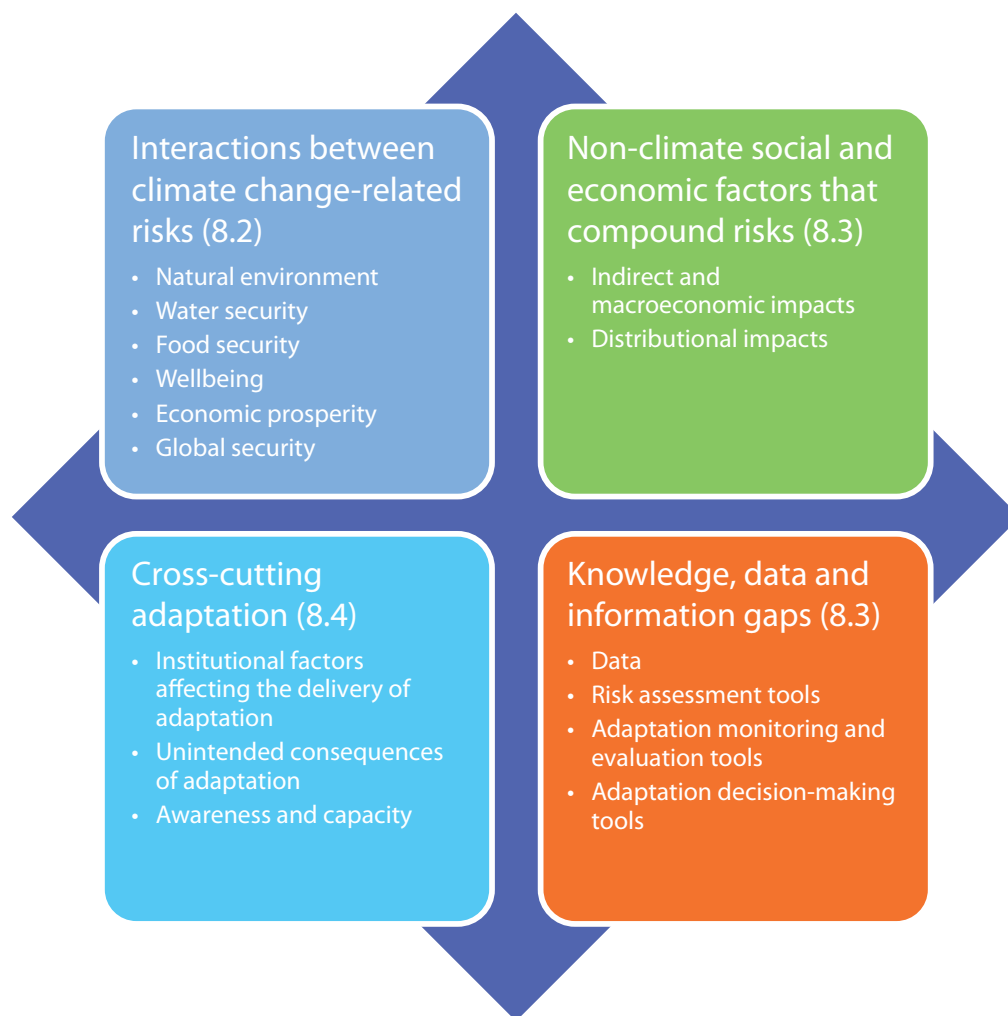


Effective adaptation cannot be undertaken without careful consideration of the cross-cutting nature of risks and synergies between adaptation activities. Unless cross-cutting issues are considered, actions could be ineffective, sub-optimal in terms of their costs and benefits, or lead to unintended consequences.

