Introduction to Response Strategies

Citizens of the United States and the world make choices every day that change the risks of current and future climate change. The impacts of climate change are already evident, and have been directly and unequivocally linked to human activities. To the extent that we can anticipate future changes, society can make better decisions about how to reduce risk and protect people, places, and ecosystems from extreme events and long-term changes. Some but not all of these changes are inevitable. Clearly, decisions made now and in the future will influence society's resilience to natural, social, and economic impacts of future climate change.

In recognition of the significance of these decisions, the 2013 National Climate Assessment Report presents information that is useful for a wide variety of decisions within regions and sectors, at multiple scales, and over multiple time frames. For the first time, this Assessment includes chapters on Adaptation, Mitigation, and Decision Support, in addition to identifying research needs associated with these topics. Further, this report includes a chapter on the Sustained Assessment Process, which describes the rationale for ongoing assessment activity to achieve greater efficiency and better scientific and societal outcomes.

As with other sections of this report, the linkages across the 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. The Adaptation chapter assesses current adaptation activities across the U.S. in the public and private sectors, and concludes that although a lot of adaptation planning is being done, implementation of adaptation plans lags significantly behind the scale of anticipated changes. The Mitigation chapter describes emissions trajectories and assesses the state of mitigation activities – which are increasing but are still not keeping pace with global goals to manage emissions. 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.

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