified not on the basis of political interference into the Bank's work, but to ensure that the Bank can deliver on its core mandate over the long term (supporting government economic policy, also per its mandate).¹¹⁵ The Bank could repurpose its existing Term Funding Scheme to incentivise bank lending to green sectors based on the government's Green Energy Mission 2030 and in coordination with HM Treasury and the Department for Energy Security and Net Zero. France, for example, has a long-standing zero-interest housing loan scheme, delivered through domestic banks (who receive subsidies in compensation), which in recent years has extended to green housing retrofits.¹¹⁶ Detailed proposals of how to implement such a scheme in the Eurozone have been developed and discussed in the European parliament.¹¹⁷

The Bank could also make adjustment to its wider market operations that support monetary policy, particularly its collateral regime – the type of securities it accepts and haircuts¹¹⁸ it imposes in return for the provision of central bank liquidity to banks and some non-bank financial intermediaries – and its asset purchase programmes. Climate-related risks are partially reflected in the collateral regime – e.g. through actions taken in relation to the Domestic Minimum Energy Efficiency Standards (MEES) – but nature-related risks are not, meaning a default favouritism for environmentally damaging companies over greener ones, given their overall economic dominance.^{119 120}

Initial climate considerations have started to be introduced into the collateral framework, such as through gathering information via

due diligence questionnaires¹²¹ or adjusting collateral eligibility criteria and haircuts for specific mortgage types.¹²² However, these measures remain limited in scope and fall short of fully integrating climate-related risks across the broader range of assets used as collateral.¹²³ Whilst the measures required will differ between central banks depending on what assets they hold as collateral, the ECB announced in July 2025 that it would introduce a 'climate factor' to protect the Eurosystem against the potential decline in value of collateral in the event of climate-related transition shocks.¹²⁴

Regarding asset purchases, the Bank previously took action to green its corporate bond purchase scheme (CBPS). This involved 'tilting' (re)investments within but not across sectors – for example, by buying the 'best-in-class' fossil-related corporate bonds rather than committing to exclude the sector altogether, although the Bank did fully exclude thermal coal mining.¹²⁵ Research suggested this would only have a limited impact on the subsidies quantitative easing offered to carbon-intensive sectors in the CBPS.¹²⁶ As inflation began to rise, the Bank started to unwind its corporate bond portfolio for quantitative tightening purposes (taking money out of the financial system by selling corporate bonds back into it), accounting for climate characteristics when setting reserve spreads, but again not targeting specific sectors.¹²⁷

As part of its 'escalation approach', the Bank should revisit its green tilting strategy so that it applies for both quantitative tightening and quantitative easing and consider whether further sectors could be completely excluded from its asset purchases.¹²⁸ Exclusions should apply to assets from issuers whose main economic activity is fossil fuel expansion, in line with the International Energy Agency Net Zero Roadmap,¹²⁹ or financing activities contributing to the destruction of critical ecosystems.¹³⁰

5. MONETARY-FISCAL COORDINATION TO DEAL WITH SECTORAL SUPPLY-SIDE SHOCKS

During the 2021-2023 inflation, many countries used fiscal policy to help manage the impacts of price shocks in key sectors. In particular, ‘unconventional’ policies such as price caps and price controls and various temporary subsidies and taxes were used to make it easier for households and firms to weather the inflationary episode and minimise the pass-through of high commodity prices to core inflation.

Spain, for example, capped the wholesale price of gas by subsidising producers to keep the prices of electricity down for consumers, decoupling the Spanish electricity market from volatile wholesale prices, among other measures to protect consumers. The Banco de España estimated that the combined fiscal measures reduced inflation by 2.3 percentage points in 2022 and helped Spain reduce its inflation rate to well below the Eurozone average. This is estimated to be 10 times greater than the corresponding contribution of the ECB’s monetary policy to lowering inflation.¹³¹

The Bank of England, working with HM Treasury and other relevant government departments, as well as representatives of business and labour, could move toward developing a broader, cross-government, supply-side inflation management policy framework. This could examine how best to combine fiscal, industrial and monetary policy interventions to prevent and reduce future climate- and nature-related supply shocks, as has recently been suggested by a deputy governor of the Banque de France.¹³² This would support the government’s mission to increase the resilience and security of the UK economy to external energy shocks.

