

# Adapting to international climate risks

Summary of the Royal Society workshop held on 7 October 2025

This note summarises the key findings from a one-day workshop held at the Royal Society in October 2025. The workshop brought together 40 researchers, policymakers and practitioners to explore how the UK can better understand, prioritise and respond to international climate risks. The meeting was held to inform the Well-Adapted UK (WAUK) report, which is being developed by the Climate Change Committee (CCC) as part of the UK's Fourth Climate Change Risk Assessment (CCRA4).

The UK's *Third Climate Change Risk Assessment (CCRA3)*<sup>1</sup>, published in 2021, highlighted the importance of considering how climate impacts overseas can affect the UK. These risks can arise through complex interactions across geographies, sectors, and transmission pathways. Despite a growing body of evidence on the nature of these risks and a relatively advanced domestic adaptation governance framework, the policy and practical response to these transboundary risks has been limited.

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## Focus

Discussions were structured around five thematic sectors aligned with chapters of the CCC's risk assessment: food security, trade and supply chains, health, finance, and migration. The workshop focussed on international risks to the UK but naturally also considered risks in the UK due to the interconnectedness of global systems. Across these sectors, participants considered three main questions:

1. What are the key risks to each sector, and how might the UK adapt to them?
2. How do risks in one sector interact with others, and what systemic or cascading risks emerge?
3. How can climate-related risks be better quantified, and what data or evidence is needed to inform effective adaptation?

This note summarises the workshop discussions, drawing out key themes and suggestions for potential action and further research. It does not represent a verbatim record of proceedings, nor a consensus view across sectors. The views expressed do not necessarily reflect those of individual participants, their organisations, the Climate Change Committee, or the Royal Society.

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1. Challinor, A and Benton, T G (2021) International dimensions. In: The Third UK Climate Change Risk Assessment Technical Report [Betts, R A, Haward, A B and Pearson, K V (eds.)]. Prepared for the Climate Change Committee, London.

# Overview

The UK faces exposure to international climate risks through multiple pathways, including food systems, finance, health, supply chains, and migration.

These risks arise both directly, for example through impacts on imported food or critical raw materials, and indirectly, via economic, social, and political interactions abroad. Climate-related shocks overseas can propagate through UK systems, while slower-onset trends create long-term systemic vulnerabilities.

Transferring or offloading risk does not eliminate exposure. If other regions or sectors absorb these risks without building resilience, cascading effects can eventually feed back into the UK, amplifying impacts across multiple systems. Adaptation therefore requires coordinated action across sectors and borders, integrating climate considerations into core risk management, investment strategies, and policy frameworks.

Key themes highlighted across the workshop included:

- **Interconnectedness of risk**  
International climate impacts affect multiple UK sectors simultaneously, often with cascading or compounding effects.
- **Systemic vulnerability**  
Chronic and acute risks interact, and slow-onset changes may be overlooked if attention focuses solely on high-profile events.
- **Data and evidence gaps**  
Limited availability of reliable, forward-looking data constrains the ability to quantify risks, prioritise action, and monitor adaptation progress.
- **Integration and coordination**  
Effective adaptation depends on integrating climate risk into core organisational and government functions, and aligning UK adaptation efforts with international action.

## Sector-specific highlights

- **Food security**  
Reliance on a relatively narrow range of imported commodities, coupled with extreme weather, water stress, and global production shocks, creates vulnerabilities across the food system. Adaptation measures include crop diversification, flexible trade models, and better data transparency.
- **Trade and supply chains**  
Climate impacts threaten critical imports, raw materials, and logistics networks, with cascading effects on domestic production and economic resilience. Adaptation measures require government-private sector coordination, risk disclosure, and strategic trade planning.
- **Health**  
Rising risks from infectious and non-communicable diseases, heat stress, malnutrition, and mental health pressures are amplified by environmental and social factors abroad. Integrated surveillance and improving public health infrastructure are key adaptations.
- **Finance**  
Insurance, investment, and pension systems face interconnected risks from global hazards, with slow-onset trends and data gaps limiting resilience and systemic planning, whilst climate risks are often siloed from mainstream operations. Adaptation calls for better global coordination and regulation.
- **Migration**  
Climate-related migration presents both opportunities and risks, including potential social, economic, and political impacts on the UK and its overseas territories. Bilateral labour agreements and investment in peace and resilience building are key to mitigating risk.

