



Environment-driven Mobilities and UK National Security

PRIORITY POLICY QUESTIONS: SUMMARY OF KEY FINDINGS

Environment and National Security: Exploring the Risk Pathways

July 2026

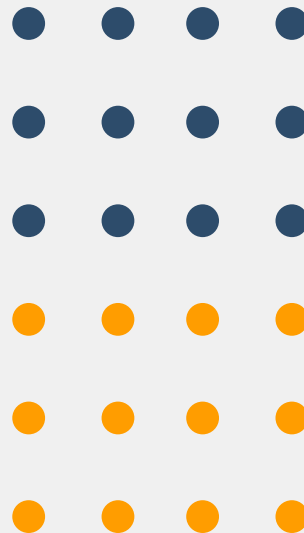


About

This document is one of a series of reports from the Agile Initiative's Environment and National Security: Exploring the Risk Pathways project. The Priority Policy Questions: Summary of Key Findings reports respond to questions emerging from discussions with policymakers. Designed to be concise and accessible, each provides a list of key findings, a synthesis of available scientific evidence, a graphic illustrating the pathways between environmental pressures and national security, an explanation of the implications for UK national security, a list of priority policy recommendations, and description of relevant uncertainties and evidence gaps.

The Priority Policy Questions Series

- The role of critical natural infrastructure in supporting national security
- Managing demand: energy security, food security and UK national security
- Climate risks and opportunities for maritime shipping and UK trade
- Environment-driven mobilities and UK national security
- Weaponisation of nature
- Environment and social resilience



Policy Questions

Human migration

Q1

How do diasporic links between the UK and regions impacted by climate change and environmental degradation shape migration to the UK in practice?

Q2

How will climate change and environmental degradation shape the movement of people within the UK?

More-than-human mobilities

Q1

What are the security implications of more-than-human migratory trends: pathogens, vectors, plants and animals

Summary

- Environment-related migration is not principally a story of mass cross-border flows to the UK. The dominant climate-related mobilities are 'in-country' and urban, concentrated in the Global South. Within the UK, the most consequential near-term security issues for human migration arise from (i) the announcement and management of coastal retreat and flood risk and (ii) the way diasporic networks operate as both adaptation channels and contested political arenas. Security threats are rooted principally in unmanaged pressure on UK institutions, weak governance, rights and protection gaps, hostile exploitation of migration narratives and radicalisation regimes, and failure to prepare for both movement and immobility.

For more-than-human mobilities, security threats arise from movement of pathogens, vectors and invasive species.

Priority recommendations

Establish a statutory compensation framework for managed retreat and design a Flood Re successor regime ahead of the 2039 sunset.

Make funded receiving-community planning mandatory at SMP and Coastal Transition Accelerator Programme (CTAP) designation stage.

Create a statutory cross-departmental forum coordinating Critical National Infrastructure climate adaptation with household and ecological retreat planning.

FCDO to recognise UK diasporic networks as adaptation channels; Home Office to clarify how climate vulnerability is weighed in Article 8 of the ECHR (right to private and family life) and Appendix FM of the Immigration Rules.

Expand UK biosecurity surveillance and public education, with a 'living-with' risk management logic; learn from Australia and New Zealand on smart border controls for imported goods.

Uncertainties

Long-range numerical forecasts of climate migration to the UK from specific origin regions.

Size, pace and demographic composition of internal UK relocation under sea-level rise, erosion, flooding and heat.

Conditions under which environment-driven mobility translates into security exposure rather than background population change.

How diasporic networks are mobilised by hostile narratives vs as adaptation assets.

Interaction of expanded saltmarsh and wetlands with vector habitats and disease pathways.



Key Findings



Climate-related migration is overwhelmingly internal, involving movement to informal urban settlements in the Global South. Over 1 billion people globally already live in such settlements, predicted to rise to ~3 billion by 2050. Long-range forecasts of climate migration to the UK are unreliable (HIGH CONFIDENCE).



UK managed retreat is felt principally through the immobilities it produces: property blight, frozen sales, withdrawn services, and decades awaiting decommissioning. Case studies at Fairbourne, Happisburgh and Bacton show how one Shoreline Management Plan (SMP) framework can produce three different outcomes (HIGH CONFIDENCE).



