

Introduction to the Study

Just as today's development decisions will influence tomorrow's climate, so too will tomorrow's climate influence the success of today's development decisions. Most development plans and projects have life expectancies that require future climate conditions to be given due consideration. Long-term changes in atmospheric and oceanic conditions will impose both increased and new risks on many natural and human systems, especially as a result of changes in climate variability and in the frequency and magnitude of extreme climatic events.

The overall goal of a risk-based approach to climate change adaptation is to manage both the current and future risks associated with the full spectrum of atmospheric and oceanic hazards. This is best undertaken in a holistic manner as an integral part of sustainable development planning. National, local and sector development should be based on harmonized hazard management strategies and climate change adaptation measures that ensure risks are reduced to acceptable levels. These measures, and the related strategies, will help strengthen all decision-making processes by requiring that specific programs and projects include plans and measures to manage risks associated with future, as well as present, climate variability and extreme events. Such actions will result in the climate proofing of development projects and related initiatives, in support of the wider process of sustainable development.

Climate proofing means identifying risks to a development project, or any other specified natural or human asset, as a consequence of both current and future climate variability and extremes, and ensuring that those risks are reduced to acceptable

levels through long-lasting and environmentally sound, economically viable, and socially acceptable changes implemented at one or more of the following stages in the project cycle: planning, design, construction, operation, and decommissioning.

This book presents case studies that demonstrate the climate proofing of infrastructure and community development projects, and the mainstreaming of climate change considerations into national strategic development plans. In the context of addressing climate and related risks, the term "mainstreaming" is used to describe the integration of climate change adaptation into ongoing and new development policies, plans, and strategies, including laws and regulations (e.g., environmental impact assessment requirements). Mainstreaming aims to enhance the effectiveness, efficiency, and longevity of initiatives directed at reducing climate-related risks, while at the same time contributing to sustainable development and improved quality of life.

The case studies thus include assessments of both the risks arising from current climate variability and extremes and from future, incremental changes in those risks that will result from longer-term changes in climate. Significantly, the case studies incorporate assessments of adaptation strategies and specific measures that can be used to reduce unacceptable risks, including analyses of their benefits and costs. One aim of these analyses is to determine, in a rigorous and quantitative manner, the incremental costs of adaptation to climate change. The likelihood is increasing that when these costs are clearly identified and quantified by a developing country, they will be met, at least in part, by the international community (e.g., bilateral and

multilateral aid providers and financial mechanisms such as the Global Environment Facility (GEF).

The case studies were chosen to highlight the range of levels at which adaptation takes place, and the linkages between them. The levels are i) project, ii) regulation and compliance, iii) short- and mid-term policymaking and planning at subnational level, and iv) national strategic development planning. Therefore, as shown in Figure II.1, the case studies also demonstrate the importance of mainstreaming adaptation, including strengthening the enabling environment for adaptation to increase the likelihood of successful adaptation at project and community levels.

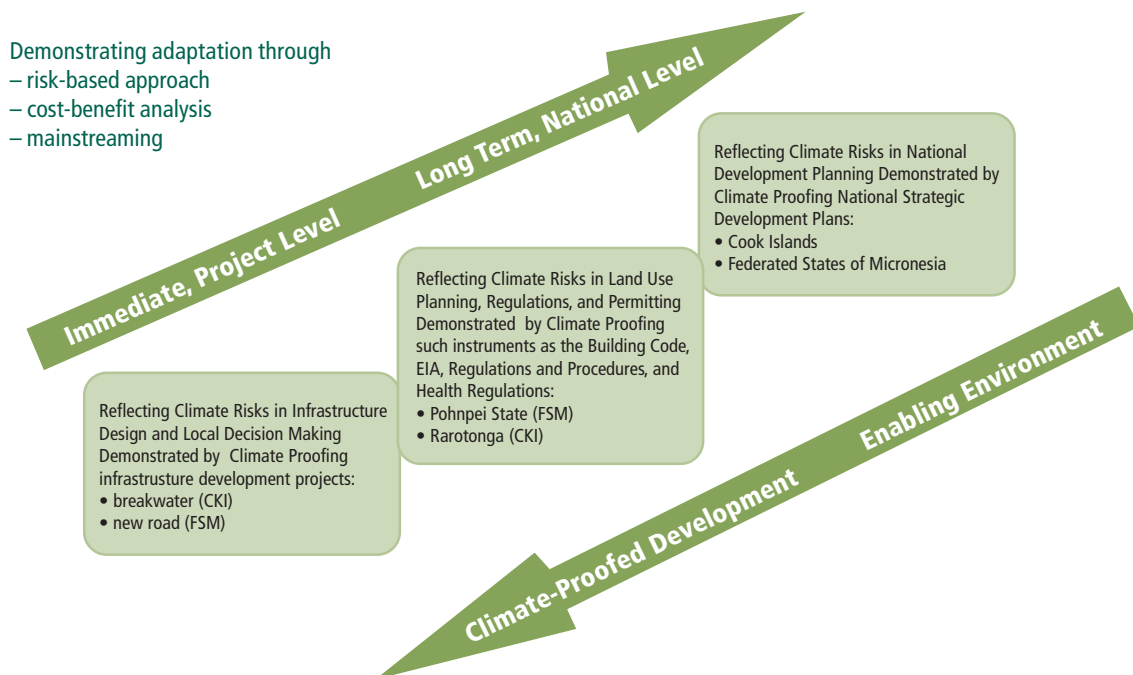
The field studies and other activities to develop the six case studies were undertaken in the Cook Islands and the Federated States of Micronesia (FSM), as part of RETA 6064-REG Climate Change

Adaptation Program for the Pacific (Second Phase, Country Level Activities), 2003. However, the innovative methodologies and tools, as well as the findings, are applicable to all Small Island Developing States and even to larger developing and developed countries.

The case studies have been prepared through a partnership among the Government of Canada (funding provider), the Asian Development Bank (executing agency), the Governments of the FSM and the Cook Islands (implementing agencies), Maunsell (NZ) Ltd (environmental and engineering consultancy) and the International Global Change Institute, University of Waikato, New Zealand. The RETA was funded under REACH by the Canadian Cooperation Fund for Climate Change—Greenhouse Gas Abatement, Carbon Sequestration, and Adaptation.

Figure II.1. Case Studies Demonstrate the Importance of Mainstreaming Adaptation

The case studies cover the continuum between project, subnational planning and regulation, and national strategic development planning, thereby showing the importance of the enabling environment to infrastructure, community, and other development projects. They also demonstrate how a risk-based approach, cost-benefit analysis, and adaptation mainstreaming contribute to the success of adaptation.



Source: CCAIRR findings.