Policies that could be examined include the use of temporary strategic price controls and caps, windfall taxes and subsidies and the use of buffer stocks (for example of energy and key food commodities).¹³³ The Bank would not have the democratic authority to implement such policies but could play an important analytical and advisory supporting role by monitoring the prices of key commodities and contributing to decision-making forums led by HM Treasury.



6. LIMITS ON LENDING AND PORTFOLIO RESTRICTIONS

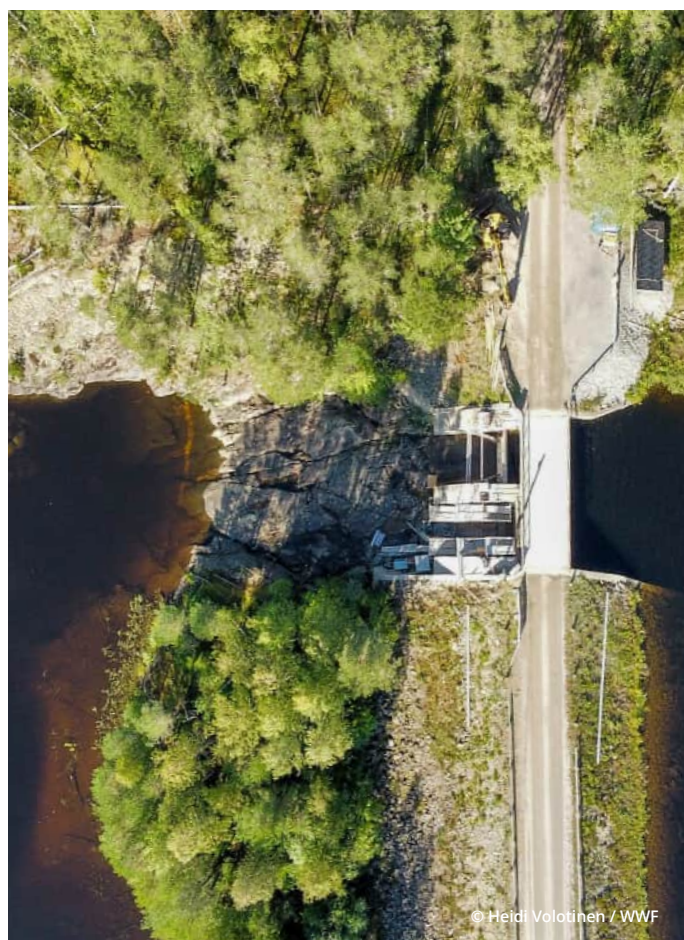
The most direct means by which to manage financial flows in line with climate and nature goals would be to place outright limits on lending to activities contributing to environmental degradation. This can take the form of either phase-outs from a central bank's investment portfolio or placing limits on private sector lending.

Whilst the approach taken by the Bank of England would depend upon what is in its portfolio, a phase-out from a central bank's investment portfolio would involve a deliberate and systematic process of divesting from assets or activities that are always environmentally harmful. According to the International Energy Agency, to achieve net zero emissions by 2050, no new final decisions should be made to invest in unabated coal plants, and the least efficient coal plants must be phased out by 2030. In line with these global objectives, some central banks have started aligning their asset management strategies.¹³⁴ The Banque de France has published a responsible investment charter for its proprietary portfolio to ensure the gradual alignment of asset portfolios with the target of limiting global warming to 1.5°C, fully excluding investments in the coal sector as well as unconventional hydrocarbons since the end of 2024: "One of its tasks... is to safeguard financial stability, to which the mitigation of environmental risks contributes."¹³⁵

There are several examples of quantity-based credit policies from other central banks.¹³⁶ The Brazilian central bank's policy to align the financing of agricultural activities with strict environmental requirements in certain ecological zones resulted in a material reduction in deforestation over the period 2003–2011, compared to locations not covered under the policy.¹³⁷ In terms of

stimulating green investment, the Reserve Bank of India requires banks to allocate at least 40% of loans to priority sectors, including renewable energy.¹³⁸ In advanced economies, quotas have been used to limit bank lending to less desirable sectors of the economy, particularly in the real estate sector following the financial crisis.¹³⁹

While no central banks have enforced limits on private sector lending toward environmentally damaging sectors, this would be one of the most immediate and impactful actions possible. Government policy includes a transition to a net-zero, nature-positive economy, and the Bank of England's secondary objective is to support this (alongside its primary mandate of price and financial stability). Where other measures are less effective, the Bank, in coordination with government, may need to introduce measures that limit lending to environmentally harmful sectors to deliver on its mission.



