

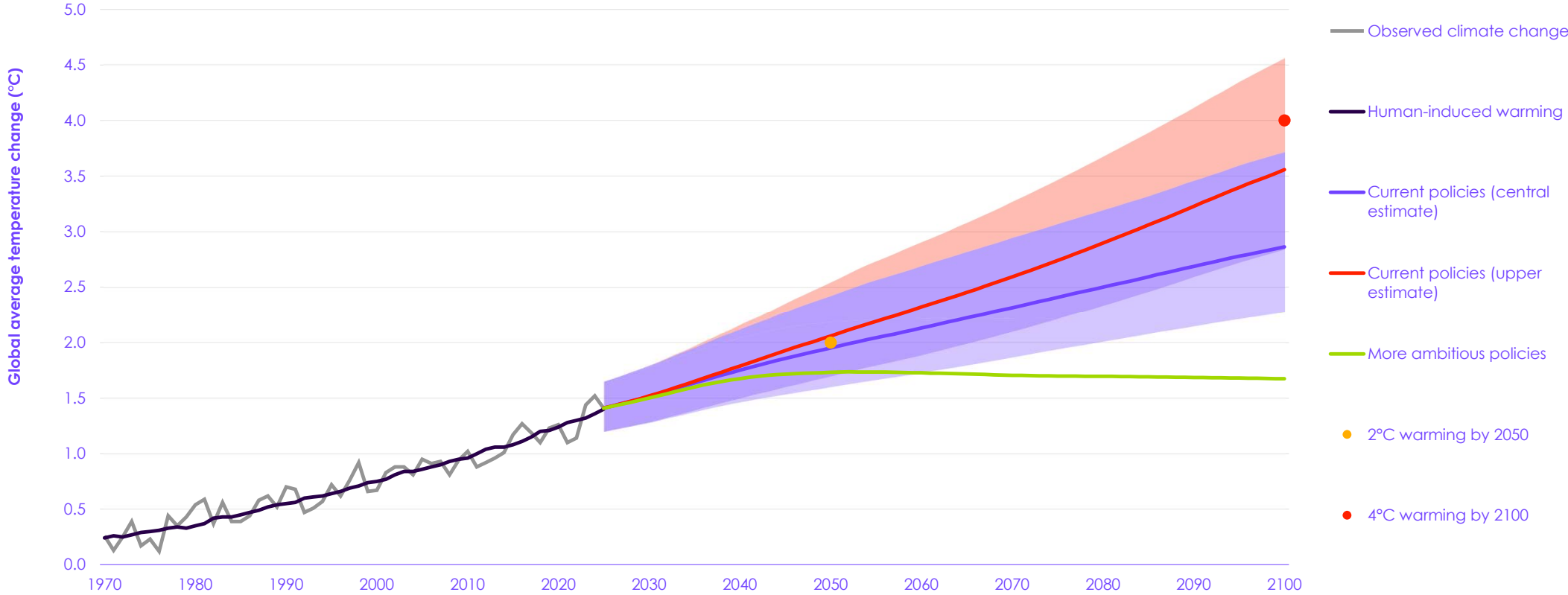
9 June 2026

Well-Adapted UK landscapes

Kim Dowsett, Natural Environment Lead - Adaptation

Global average temperatures are continuing to warm at record pace

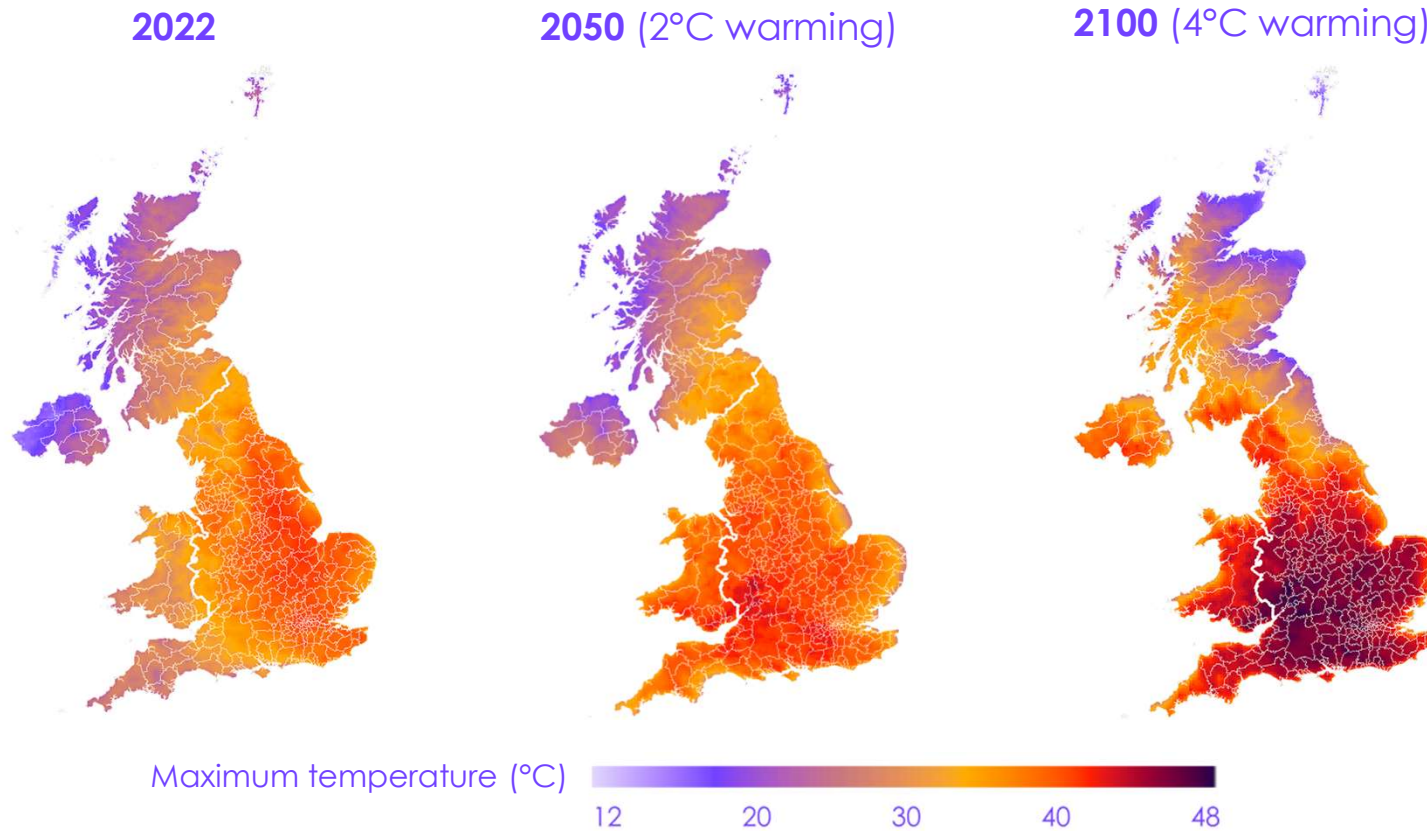
We must plan for 2°C above pre-industrial by 2050 and 4°C by 2100



Source: Met Office (2025) Climate Dashboard – Tracking the Changing Climate with Earth Observations; Forster, P. et al (2025) Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system and human influence; Rogelj, J. et al (2023) Credibility gap in net-zero climate targets leaves world at high risk; United Nations Environment Programme (2025) Emissions Gap Report 2025: Off Target – Continued collective inaction puts global temperature goal at risk.

