

How have priorities in climate policy-making changed since the Scottish Government's centre of expertise on climate change, ClimateXChange, was established in 2011?

Governments around the world are navigating increasingly complex and uncertain climate policy landscapes. As climate risks intensify and policy choices carry far-reaching social, economic and environmental implications, policymakers rely on a diverse suite of evidence to design and implement strategies for mitigation, adaptation and resilience building. In this context, knowledge brokers play a central role in enabling evidence-informed climate governance. Their function extends beyond simply transmitting research findings: they facilitate coproduction, translate knowledge into policy-relevant formats, and tailor evidence to specific governance, socio-economic and political contexts.

One such knowledge broker organisation is ClimateXChange (CXC), established in 2011 as the Scottish Government's centre of expertise on climate change, with a secretariat based at ECCI. This research examines the evolution of evidence demand from the Scottish Government through CXC and explores what this reveals about changing priorities in climate policymaking.

Drawing on a review of 299 research outputs commissioned between 2011 and 2024, research analysed how evidence asks have shifted over time and considers the implications of these shifts for the future of knowledge brokerage.

How have priorities in climate policy-making changed?

A Mitigation-dominant evidence landscape

Across the period reviewed, mitigation has dominated

policy-driven evidence demand. Of 299 research outputs, 202 focused primarily on mitigation, compared to 56 on adaptation and 26 on climate change impacts. This distribution reflects a strong alignment with Scotland's statutory emissions reduction targets under the Climate Change (Scotland) Act 2009 and subsequent net zero commitments.

Within mitigation, three sectors have consistently attracted the greatest attention:

- Energy
- Agriculture, Forestry and Other Land Use (AFOLU)
- Buildings and housing infrastructure

By contrast, transport, industry, waste, economy and governance have received comparatively limited attention

Adaptation-related research represents roughly one-third of mitigation outputs. Unlike mitigation, which shows concentrated sectoral focus, adaptation demand is more diffuse and fragmented. Adaptation research lacks the sustained, cross-sectoral integration seen in mitigation. Overall, impact and adaptation evidence remain comparatively underdeveloped and episodic, raising questions about balance in long-term resilience planning.

Increasing complexity and interdisciplinarity

Over time, evidence requests have become more complex and cross-cutting. Early outputs were relatively straightforward to classify by single sector and theme. More recent projects frequently span multiple sectors and integrate social, economic and governance considerations. This reflects growing recognition that climate policy challenges are systemic and interconnected.

This shift creates both opportunities and pressures for knowledge brokers. As evidence-asks become more interdisciplinary and transition-oriented, they require more complex forms of synthesis, deeper engagement with diverse stakeholders, and facilitation across multiple policy domains.

Evolving evidence-asks

Scottish Government's evidence-asks over time can be grouped into three broad categories: instrumental, conceptual and anticipatory. Together, these categories illustrate how the nature of evidence demand has evolved in response to changing policy priorities and increasing complexity in climate governance.

Our analysis suggests a clear shift towards anticipatory evidences, reflecting policymakers' need to manage uncertainty and pre-empt unintended consequences in an increasingly contested policy environment. This reflects a shift towards more adaptive and reflexive governance. Policymakers are not only asking what works, but what might happen, who might be affected, and how policies will be received.

What does this mean for Knowledge Brokerage?

The shift in the type of evidence being demanded by policymakers highlights that the pathways to achieving climate targets have become clearer, but they coexist with increasingly complex and difficult questions. There is growing recognition that climate action is deeply embedded within complex social systems. Issues of intersectionality, inequality, justice, gender, and vulnerability have central to climate policy, requiring evidence that moves beyond technical feasibility to consider who benefits, who bears the costs, and whose voices are included. This shift also raises fundamental ethical and political questions of whether the means also justify the ends.

Addressing these complex questions requires sustained, interdisciplinary engagement, the ability to navigate diverse knowledge systems, and deliberation with a wide range of actors and policy concerns. However, existing knowledge brokerage structures may be poorly equipped to support this work. Institutional constraints, including short funding cycles, demands for rapid responses, and pressures to align with dominant policy agendas. This can limit opportunities for critical, experimental, or reflexive ap-

proaches. For knowledge brokers, this shift necessitates deeper interdisciplinarity, enhanced facilitation skills and greater institutional support. Strengthening knowledge brokerage, through long-term resourcing, strategic partnerships and recognition of its reflexive role, will be critical for enabling governments to make confident, just and adaptive climate decisions in an era of escalating uncertainty.

What this means for the public?

This piece of research demonstrates Scottish Government's commitment to underpinning decision with robust evidence. This means that they are not only accountable for the decisions they make but also aware of the impact these decisions have on society. Secondly, this research shows that the government are tackling really difficult but essential cross-cutting topics for climate action. There is a maturity to the asks from government and this reflects Scotland's own journey to building climate resilience.

Edinburgh Climate Change Institute

Located in the heart of Edinburgh, ECCI is a leading centre for research, teaching, policy and practice for climate action.

Established in 2010, we are a centre of excellence and an interdisciplinary hub within the University of Edinburgh - driving evidence-based climate action across Scotland, the UK and beyond.

An inclusive hub for researchers, policy makers, businesses, students and educators - the ECCI community includes expert climate researchers, agencies who work to tackle climate change and experienced climate practitioners working on externally funded challenge-driven projects.

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