SECTION 4.3: A NEED FOR BROADER POLICY COORDINATION

Central bank independence is a key tenet of maintaining price and financial stability, and the Bank would be justified in taking policy action in support of a green transition to deliver its core objectives. However, in reality central banks operate in a political context, and the Bank will be reluctant to move ahead of government in driving the green transition, given that the use of its policy tools would reallocate capital across the economy. The inconsistent and at times unambitious nature of recent UK government policy has increased the chances of a disorderly transition, which negatively impact central bank objectives. Nevertheless, political and institutional pressures may explain why many central banks have deferred to a narrowly interpreted risk-based logic to justify their green agendas so they cannot be accused of overstepping government action.¹⁴⁰ The current government's economic strategy is supportive of a transition so should ease this concern, as the Bank also has a duty to support government policy, subject to its primary objectives.

Nonetheless, the challenges in maintaining consistent central bank action in the context of changing politics reveal the limitations of the present institutional architecture of central banking and financial supervision within broader macroeconomic policy. Environmental risks may never be able to be estimated to the degree of certainty required to spur an operationally independent central bank with a *narrowly* interpreted price and financial stability mandate to take preventative policy action. As such, central banks feel constrained toward inaction, even when environmental risks are clearly relevant to their primary mandate. Moreover, as discussed above, the ability of central banks to manage supply-side inflationary shocks (which will become more likely under severe environmental breakdown) independently of broader policy coordination is increasingly called into question.¹⁴¹

Overcoming these constraints requires strategic coordination between central banks, financial supervisors, and governmental and parliamentary bodies implicated in green industrial strategy, while maintaining central bank independence and appropriate democratic oversight.¹⁴² Such coordination is hardly novel: during the 2020 pandemic, for instance, the Bank of England temporarily put aside its commitment to political neutrality to deliver stimulus to targeted parts of the economy in direct collaboration with HM Treasury.¹⁴³ In Europe, a European Credit Council that would provide a more deliberative form of policy coordination with the European Parliament has been proposed.¹⁴⁴ At the very least, this could provide parliamentary scrutiny to ensure the central bank's decisions are enabling and not undermining national net-zero or nature-positive targets.

New forms of coordination could facilitate the deployment of targeted lending policies that aim to direct financial flows in support of broader green industrial policy and repress more environmentally damaging flows.

More ambitiously, new forms of coordination could facilitate the deployment of targeted lending policies that aim to direct financial flows in support of broader green industrial policy and repress more environmentally damaging flows.¹⁴⁵ Such domestic policy coordination will also be contingent on measures to govern international financial flows, and unregulated forms of market-based finance. While beyond the scope of this report, these issues nevertheless position international coordination as an important dimension for central banks' management of climate- and nature-related risks.

CONCLUSION

Climate change and nature loss pose fundamental challenges to macroeconomic, financial and price stability. There is increasing evidence that this is happening now, and that these challenges will increase in future.



NAVIGATING ENVIRONMENTAL RISKS TO THE ECONOMY

The Bank of England plays a critical role in navigating environmental risks to the economy. In the UK, where the Bank of England's remit has been reinforced recently through legislative changes and regulatory remit letters, this is especially the case. Other central banks are dedicating more capacity and taking greater action. The Monetary Authority of Singapore, Bank of Brazil, European Central Bank and Banque de France are just some of the examples mentioned in this report as having made more progress in both understanding and taking action on climate- and nature-related risks.



APPLYING EFFECTIVE ANALYTICAL JUDGEMENT

Moving to alternative forms of analysis, which facilitate better judgement in the face of radical uncertainty, can underpin long-term economic safety and resilience.

The Bank should start by building capacity around and developing its own understanding of climate- and nature-related risks (including by incorporating credible scientific expertise) and communicating this understanding to economic policymakers. Analytical work should also include a revised climate exercise within the next year; a nature exercise in the next 18 months; a regular timetable for future scenario analysis and stress testing; and more robust supervisory expectations for climate- and nature-related risks.



ALIGNING WITH THE GREEN TRANSITION

Such analysis should be the foundation of policy action by the Bank which aligns with, instead of undermines, the green transition, consistent with the government's and its own objectives. The Bank has powerful tools it can deploy, such as microprudential and macroprudential capital requirements; adapting market operations to better align with net-zero transition goals (including through greening its collateral framework and its corporate bond purchase scheme); putting in place limits on lending and portfolio restrictions; and better coordination with the government and fiscal measures to address supply-side shocks which the inflation targeting framework cannot solely address.



