

## **Economic aspects of adaptation to climate change: Costs, benefits and policy instruments**

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Estimating the costs of adaptation has recently blossomed into a growth industry. Cost estimate studies are proliferating at a national level, by sectors and in global aggregate terms. The emerging consensus seems to be that adaptation costs are likely to be in the order of tens of billions of dollars per annum within a few years, and that the reliability of these estimates is low. There are urgent questions around these estimates. How much climate resilience is built into the assumptions? What baseline of current costs is calculated or assumed? What level of risk reduction is provided for? And so on. In three short chapters, written by ten authors and edited by two of them, this slim volume moves beyond cost estimation to the potential and limits of economic and policy instruments. The bottom-line question is: what can best be done to motivate and facilitate adaptation actions?

The essays address insurance and risk sharing, environmental markets and pricing, and public–private partnerships. Chapter 1 places the issue of adaptation costs into a broader economic and policy context. Chapter 2 provides a good critical review of many of the actual estimates that have been made, and Chapter 3 describes a number of economic and policy instruments to promote adaptation.

The book is an excellent primer for those seeking to assess the use-value of cost estimates for adaptation, in helping to inform global negotiations under the UNFCCC and for the donor and developing countries that are seeking ways to ‘mainstream’ climate change adaptation into development strategies, policies and measures. It is not a how-to-do-it book. Rather, it is a provocative and

challenging exercise in raising questions to which there are, for the moment, no satisfactory answers; nor does it offer any immediate prospect of finding robust answers. The book’s greatest value to this reviewer is that it engenders serious reflection on whether the right questions are being asked at all.

Adaptation runs a whole gamut of approaches from place- and project-specific, through sectoral policies and measures, to grand national strategies. For example, in Bangladesh, one might ask about the costs and benefits of adaptation in a single coastal-zone defence project against sea-level rise and enhanced cyclonic storm intensity. At the next level one might ask what the costs would be of providing an ‘adequate’ or ‘acceptable’ level of protection of rice cultivation in large regions subject to droughts, floods or increased salinity. On a larger scale one should also probably ask (although the question is itself unwelcome) what the economic cost implications might be of abandoning the palliative in-situ adaptation that is currently favoured in the lowest-lying and most exposed delta lands, in favour of what seems to be the inevitable relocation sooner or later of millions – perhaps tens of millions – of coastal zone dwellers.

The legitimate economic dimensions of these sorts of questions need to be addressed. But what purpose is served by lumping them all together under the rubric of ‘the costs or the economics of adaptation’? Surely the concept of adaptation as it is currently being used is far too vague and all-encompassing to try to address in a holistic way. You might as well ask, what is the cost of sustainable development?

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The crucial questions seem to centre around finding ways to make 'good' decisions about choosing adaptation measures, shaping adaptation policies and conceptualizing broader strategic visions of how nations and regions might cope with long-term dislocation and redistribution of population and economic activities.

This book is a first-rate introduction to ways of thinking about these issues from an economic perspective. In so doing it demonstrates many of the strengths and the weaknesses of economics as applied to the adaptation to climate change. How much climate damage is tolerable? What

does it mean to be 'climate resilient'? For many in developing countries it is abundantly clear that the present levels of expenditure on adaptation (of all kinds) are inadequate.

There is an adaptation deficit in relation to current climate change and variability. For some it is evidently important to know what the 'ultimate' costs of adaptation might be. For many more it is important to accelerate the process of developing a more programmatic approach which can move climate change adaptation forward more rapidly. This book of three essays is a step in the right direction.