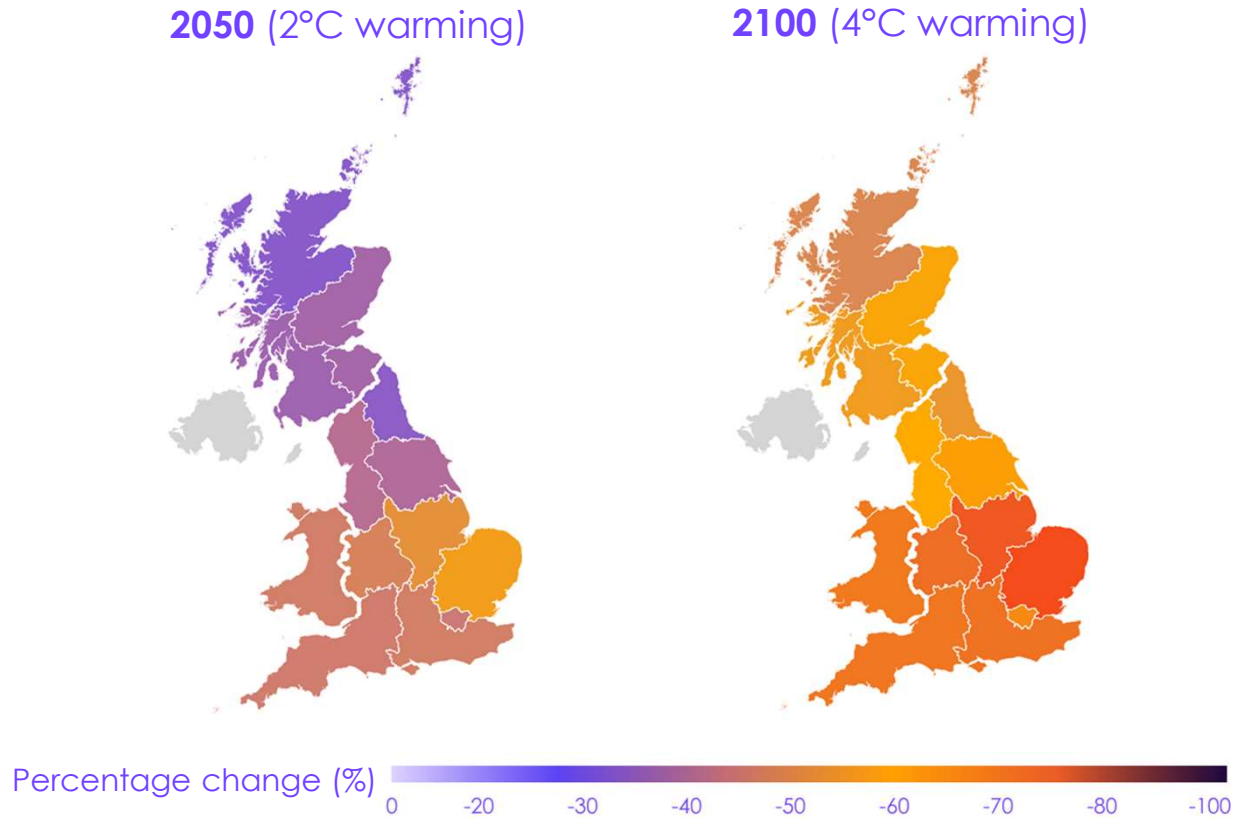
Heatwaves in the UK will be more frequent, longer, and more intense than they are today

Recent and projected maximum temperatures



Source: Hollis, D. et al (2025) *HadUK-Grid Gridded Climate Observations on a 5km grid over the UK, v1.3.1.ceda (1836–2024)*; Met Office (2025) *UKCP Local Projections on a 5km grid, bias corrected using scaled distribution mapping, over the UK*.

Higher temperatures and reduced rainfall will contribute to less available water
Projected change in water available in rivers during droughts



Source: UK Climate Risk Indicators (2021) *Climate Risk Indicator Explorer*.

Dry, hot summers increase the risk of drought and wildfire
Projected number of days with 'very high' wildfire risk

Recent past (1981-2010)



2050 (2°C warming)



2100 (4°C warming)