WORKING TOGETHER TO TACKLE RISKS

Ultimately, the Bank and the government should work better together to tackle climate- and nature-related risks to the financial system and broader economy. This coordinated action must be underpinned by an understanding that the financial system is not just a recipient but also a driver of environmental risk. Economic decision-makers must act in cohort, to protect and deliver UK growth and prosperity.

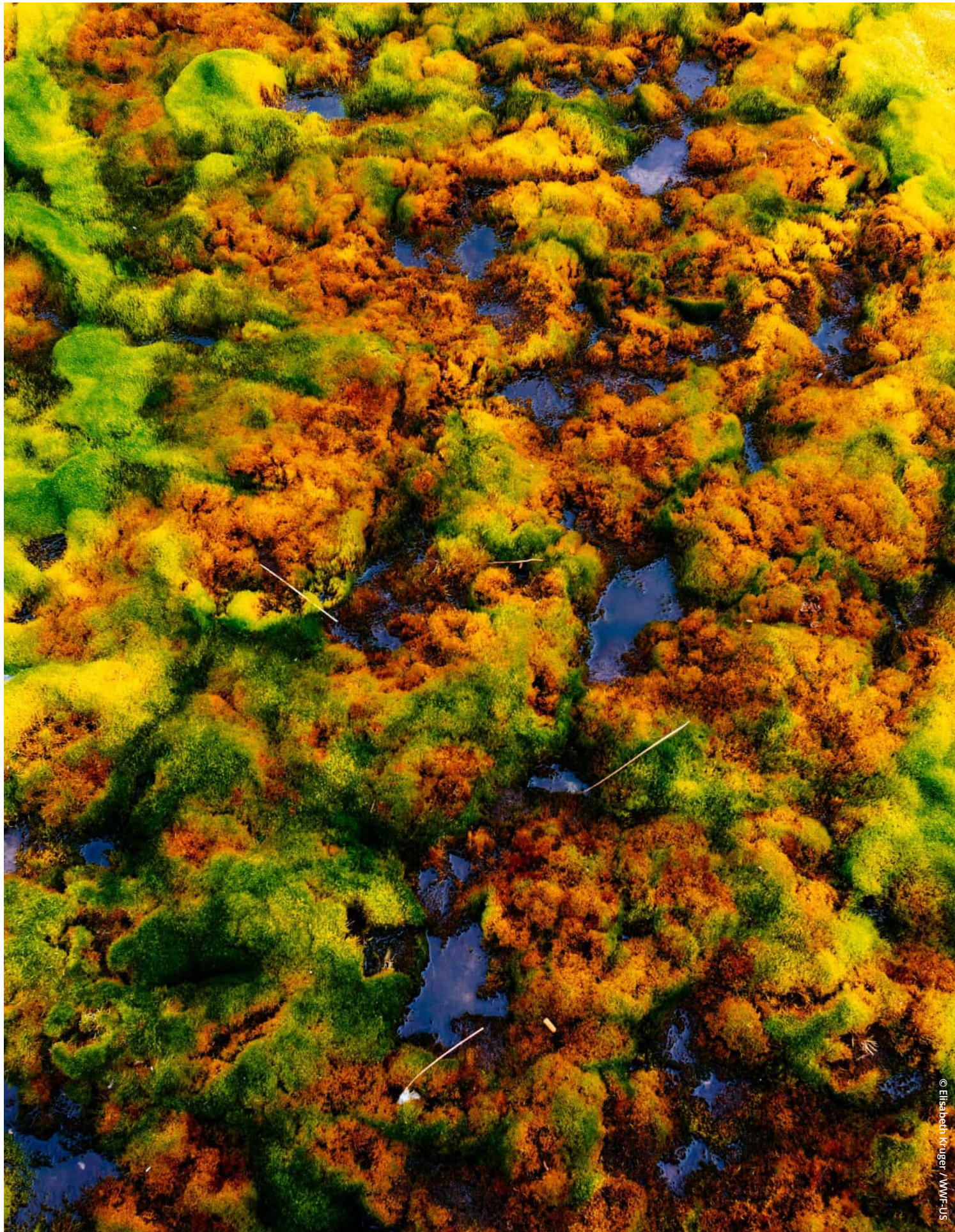


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