Wider UK exposure is large: ~25% of UK homes will be in flood-risk zones by 2050 and ~50% at risk of overheating. Insurance withdrawal, mortgageability and the 2039 Flood Re sunset are foreseeable pressures. Flood risk in some of the most densely populated regions of the UK is foreseeable and mitigation action is needed urgently (HIGH CONFIDENCE).



UK diasporic networks are an under-used adaptation and climate diplomacy asset; no current UK strategy operationalises them (MODERATE CONFIDENCE).



Climate change reshapes the conditions under which pathogens, vectors and hosts move. West Nile virus, bluetongue, Lyme, Xylella and oak processionary moth present the greatest UK risks currently. Invasive species and animal/plant disease cascade into food security, public health and rural economies (MODERATE-HIGH CONFIDENCE).



Implications for UK National Security

Environment-driven mobilities intersect UK national security in four main ways which are often not fully recognised nor well-coordinated across departmental architecture.

International migration to the UK has **remained a major concern for people in the UK for at least the last 20 years, with public opinion frequently being based on misrepresentation of both its causes and consequences.**

Climate mobilities are unlikely to have a significant impact on international migration numbers in the near future but have the potential to enhance such concern. The UK's international security priorities currently emphasise conflict prevention and climate diplomacy in geopolitically sensitive parts of the globe. Providing overseas support to enhance urban resilience in climate-exposed cities and informal settlements, where water stress, food insecurity, housing pressure and governance weakness converge, is potentially a powerful instrument of climate diplomacy, humanitarian protection and means to reduce the risk of institutional failure for the UK. Diasporic networks are potentially an asset for this work.

Climate change is driving internal displacement and immobilities in the UK. The 2014 decision to change the Shoreline Management Plan (SMP) at Fairbourne from “hold the line” to “managed realignment” placed ~700 residents inside a 40-year deferred future of property blight¹. At Happisburgh, the eroding sea cliffs have retreated by around 27m

between 2015–22, with 35 properties lost², while the Bacton Gas Terminal six miles east is protected by sandscaping because it supplies up to one third of UK gas. The same framework produces different outcomes for communities and Critical National Infrastructure, with no national governance over the trade-offs. In addition, ~500,000 UK properties are exposed to coastal flooding and ~9,000 to erosion³; ~25% of UK homes will be in flood-risk zones by 2050 and ~50% at overheating risk⁴. Flood Re, the joint government and insurance industry initiative in the UK that makes home and contents insurance significantly more affordable for properties in high flood-risk areas, ends in 2039 with no successor announced.

State legitimacy and citizen-state trust are affected long before anyone physically relocates. Residents in retreat-designated communities describe themselves as “abandoned” and “not worth it”. These are durable, locatable grievances on multi-decadal timeframes, and available for capture in the rhetoric of domestic political discourse and hostile information operations, especially when slipped into wider migration debates. Managed retreat therefore produces security-relevant effects long before any physical movement occurs.

More-than-human mobilities carry cascading consequences. Climate-driven vector-borne diseases affecting humans (e.g. West Nile, Lyme), animals (e.g. bluetongue, Schmallenberg) and plants (Xylella, oak processionary moth) and currently non-established vector insects (tiger mosquitos, sandflies, various tick species) will reshape conditions for UK

agriculture, trade, recreation and tourism, exacerbating existing risks from flooding and pollinator decline.

Causal pathways

Environmental pressure	Transmission pathway	UK exposure	Security consequence	Intervention point
Climate stress in regions with historical UK migration ties (South Asia, Caribbean, East Africa)	Internal and urban displacement abroad; diasporic networks (remittances, family reunification, online discourse)	Adaptation finance demand; family-reunification jurisprudence stretched; political discourse on migration	Risk to UK climate diplomacy objectives and to the credibility of UK migration and asylum policy; scope for narrative exploitation	FCDO ODA and climate diplomacy programmes; Home Office guidance on Article 8 (ECHR) and Appendix FM of the Immigration Rules
Sea-level rise, coastal erosion, riverine and coastal flooding, heat	SMP designation; Flood Re; mortgage and insurance models; planning regime	~500k properties currently flood-exposed; ~25% of homes in flood-risk zones by 2050; ~50% at overheating risk	Property blight, erosion of trust, infrastructure exposure, fiscal pressure on receiving areas (concentrated demand for housing, schools, health services and infrastructure as relocating households cluster in destination communities)	Statutory compensation; Flood Re successor; receiving-community planning; Critical National Infrastructure forum
Higher temperatures, milder winters, changed wind patterns, land-use change (incl. saltmarsh expansion)	Pathogens, vectors and hosts move via tourism, trade, livestock and plant trade, migratory birds	WNV, bluetongue, Lyme, Xylella, oak processionary moth; possible malaria return; food-system stress	Health-system burden; agricultural loss and food-security risk; biodiversity and rural economy pressure	Defra/APHA/UKHSA surveillance; 'living-with' risk management; international best practice; public education