The workshop concluded that international climate risks are deeply systemic, affecting the UK across multiple sectors in complex and interconnected ways. Across all sectors, the workshop stressed the need for joined-up policymaking, open data, and government leadership to adapt to systemic risks and build resilience.

# Food security

## Overview

CCRA3-IA identified several risks to UK food security from climate change overseas, including potential impacts on food availability, safety, and quality.<sup>2</sup> The report also noted a “watching brief” for opportunities to enhance UK food availability and exports resulting from climate change impacts abroad.<sup>3</sup>

International climate risks pose multiple challenges to UK food security, affecting both global supply chains and domestic production. Reliance on a narrow set of commodities and sourcing regions, combined with increasing climate-related shocks, can reduce resilience. At the same time, adaptation opportunities exist through diversification, innovation, and cross-sector collaboration. Addressing these risks requires coordinated action across government, the private sector, and international partners.

## Key risks

Key climate-related risks to UK food security:

- **Extreme weather, heat, and water stress**  
Increasingly frequent and severe weather events, coupled with rising temperatures and water scarcity, are reducing agricultural productivity globally. Even small declines in efficiency can cascade through supply chains, driving up food prices and straining availability. For the UK, these pressures heighten reliance on international imports, precisely when global demand and competition for food supplies are also intensifying.
- **A lack of diversity of food commodities and sourcing regions**  
The UK imports nearly half of its food and relies heavily on international suppliers for fruit and vegetables – which are central to population health. This vulnerability is exacerbated by the inflexibility of commercial contracts and the fact that majority of these commodities are sourced from just a few countries.
- **Simultaneous shocks**  
The ‘stacking of risks’ make it difficult for the UK’s food systems to absorb shocks and continue to function effectively. These challenges come from climate change but also stem from conflict, geopolitical instability or disease. COVID-19 and the Ukraine conflict may have created a false sense of security given that they occurred in relatively good production years (in terms of weather). Policymakers and the general public may drastically underestimate the complexity and fragility of the global food system.
- **Environmental degradation abroad**  
The degradation of soils and ecosystems leads to a reduction in important ecosystem services upon which food production depends. This increases the need for high-emission inputs such as fertilizers to maintain the same level of outputs.
- **Concentration of power**  
A small number of privately owned multinational companies are responsible for sourcing and distributing a large proportion of the world’s food supply. This concentration of power combined with a perceived lack of governance and regulation is potentially high risk.

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2. *Ibid.*, sec 7.2.

3. *Ibid.*, sec 7.1.

## Key adaptations

Key general and food-specific adaptation approaches:

- **General principles**  
Agile, flexible, cross-cutting, collaborative, and science- and innovation-driven approaches are necessary to support resilient food systems.
- **Policy and land use frameworks**  
Integrated policies for multifunctional land use could balance food production, biodiversity, and climate goals. Understanding global land competition, ensuring that food production is not at the expense of other important benefits delivered by the land, and aligning trade agreements and foreign policy could optimise global land use, maximising co-benefits and minimising trade-offs.
- **Varied business and commercial models**  
Rigid contracting arrangements can limit the food sector's ability to respond to climate-related disruptions, constraining diversification and mid-contract price adjustments. More flexible and adaptive business models, promoting direct relationships with producers and supporting consumer access to affordable, healthy diets, are important for strengthening resilience in a changing climate.
- **Global crop diversification**  
Diversify crops and sourcing regions, including traditional, gene-edited, and climate-resilient varieties. Growing more fruit and vegetables in the UK would aid security, as would investment in seed banks.
- **Reduce the consumption of animal products**  
Livestock production is inherently inefficient, and the world would be vastly more food secure if crops were not fed to animals. Livestock production and consumption is also responsible for 14.5% of greenhouse gas emissions globally<sup>4</sup> and soy grown to feed livestock is a leading driver of deforestation.
- **Innovation and collaboration**  
Capitalise on UK research and food sectors, fostering partnerships between research institutions, industry, and policymakers to translate scientific advances into practice. An institute dedicated to bridging research and application could support this.