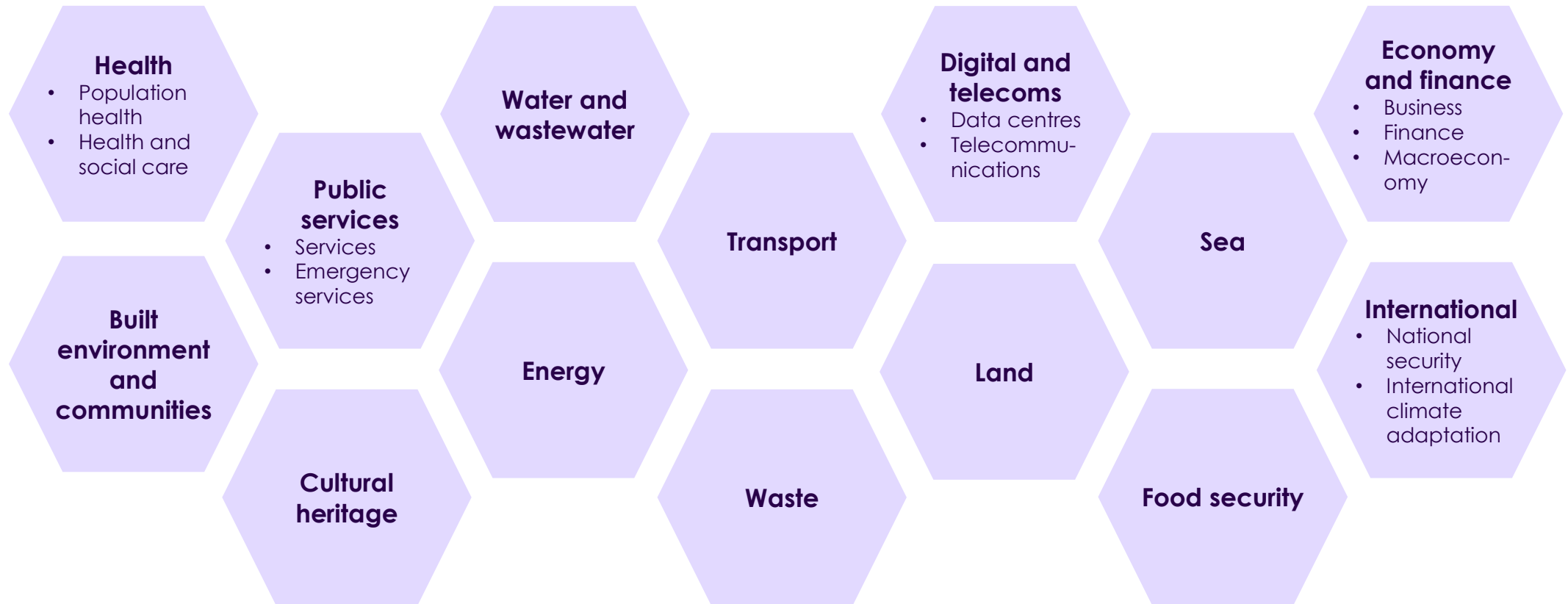


Days per year



Source: UK Climate Risk Indicators (2021) *Climate Risk Indicator Explorer*.

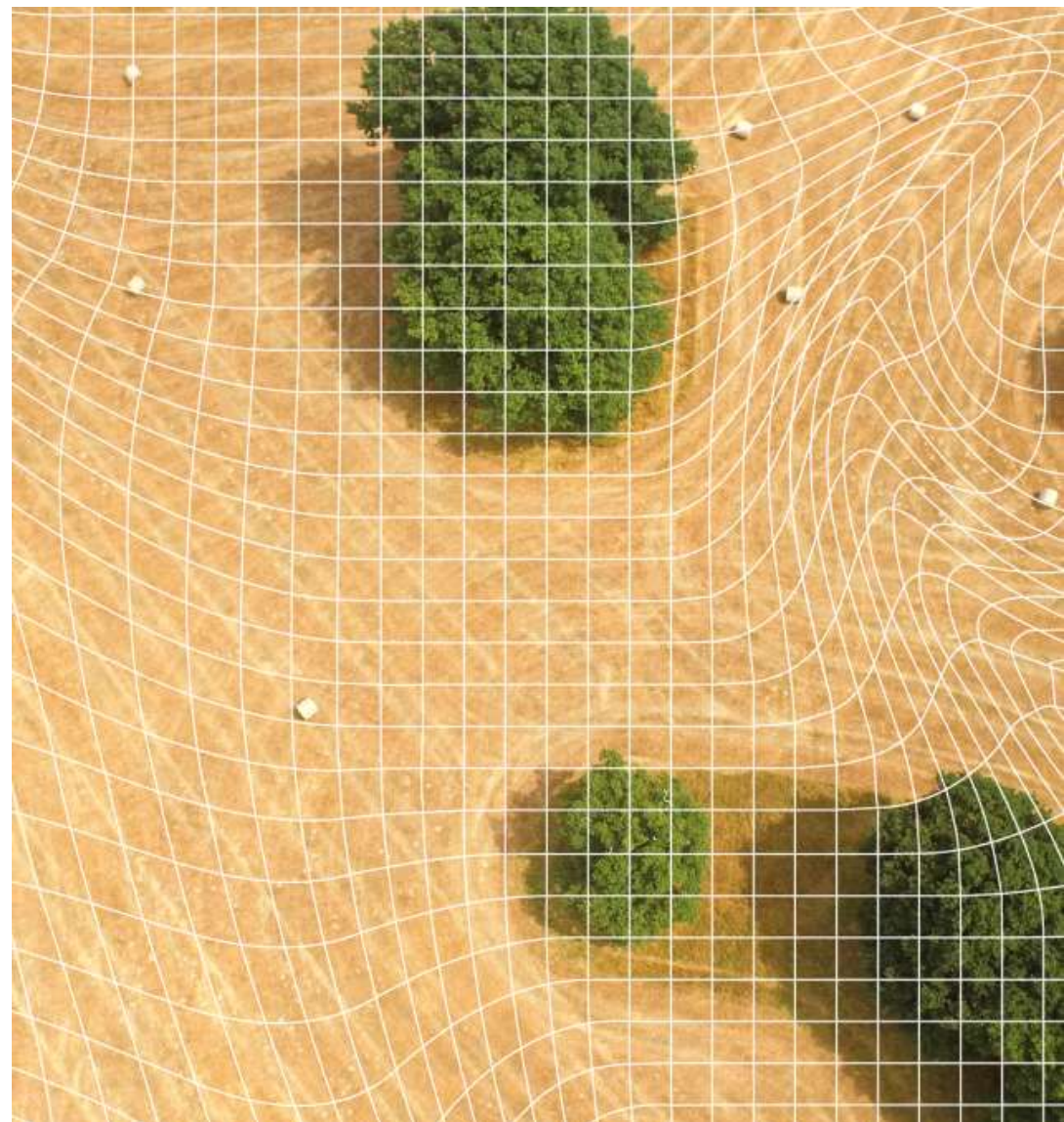
The CCC assesses evidence on climate risk and adaptation for 14 systems
The systems cover key sectors at risk from climate change across the UK



