

# RESPONSE STRATEGIES

People make choices every day about risks and benefits in their lives, weighing experience, information, and judgment as they consider the impacts of their decisions on themselves and the people around them. Similarly, people make choices that alter the magnitude of impacts resulting from current and future climate change. Using science-based information to anticipate future changes can help society make better decisions about how to reduce risks and protect people, places, and ecosystems from climate change impacts. Decisions made now and in the future will influence society's resilience to impacts of future climate change.

In recognition of the significance of these decisions, the National Climate Assessment presents information that is useful for a wide variety of decisions across regions and sectors, at multiple scales, and over multiple time frames. For the first time, the National Climate Assessment includes chapters on Decision Support, Mitigation, and Adaptation, in addition to identifying research needs associated with these topics.

As with other sections of this report, the linkages across and among these chapters are extremely important. There are direct connections between mitigation decisions (about whether and how to manage emissions of heat-trapping gases) and how much climate will change in the future. The amount of change that occurs will in turn dictate the amount of adaptation that will be required.

In the Decision Support chapter, a variety of approaches to bridge the gap between scientific understanding and decision-making are discussed, leading to the conclusion that there are many opportunities to help scientists understand the needs of decision-makers, and also to help decision-makers use available tools and information to reduce the risks of climate change. The Mitigation chapter describes emissions trajectories and assesses the state of mitigation activities. Policies already enacted and other factors lowered U.S. emissions in recent years, but achievement of a global emissions path consistent with the lower scenario (B1) analyzed in this assessment will require strenuous action by all major emitters. The Adaptation chapter assesses current adaptation activities across the United States in the public and private sectors, and concludes that although a lot of adaptation planning is being done, implementation lags significantly behind the scale of anticipated changes.

This report concludes with chapters on Research Needs to improve future climate and global change assessments and on the Sustained Assessment Process, which describes the rationale for ongoing assessment activity to achieve greater efficiency and better scientific and societal outcomes.