## Quantification of risk

Data and evidence is 'good enough' for action, though there are gaps in data for assessing climate-related risks to UK food security:

- **Historical and current data**  
Good data exists on past production conditions, availability, and prices, which can serve as indicators of system performance. However, past trends cannot fully predict future outcomes, and commercial sensitivities limit access to more precise retailer-level data. Metrics on water availability and soil health are more limited.
- **Forward-looking modelling**  
Probabilistic, scenario-based approaches can help quantify the likelihood of different events and reduce uncertainty. Advanced meteorological and climate models, combined with AI and satellite data, could improve monitoring of global crop yields and production conditions.
- **Cross-sector comparability and data integration**  
Standardised metrics and open data platforms would allow comparison across sectors, identification of priority adaptation areas, and aggregation of business, supply chain, and research data. This would support evidence-based decision-making and more proactive adaptation strategies.

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4. Food and Agriculture Organization of the United Nations. 2017: Livestock Solutions for Climate Change. Rome, Italy. See: <https://openknowledge.fao.org/handle/20.500.14283/i8098en>

# Trade and supply chains

## Overview

CCRA3-IA identified that further action is needed to address risks to the UK arising from international trade routes. These include direct physical risks to infrastructure, cascading effects from multiple concurrent disruptions, and vulnerabilities at critical global chokepoints.<sup>5</sup> The report also noted a “watching brief” for potential opportunities, such as new shipping routes opening due to Arctic sea ice melt.<sup>6</sup>

International climate impacts are increasingly shaping the resilience of UK trade and supply chains. The UK’s exposure arises from global dependencies in critical goods, including food, energy, pharmaceuticals, and materials essential for net zero transitions. Disruptions abroad can quickly cascade into domestic shortages, price volatility, and operational risks for businesses. Ensuring that supply chains remain transparent, diversified, and resilient is therefore a national priority, linking economic security with climate adaptation.

## Key risks

Features of UK supply chains make them vulnerable to international climate risks:

- **Management strategy**  
Many businesses continue to prioritise just-in-time logistics over just-in-case resilience. This approach sacrifices flexibility and leaves firms less prepared to respond to shocks. Strengthening resilience will not only improve adaptation to climate impacts but also enhance preparedness for other risks such as cyberattacks.
- **Supply chain visibility**  
Most companies have limited insight beyond Tier 2 suppliers, leaving significant risks unrecognised and unmanaged. There is a particular need to focus on nationally critical supply chains, including those for raw materials supporting net zero, manufacturing, pharmaceuticals, defence, and semiconductors.
- **Fragmented risk management**  
Current adaptation and risk management efforts are often siloed, locally led, and poorly connected to broader corporate or national strategies, reducing overall coherence and effectiveness.
- **Food system vulnerabilities**  
Food supply chains remain a notable point of weakness. International climate shocks can drive food price inflation, threatening domestic food security – particularly for low-income households unable to access affordable, nutritious food. There are also embodied risks in imported food, such as exposure to water scarcity and environmental degradation in producer countries.

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5. Challinor and Benton, *International Dimensions*, *op. cit.*, sec. 7.1.

6. *Ibid.*

## Key adaptations

A well-adapted supply chain sector would manage volatility and uncertainty, build in redundancies, move beyond just-in-time strategies, and have high levels of risk disclosure and supply chain transparency. Key adaptation pathways include:

- **Businesses-government dialogue**

Focus on priority sectors identified in national risk registers, substitutable markets that might become available in the future, and greater government transparency about the supply chains in which they might need to intervene. Examples include machinery, semiconductors, critical raw materials, and food.