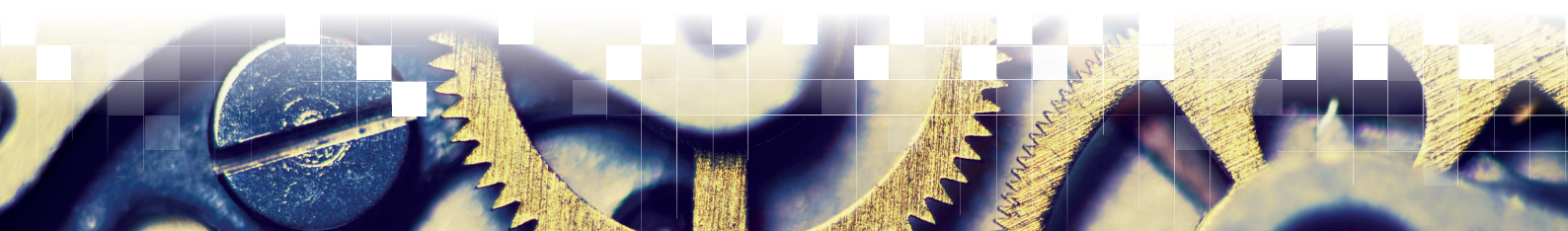
The main cross-cutting factors relating to **climate change risks** in the UK are:

- **Interactions among risks:** Climate change risks act together to impact upon natural capital, water security, food security, wellbeing, economic prosperity and ultimately global security.
- **Indirect and macroeconomic impacts:** The evidence suggests that indirect economic losses to the UK from climate risks are likely to be at least of the same order of magnitude as the identified direct losses. To date there has been little assessment of the potential macroeconomic impact of climate change for the UK.
- **Distributional impacts:** Climate change will affect different people differently, depending on their social, economic and cultural background, and local environment. Low income households are particularly susceptible to climate change impacts, as these impacts would disproportionately affect their resources. These groups also have lower capacity and resources to adapt.

Cross-cutting issues affecting climate change risks



Note: Numbers denote the sections of Chapter 8 which discuss the issues presented.





Cross-cutting issues relating to **adaptation planning and policy responses** are:

- **Institutional barriers:** Current institutional frameworks for adaptation in the UK have the potential to deliver outcomes that achieve multiple benefits. However, obstacles to success include unclear or unmeasurable adaptation policy goals across correlated risks; a large number of partners involved in delivering adaptation activity; the limited alignment between related policy goals (e.g. flood risk management with housing and planning policies); and capacity gaps, including as a result of funding and resource constraints, particularly at the local level.
- **Unintended consequences:** Taking interacting risks into account, together with non-climate drivers of risk (e.g. changing demographics or technology), and addressing institutional barriers, can help policies succeed and avoid the risk of unintended consequences. Such a cross-cutting approach, as advocated in the HM Treasury Green Book, is not always followed in practice.
- **Adaptive capacity:** Addressing climate change risks systematically requires considerable knowledge, skills and resources. Shortages in capacity can lead to a focus solely on 'incremental change at the margin', with more fundamental and ultimately beneficial ('transformational') change considered too difficult, expensive or risky in the absence of detailed appraisal and exploration. Opportunities to achieve co-benefits are lost as a result.

A number of **knowledge, information and data gaps** to assess and manage cross-cutting risks have also been identified:

- **Data:** Data gaps include social vulnerabilities and their relationship with climate change impacts. The data that are available are often incomplete or incompatible with other data sources. Data collection in specific areas could be strategically planned at a multi-organisation level. Data access, including in some cases the desire to generate revenue from publicly-funded data, remains a significant obstacle to research and innovation in the UK.
- **Risk assessment models and other tools:** Although there have been some advances in models, tools and other resources to support risk assessments, there are particular gaps that need further attention. These include the assessment of aggregate annual risks from multiple hazards and to multiple receptors; assessing the intangible impacts of climate change; macroeconomic models that can be applied at city or regional level; and tools to assess community resilience.
- **Decision-making tools:** Although not widely accessible and used, there are a growing number of decision-making tools to support adaptation related activity. However, many of these tools have been developed by the research community and may not meet the needs of practitioners.
- **Adaptation monitoring and evaluation tools:** Many of the available indicators to measure adaptation progress are based on what data are available rather than what would be most useful. There appears to be little routine collection of data and other evidence to assess whether adaptation policies are effective in achieving their stated objectives.