Climate impacts to land will increase

Impacts for 2°C by 2050 and 4°C by 2100

- Food production in the UK will increasingly be at risk.
- Wildfire will increase.
- UK tree species will be threatened.
- Freshwater habitats will be at risk from water availability.
- Sea level rise and storms will increase the loss of coastal habitats.



Well-adapted land system

Risks to the system from climate change: heat; flooding; drought; wildfire; sea-level rise; and climate-related invasive non-native species, pests, pathogens, and diseases impact the land system.

Objective: land is healthy, diverse, and managed for the future, whilst productivity is maintained without degrading the land.

Actions

Farmland: resilient soil and water management and farm practices, technology uptake, and increased biodiversity.

Uplands: rewetting blanket bogs and peatlands, reduced soil erosion, and assisted movement of species.

Woodland: species and site selection, natural regeneration, and resilient practices.

Freshwater: catchment-scale water level management, and riparian shading.

Coastal margins: new habitat creation.

Cross-landscape: increased diversity and connectivity; management of invasive non-native species, pests, and diseases; and wildfire management.

Enablers

Reduce external pressures on habitats: to help maintain good ecological condition of habitats to improve resilience.

Resources: funding for delivering targeted actions up-front and for actions designed for multiple benefits.

Data and monitoring processes: to target adaptation spatially and for greatest impact, and to ensure land management is adaptive to changing conditions.

Engagement, awareness, and support: for sharing knowledge and skills, and education on changes to land.

Policies

Economic incentives and public provision: ensure payments and subsidies for ecosystem services support farmers and nature to adapt.