- **Private sector resilience**

There are divergent views on the ability of the private sector to adapt autonomously, especially where there is lack of evidence on the resilience of the supply chains, for example with AI, data centres, semiconductors, and materials for low-carbon targets (eg, rare earth minerals and batteries). More research is needed to understand chokepoints in supply chains and how these risks relate to other risks (such as cybercrime).

- **Risk disclosure and transparency**

Diversification may no longer be the best way to adapt and improve a supply chains resilience as risks become ubiquitous. It is necessary to facilitate and encourage higher levels of risk disclosure and supply chain transparency. Potential tools include:

- open book accounting, with cost data for the whole supply chain rather than profitability data;
- permissions blockchain technology, where only some stakeholders can access information; and
- risk management of green bonds, which raise funds for new and existing projects which deliver environmental benefits and a more sustainable economy.

- **Trade strategy and diplomacy**

Government could be more proactive in managing risks, analysing the trade landscape, and creating a clear strategy for what it would look like for the UK trade sector to adapt. This would inform new trade deals and strategies.

## Quantification of risk

The lack of data on climate-related supply chain risks is a significant barrier to quantifying and managing the transmission of international risks via UK imports. Sources of 'good enough' data includes data on demand, sources of critical risks, points of vulnerability that might require action. The automotive and food sector have good levels of data, but there are challenges:

- There are major gaps in pharmaceuticals and granular business-level information.
- Global risk mapping remains incomplete, limiting the ability to quantify supply-side climate risks.

Suggested ways to strengthen the quantification of risk include:

- Governments and businesses should invest in modelling capabilities to analyse decision-grade data.
- Balance incentives and regulation; regulation can facilitate behaviour change for companies, but bigger companies can also require suppliers to report on ESG.
- Monitor climate risks over time using internationally agreed benchmarks and frameworks.
- Consider climate risks in task forces on critical supply chains, eg, building on the Food Resilience Industry Forum during the pandemic.
- Consider creating institutions for information sharing that is relevant to national security; information could be shared with the institution and government but not be made publicly available.
- Gather and assess data on avoided risks and value generation to improve the quantification of the benefits of investments in supply chain resilience building.
- 'Walk' the supply chain to understand risks.

# Health

## Overview

CCRA3-IA identified the risk to UK public health from climate change impacts overseas, highlighting vector-borne diseases as a primary concern<sup>7</sup>, though workshop discussions also emphasised non-communicable disease risks.

Climate change poses a growing threat to the UK's population health and to health and social care delivery systems through both direct and indirect international impacts. Changing disease patterns, disruptions to food and water systems, and wider socioeconomic pressures all contribute to heightened health risks. Global health threats can reach the UK through travel, trade, and migration, while climate-driven stresses abroad may indirectly influence domestic wellbeing, health inequalities, and system resilience. Adapting the health sector therefore requires an integrated, cross-disciplinary approach that supports both public health protection and service delivery resilience, combining surveillance, workforce capacity, and collaboration across human, animal, and environmental health systems.

## Key risks

Key international climate-related health risks:

- **Infectious diseases**

A warming world alters the distribution and transmission of vector-borne infections, zoonotic infections, waterborne and foodborne pathogens, and human-exclusive pathogens. Diseases such as typhoid, tuberculosis, and cholera may reemerge,<sup>8,9</sup> while non-endemic diseases may be introduced via travel, immigration, imported animals and plants. Rapid climate-driven evolution of crop pathogens and the climate sensitivity of disease vectors further amplify these risks.

- **Non-communicable diseases**

Environmental stressors such as heat exposure, drought, water scarcity, and other climate-related pressures are linked to cardiovascular, respiratory and other non-communicable diseases, disproportionately affecting vulnerable populations. Malnutrition, worsened by food disruptions and rising costs, increases susceptibility to infectious diseases, creating compounding health effects. Drug resistance further complicates responses to infectious disease threats.