Composite summary diagram

Climate change is co-constituted with other factors to produce distinct mobility and immobility outcomes across diasporic/international, UK-internal and more-than-human registers.



Evidence Synthesis



Climate-related migration globally and to the UK

Climate-related mobilities are dominantly internal and urban: from environmentally degrading rural areas to large informal urban settlements in the Global South⁵. UN-Habitat estimates ~1 billion people live in informal settlements, projected to ~3 billion by 2050⁶. International migrant numbers grew slowly (175 million in 2000 to 304 million in 2024) while urbanisation accelerated faster⁷. The 'maximalist' tradition predicted 50–200 million environmental migrants by 2010⁸; these numbers did not materialise. No reliable method exists for attributing a share of observed international migration specifically to environmental degradation, so the two figures should not be read as subsets of one another. UK public opinion remains hostile to migration in aggregate (top 'most important issue' at 38% in October 2024)⁹, shaping any framing of climate migration. Diasporic remittances and knowledge flow shape adaptation in Bangladesh, the Caribbean and East Africa.

Policy implications

Climate-related migration concentrates in urban informality (unplanned, under-serviced settlements in Global South cities), not in flows to the UK. The UK's near-term exposure runs through whether those cities stabilise or fail, and diasporic networks are an under-used asset, not a threat.



UK internal mobilities, managed retreat, and broader exposure

UK managed retreat is slow, one-way, deferred over 30–50 years, and most powerfully felt through the immobilities it produces. The Fairbourne, Happisburgh and Bacton cases show one SMP framework producing three different outcomes; consultation rights existed at every step, but the outcome did not change¹⁰. The Thames Barrier requires renewal by 2070; a Thames Gateway flood could cost £12 billion¹¹. Houses are still being built on floodplains. Sea-level rise threatens agriculture in the Fens and Romney Marsh, with food-security concerns.

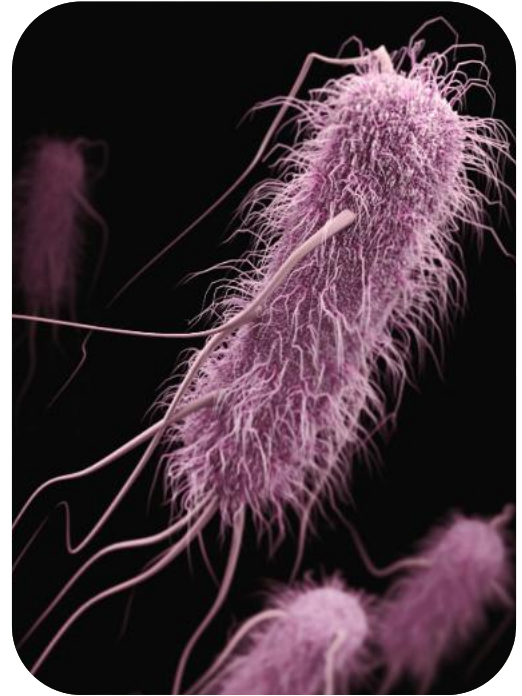
Policy implications

Without action, blight and immobility spread to more coastal and floodplain communities, eroding public trust in government, exposing the state to rising fiscal and compensation liabilities, and leaving Critical National Infrastructure and receiving areas under-planned.



More-than-human mobilities, biosecurity and food security

Habitat loss, overexploitation, climate change and trade are jointly displacing animals, plants and pathogens¹². Climate change does not mechanically produce specific outcomes; it changes the dispositions under which pathogens, vectors and hosts move. The greatest risks facing the UK are from West Nile virus, bluetongue, Lyme, *Xylella* and oak processionary moth; the Tiger mosquito has been identified in Kent but is not established; malaria re-emergence is plausible under combined warming and land-use change. Expanded saltmarshes under managed retreat reshape mosquito and tick habitat. Cascading consequences include food security (livestock disease and plant disease), rural economy disruption, biodiversity loss and public health pressure. The traditional UK 'logic of closure' (disease as external threat at the border) is increasingly insufficient.