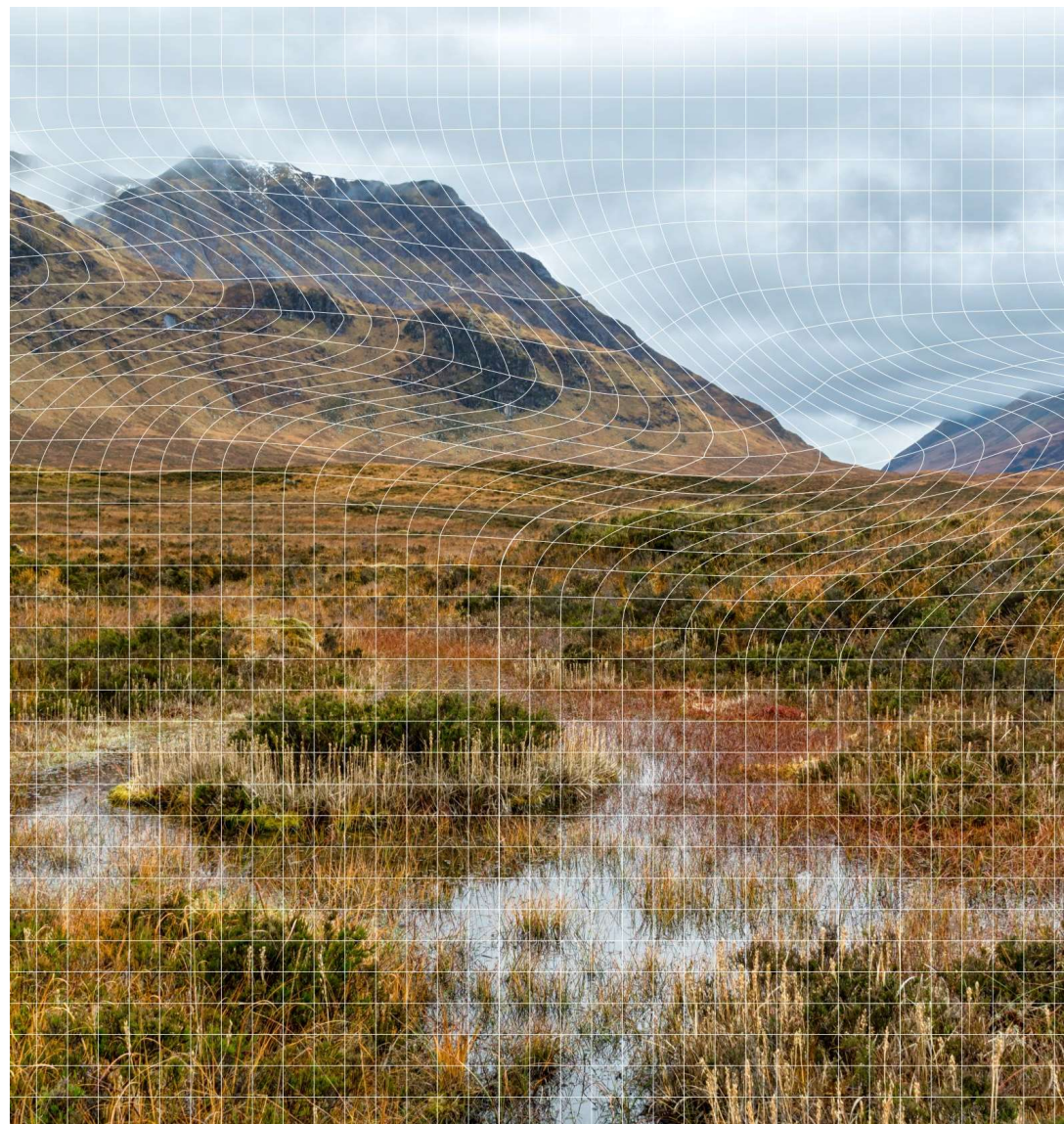
Governance: joined up and future-proofed planning for integrated adaptation across landscapes.

Regulation: for protected site designation and to ensure sites and landscapes are protected for future climate conditions.

Resilient uplands

There are limits to adaptation for some species

- Re-wet blanket bog and peatland.
- Minimise soil erosion.
- Assisted movement of species.
- Increase diversity and connectivity.
- Manage INNS, pests, pathogens, and disease.
- Implement wildfire management.



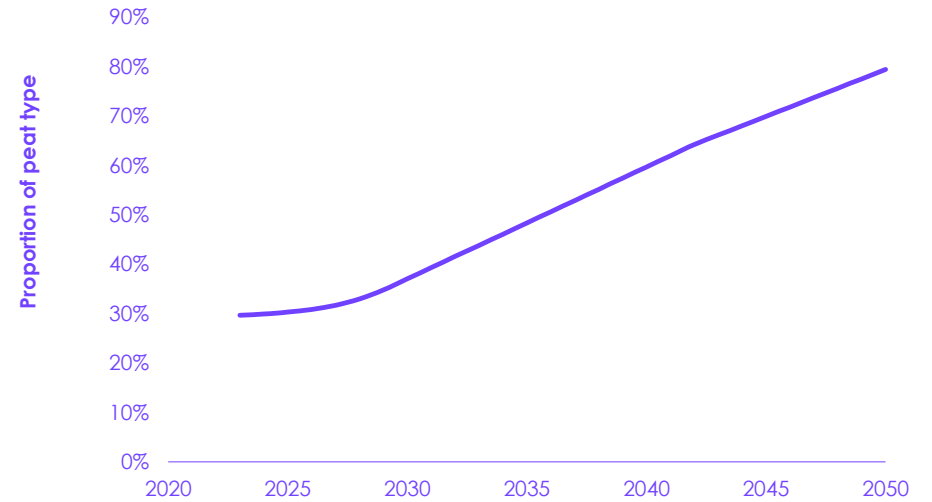
Resilient uplands important for reducing peat emissions to help meet carbon budgets

Area of upland peat in near natural or rewetted condition rises to 60% by 2040

Under our Balanced Pathway:

- Area in near natural or rewetted condition rises to 60% by 2040.
- This would reduce upland peat emissions by 45% between 2022 and 2040.

Proportion of upland peat in rewetted or near natural condition under the Balanced Pathway



Source: UKCEH, CCC analysis

— Upland peat

Contact: kim.dowsett@theccc.org.uk