- **Mental health**

Social stressors such as climate-related financial pressures housing insecurity, displacement, and extreme events can significantly affect wellbeing. Poor mental health can in turn impact physical health, reduce productivity, and increase the risk of unemployment, creating wider social and economic consequences.

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7. *Ibid.* sec 7.10

8. Mora, C., *et al.* (2022) Over half of known human pathogenic diseases can be aggravated by climate change. *Nature Climate Change*. **12**, 869–875. <https://doi.org/10.1038/s41558-022-01426-1>

9. Wellcome. (2023) How climate change affects waterborne diseases. See: <https://wellcome.org/insights/articles/how-climate-change-affects-waterborne-diseases>

## Key adaptations

Building resilience in the UK health system will depend on integrated surveillance, workforce capacity, and supportive infrastructure:

- **Surveillance systems**

Continuous, integrated monitoring of human, animal, and environmental health, following a *One Health* approach, is essential. This includes hospital case detection, environmental sampling, animal surveillance, and early warning systems for emerging pathogens. Surveillance should operate at multiple tiers, from low-cost initial screening to more detailed and extensive diagnostic analysis. Integrated surveillance allows rapid identification of hotspots, early warning for emerging threats, and more effective targeting of interventions. To strengthen surveillance capacity, the scope of notifiable diseases could be expanded to capture a wider range of climate-sensitive and emerging infections. Point-of-entry testing, including diagnostic screening directly on aircraft or at airports, could further enhance early detection and containment of imported cases. Effective surveillance requires harmonised protocols and clear manuals across sectors, supported by workforce training in technical and analytical capacities, including bioinformatics. Digital tools can also improve detection and diagnostic accuracy, particularly for rare or non-endemic diseases.

- **Workforce development**

Traditional clinical training is insufficient; health professionals need the capacity to recognise and respond to non-endemic pathogens, anticipate shifts in disease epidemiology, and collaborate across human, animal, and environmental health. Strengthening the training of environmental health practitioners and improving integration between public health and environmental health workforces are essential to build a more coordinated and climate-resilient health system. Meaningful employment opportunities across these areas are also vital to ensure that highly skilled individuals are retained and deployed effectively.

- **Infrastructure**

Rebuilding the Public Health Laboratory Service, dismantled in 2003, is essential for robust disease detection and response. The loss of this infrastructure, with a strong focus on pragmatic laboratory functions, has been a major setback.

- **Advice**

Current guidance for travellers provided by primary care professionals and the FCDO focuses mainly on infectious disease risks and vaccination. This could be expanded to address other climate-related health risks such as heat stress and wildfire smoke exposure, with tailored advice for the general public and for at-risk groups.

## Quantification of risk

Accurately assessing health risks from international climate impacts is essential for effective planning and intervention. Integrating technologies into routine public health systems will be essential for timely, scalable, and cost-effective risk assessment:

- **Data integration**

Information across sectors is fragmented, inconsistently analysed, and often inaccessible. Harmonising data systems and improving bioinformatics capacity are vital to enable evidence-based decision-making. Equally important is investment in training so that professionals across sectors can interpret and act on complex data effectively.

- **Risk perception**

High-profile threats such as pandemics attract rapid funding and attention, whereas slower-onset but equally serious risks (including heat stress, malnutrition, and antimicrobial resistance) often receive limited focus.

- **Emerging tools**

Such as artificial intelligence and advanced analytics can enhance surveillance, improve diagnostic accuracy, and identify early warning signals for rare but serious infections.

# Finance

## Overview

CCRA3-IA identified substantial risks to the UK's financial sector arising from climate impacts overseas. The UK's financial exposure to international climate risk is deemed significant over the long term both directly and indirectly affecting assets, investments and insurance through physical and transition pathways<sup>10</sup>.

