

Summary

What do we know about the future costs of climate change at the French national level? The assessment of climate risks in France has significantly improved since the last overview presented by the National Observatory on the Effects of Global Warming in 2009, both qualitatively and quantitatively. This working paper provides an overview of the methodological issues related to these evaluations and then examines available data in the French institutional literature across ten sectors: water resources, agriculture, forest, coastal risks, biodiversity, energy (supply and demand for electricity), infrastructure and networks, buildings, tourism, health. This work presents a current view of the "gray" literature contributing to public decision-making, rather than a comprehensive review of recent scientific literature on climate risks (such a review would also be valuable).

It appears that a detailed estimation of the costs, either by sector or by region - as part of a more systemic approach - remains a challenge. The heterogeneity of both time horizons and selected climate scenarios makes it difficult to compare findings, and several of the identified risks remain poorly quantified. In many cases, sectoral evaluations do not provide any order of magnitude of the damage costs. The management of climate risk assessment therefore needs to be strengthened, especially to define a methodological framework explicitly designed to guide public policies and trigger action. In this context, the links between mitigation and adaptation must be taken into account.

Improving our understanding of climate change impacts at every level of the causal chain is necessary, particularly at the local level, to better inform climate change adaptation policies. Locally collected data would then serve as a basis for the assessment of national vulnerability to the effects of climate change, which could rely on a common methodological framework. However, given the complexity of the transformations at stake, public policy choices must be robust with uncertainties inherent in prospective exercises. In any case, the need for impact assessment should not delay the implementation of adaptation actions: "no-regret" actions can be deployed without delay as soon as they are identified.