Policy implications

Unmanaged pathogen and vector spread imposes rising social and economic costs such as outbreak response and biosecurity measures, losses to horticulture, livestock and tourism, public health burden, and erosion of confidence in government where controls fail. These costs fall across Defra/APHA (animal and plant health), UKHSA (human health) and Natural England (habitats), which is why a 'closure-only' border logic is increasingly insufficient.



Policy Recommendations



Establish a statutory compensation framework for managed retreat, with capped versus market value options and integration with planning and council finance at destination.



Establish a statutory cross-departmental forum (Director General chaired) to coordinate Critical National Infrastructure climate adaptation with household and ecological retreat planning



Design and announce a Flood Re successor regime ahead of the 2039 sunset, covering both coastal flood and erosion and post-2009 builds.



FCDO to recognise UK diasporic networks as climate adaptation channels; Home Office to clarify how climate vulnerability is weighed in Article 8 of the ECHR and Appendix FM of the Immigration Rules.



Make funded receiving-community planning (housing, schools, NHS, council finance) mandatory at SMP and CTAP designation stage.



Expand UK biosecurity surveillance and public education programmes, balancing border control with a 'living-with' risk management logic; learn from Australia and NZ on smart border controls for imported goods.



Recommendation	Lead(s)	Time frame	Evidence confidence	Implementation complexity	Key dependencies / trade-offs
Statutory compensation framework for managed retreat (coast and rivers)	MHCLG (lead); Defra; HM Treasury	2–5 yrs	MODERATE	HIGH	Capped vs market-value design; equity vs fiscal cost; precedent for other relocation scenarios
Flood Re successor regime covering flood and erosion, ahead of 2039 sunset	Defra (lead); HM Treasury; ABI; Environment Agency	2–5 yrs	HIGH (URGENT)	HIGH	Insurance industry engagement; post-2009 builds; planning alignment; affordability
Mandatory funded receiving community planning at SMP & CTAP designation	MHCLG (lead); Defra; DHSC; DfE	Immediate near-term	MODERATE-HIGH	MODERATE	Cross-tier governance; resource transfer; Local Plan alignment
Statutory cross-departmental Critical National Infrastructure climate adaptation forum (Director-General chaired)	Cabinet Office (lead); MHCLG; Defra; MoD	0–2 yrs	HIGH	MODERATE	Convening authority; regulator engagement; NSRA / NRR alignment
Recognise diasporic networks as adaptation channels; clarify climate vulnerability in Art. 8 / Appendix FM	FCDO; Home Office; Cabinet Office	2–5 yrs	MODERATE	MODERATE	Political optics; legal precedent; avoiding securitisation of diaspora communities
Expand biosecurity surveillance and public-education; ‘living-with’ risk management logic	Defra (APHA); UKHSA; Natural England	0–2 yrs	HIGH	MODERATE	Industry engagement (agriculture, tourism); balance with economically salient circulations; public-trust risk

Uncertainty and Priority Evidence Gaps



What is uncertain

Long-range numerical forecasts of climate migration to the UK (model + scenario + causal attribution uncertainty). (LOW CONFIDENCE)

Scale and pace of internal UK relocation; demographic composition of trapped vs mobile populations. (LOW-MODERATE CONFIDENCE)

Interaction of expanded saltmarsh and wetlands with mosquito and tick habitats and disease pathways. (MODERATE)

Political / implementation: When environment-driven mobilities translate into security risk versus background change.



What can be decided despite uncertainty

Act now: Flood Re successor design; statutory compensation framework; Critical National Infrastructure cross-departmental forum; implementing Thames Barrier plans, mandatory receiving-community planning.

Monitor and prepare: decision-led indicators (drought, crop stress, water scarcity, food prices, governance pressure, insurance withdrawal, biosecurity detections, hostile-narrative activity).

Invest in research: UK longitudinal evidence on retreat households and receiving communities; diasporic links; climate attribution work for vector-borne and plant disease; food security cascades.

Avoid lock-in: continued housebuilding on floodplains; Critical National Infrastructure investment cycles tied to current SMP epochs; closure-only biosecurity logic.



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