Climate-related shocks abroad can transmit rapidly through global financial systems, affecting UK institutions via supply chains, insurance markets and investment portfolios. Over time, slow-onset climate trends may also erode asset values and create chronic vulnerabilities across the sector. Simply transferring or offloading risk does not remove it; exposure elsewhere can cascade back through interconnected markets, ultimately affecting UK financial stability. Effective adaptation will require integrating climate considerations into core financial governance, investment strategies, and international coordination mechanisms.

## Key risks

The UK financial sector faces multiple, interconnected climate-related risks that span domestic and international systems:

- **Insurance and mortgages**  
Increasing mortgage durations leave properties on bank balance sheets for longer, while exposure to natural hazards grows. Rising climate risks may prompt insurers to withdraw coverage, potentially creating systemic threats if critical assets become uninsurable. Large-scale flooding in coastal delta cities (eg, Miami, Shanghai, Mumbai) exemplifies this risk. Region-specific insurance programmes (such as in Florida) can concentrate rather than diversify risk, reducing overall resilience.
- **Known versus unknown risks**  
Investors often weigh known risks more heavily than unknown risks, which can disincentivise curiosity, due diligence, and proactive identification of emerging climate threats.
- **Cascading system-wide risks**  
Climate impacts can trigger complex, interconnected disruptions that affect multiple sectors simultaneously, with consequences for both sides of financial institutions' balance sheets. Key vulnerabilities include disruption of global and domestic agri-food systems, pension failures, and climate-driven civil unrest – all of which can be exacerbated by hazards, economic instability, or migration.
- **Fragmented risk management**  
Climate 'othering' occurs when sustainability teams operate separately from mainstream business functions. Treating climate risks in isolation from other financial risks (eg, cyber, tariffs) reduces the sector's capacity to build comprehensive resilience. Integration across functions is essential.
- **Chronic versus acute risk**  
Financial institutions often prioritise acute, definable events over slow-onset, long-term threats such as disruptions to major ocean currents (eg, AMOC slowdown). This can leave significant vulnerabilities unaddressed.

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10. *Ibid.* sec 7.9.

## Key adaptations

Effective adaptation in the UK financial sector could involve integrating climate risk into core decision-making, improving forward-looking data, and coordinating action across institutions and government. Many approaches remain untested and context-dependent.

- **Global coordination**

Workshop participants reflected on the limits of UK adaptation in isolation, noting that exposure in other regions could cascade back into domestic financial systems. Leveraging the UK's influence internationally, for example through the 2027 G20 presidency, is a possible mechanism to promote adaptation globally.

- **Insurance system reform**

Insurance frameworks could be redesigned to maintain coverage as risks rise to minimise the number of stranded assets. Parametric insurance and regulatory measures are potential tools to prevent critical system abandonment however these only absorb a fraction of the risk, leaving governments responsible for the remainder.

- **Investment strategy and metrics**

Investment approaches should evolve to value avoided losses alongside financial returns. Developing metrics to quantify avoided risk could incentivise the deployment of adaptation strategies across portfolios.

- **Adaptation frameworks and reporting**

Taxonomies and reporting systems (eg, TCFD, ISSB) are important tools to help monitor adaptation and resilience levels. These frameworks should emphasise actionable pathways for sectors to improve, rather than simply categorising sustainability performance.

- **Disclosure**

Fostering a culture of transparent risk disclosure is important. Currently, there can be a vested interest in not disclosing high risks for fear of investors pulling out ('greenhushing'). Being labelled high risk should carry a lesser tacit or overt penalty than not knowing or disclosing risks.

- **Embedding adaptation**

Climate adaptation should be coordinated across all levels of organisations, rather than siloed within a single team. Within government, a central department with broader remit and authority, such as the Cabinet Office, should lead and oversee adaptation response.

## Quantification of risk

Key challenges and potential approaches for measuring and monitoring climate-related financial risks:

- **Forward-looking assessment**

Stress tests, scenario modelling, and forward-looking projections to anticipate emerging risks are important to develop, rather than relying solely on historical data.

