

SECTOR OVERVIEW

While climate change and variability clearly affect each region quite differently, there are issues of national importance that transcend regional boundaries. Though many such issues were identified, the decision was made to focus on five for this Assessment. These analyses provide a more integrated national picture of the potential consequences of climate variability and change, albeit a picture with regional texture.

These analyses also provide a basis for beginning to think about important interactions between sectors with regard to climate impacts. For example, the projected changes in the timing and amount of precipitation, and hence in water supply, will very likely have significant implications for the other sectors examined here: agriculture, forests, human health, and coastal areas and marine resources. Similarly, the increases in the use of fertilizers and pesticides that are projected for the agricultural sector have obvious implications for all the other sectors as well.



Agriculture

Overall productivity of American agriculture will likely remain high, and is projected to increase throughout the 21st century, with northern regions faring better than southern ones. Though agriculture is highly dependent on climate, it is also highly adaptive. Weather extremes, pests, and weeds will likely present challenges in a changing climate. Falling commodity prices and competitive pressures are likely to stress farmers and rural communities.



Water

Rising temperatures and greater precipitation are likely to lead to more evaporation and greater swings between wet and dry conditions. Changes in the amount and timing of rain, snow, runoff, and soil moisture are very likely. Water management, including pricing and allocation will very likely be important in determining many impacts.



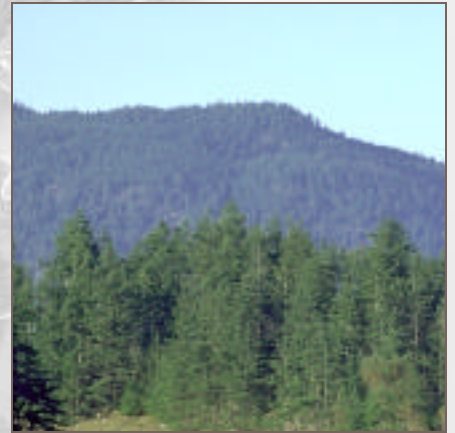
Human Health

Heat-related illnesses and deaths, air pollution, injuries and deaths from extreme weather events, and diseases carried by water, food, insects, ticks, and rodents, have all been raised as concerns for the US in a warmer world. Modern public health efforts will be important in identifying and adapting to these potential impacts.



Coastal Areas and Marine Resources

Coastal wetlands and shorelines are vulnerable to sea-level rise and storm surges, especially when climate impacts are combined with the growing stresses of increasing human population and development. It is likely that coastal communities will be increasingly affected by extreme events. The negative impacts on natural ecosystems are very likely to increase.



Forests

Rising CO₂ concentrations and modest warming are likely to increase forest productivity in many regions. With larger increases in temperature, increased drought is likely to reduce forest productivity in some regions, notably in the Southeast and Northwest. Climate change is likely to cause shifts in species ranges as well as large changes in disturbances such as fire and pests.