- **Reporting and metrics**

Taxonomies and reporting frameworks (eg, TCFD, ISSB) could help track adaptation progress and quantify avoided losses. Care is needed to ensure reporting goes beyond compliance and informs actionable decision-making.

- **Global data gaps**

More comprehensive international datasets, particularly in emerging economies, are needed to guide UK adaptation strategies and investment decisions effectively.

# Migration

## Overview

CCRA3-IA identified several risks relating to migration and security. These include risks to the rights and wellbeing of people on the move and risks to social stability in receiving countries. The CCRA3-IA technical report also identified migration as a potential opportunity for the UK, particularly in addressing skilled labour shortages, while stating a “risk” is that the UK fails to maximise on this opportunity.<sup>11</sup>

Migration is a challenging and often politicised topic. CCRA3-IA notes that most climate-related migration in the near future is expected to happen within the affected country or region, with the UK unlikely to be a large receiver of these populations.<sup>12</sup> Should climate-related migration to the UK increase, migration experts at the workshop suggested ways in which the UK could frame this as an opportunity and pursue policies designed to maximise potential benefits.

## Key risks

Key risks associated with climate-related migration:

- **Divided society**  
There is weak evidence of security threats or negative socioeconomic impacts associated with migration<sup>13</sup>; however, this is a common narrative of migration that risks sowing division in the UK and preventing the UK from maximising potential opportunities.
- **Delivery of foreign policy objectives**  
It is unclear what the UK’s foreign policy objectives are on climate and migration, and whether it will be able to meet them.
- **Reputation and soft power**  
The UK risks undermining its legitimacy and position as a global climate leader if it fails to act on climate, including with respect to migration.
- **Overseas territories**  
The UK has responsibilities to the peoples of its overseas territories, many of whom have the right to relocate to the UK and may need to do so without adequate support.

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11. *Ibid*, sec 7.4.

12. *Ibid*.

13. *Ibid*.

## Key adaptations

Participants suggested a well-adapted UK could reframe migration as an opportunity and strategic solution. The following key adaptations to enable this:

- **Communication and public education**  
The relationship between climate and migration is context specific and multicausal<sup>14</sup>. Participants emphasised the importance of effective communication of these multicausal drivers of migration to the public, and of working directly with receiving communities on integration and messaging to aid a smooth transition.
- **Bilateral labour agreements**  
While the UK already operates a skilled worker visa system, more targeted, short-term schemes could help address specific labour shortages in key sectors and be less politically sensitive for receiving communities.
- **Investment in peace and resilience-building**  
Some nations and organisations are already addressing displacement by funding conflict prevention and supporting development<sup>15</sup>. Dedicated financial instruments or portions of development assistance have been used in forced displacement settings. Targeted FCDO funding could similarly strengthen conflict prevention and rebuild resilience.
- **Work with diaspora populations**  
Remittances to home countries may make diaspora populations less wealthy, worsening inequalities. This could be mitigated by engaging directly with these communities on support measures.

## Quantification of risk

The table highlighted several evidence gaps that could support adaptations for a well-adjusted UK:

- **Supply chains and migrant workers**  
Better data on vulnerable populations could support productivity gains, more resilient supply chains, and safety and wellbeing of overseas workers.
- **Adaptation-based skills**  
What skills are needed for an adaptation education, and how can they be provided to create jobs, build resilience and reduce dependency on migrant labour?
- **Benefits of soft power**  
Quantifying the role and impact of soft power to make a case for its importance, both for achieving foreign policy and pursuing global climate adaptation.
- **The understanding of migration**  
Investment in industry, livelihood creation and honest conversations about migration with receiving communities. A more proactive approach that helps to measure the benefits and opportunities of migration.

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14. *Ibid.*

15. International Development Committee. (2025) The FCDO's Approach to Displaced People. Sixth Report of Session 2024–25 (HC 525) p30. See: <https://committees.parliament.uk/publications/49514/documents/264027/default/>

# Cross cutting risks and challenges

Climate change generates systemic and compounding risks across multiple sectors. Adaptation in one sector can unintentionally create vulnerabilities in others, while well-designed measures may produce positive ripple effects. Economic and social pressures, such as inflation, inequality, and civil unrest could exacerbate these systemic vulnerabilities.

## Cross-cutting risks between sectors

- **Food**

Systemic risks related to supply chains, health and finance. For instance, heat stress and extreme weather cause welfare issues for workers but also cause reduced productivity and can result in higher food prices. There are also challenges with farmer resilience, as farms and agribusinesses with limited resilience may struggle to recover after poor harvests or extreme weather.

- **Health**

Systemic risks related to food, migration, and trade and supply chains. Climate impacts on plant and animal health can disrupt important domestic production, heightening risks of food insecurity and malnutrition. The rising costs of a healthy diet may worsen existing health inequalities. The risk of vector-borne diseases is also compounded by transmission seasons starting earlier, different vectors overlapping, with the opening of new trade routes, and the lack of monitoring and training for health surveillance purposes. These health risks can result in reduced productivity, higher food prices, and can disrupt imports and domestic production.

- **Migration**

Systemic risks related to health and supply chains. The impact of climate change on migration remains poorly understood and insufficiently planned for, placing additional pressures on housing, health and social systems. UK supply chains that rely on migrant labour may be exposed to climate-related health impacts on those populations or disruption to work from climate disasters.

- **Financial markets**

Finance underpins the other sectors. Climate impacts on housing, food, pensions, and social stability could feed back into financial markets, amplifying risks.

- **Trade and supply chains**

Cross cutting risks connect trade and supply chains with pharmaceuticals (affecting human and animal health), food supply chains and interlinkages with energy, transport, and finance. These risks are amplified where supply chains rely on a single point of failure. Critical mineral dependency is also exposed, as climate may disrupt access to mines, with cascading effects on the net zero transition and broader UK economy.

## Cross-cutting challenges

A number of challenges were prevalent across all sectors need to be addressed at a systemic level.

- **Lack of transparency**

Commercial sensitivities and perverse incentives currently limit openness across critical sectors. Transparency is particularly important in areas such as food security, critical raw materials for net zero, and pharmaceuticals. Known risks can be penalised by investors or insurers relative to unknown risks, creating a disincentive to disclose information. This can drive up costs and share prices, reducing the ability of markets and policymakers to respond effectively.

- **International dependencies**

UK resilience is highly dependent on adaptation actions in other countries. Disruptions abroad, such as crop failures, conflict, or economic shocks, can propagate through trade, finance, and migration channels, feeding back into domestic systems. Coordinated international action is therefore critical.

- **Fragmented risk identification and reporting**

Current approaches to risk assessment and reporting are often fragmented both across different parts of a single system and between sectors, making systemic vulnerabilities difficult to identify and address. This complicates coordinated adaptation planning and underscores the need for clear allocation of responsibilities across government departments, the private sector, and financial institutions. Without clear allocation of responsibilities across government, the private sector, and financial institutions, cascading and compounding risks may go unaddressed, increasing the likelihood of severe, interconnected impacts.

## Future adaptation

Some adaptation measures could deliver benefits across multiple sectors and reduce systemic vulnerabilities:

- **Global: International collaboration**  
International coordination is crucial. Foresight exercises and scenario planning are useful for highlighting systemic risks, provided there is follow-through with clear accountability and resourcing.
- **National: Mainstreaming and oversight in Government**  
Bridging the gap between risk assessment and implementation is essential. Systematic oversight mechanisms, potentially coordinated through the Cabinet Office, could enhance understanding of critical vulnerabilities, clarify risk prioritisation, improve shock absorption, and build domestic capacity.
- **Local: Micro-level support**  
Policies should support adaptation at the micro level, helping small- and medium-sized enterprises and households embed resilience into everyday economic activity and decision-making.

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