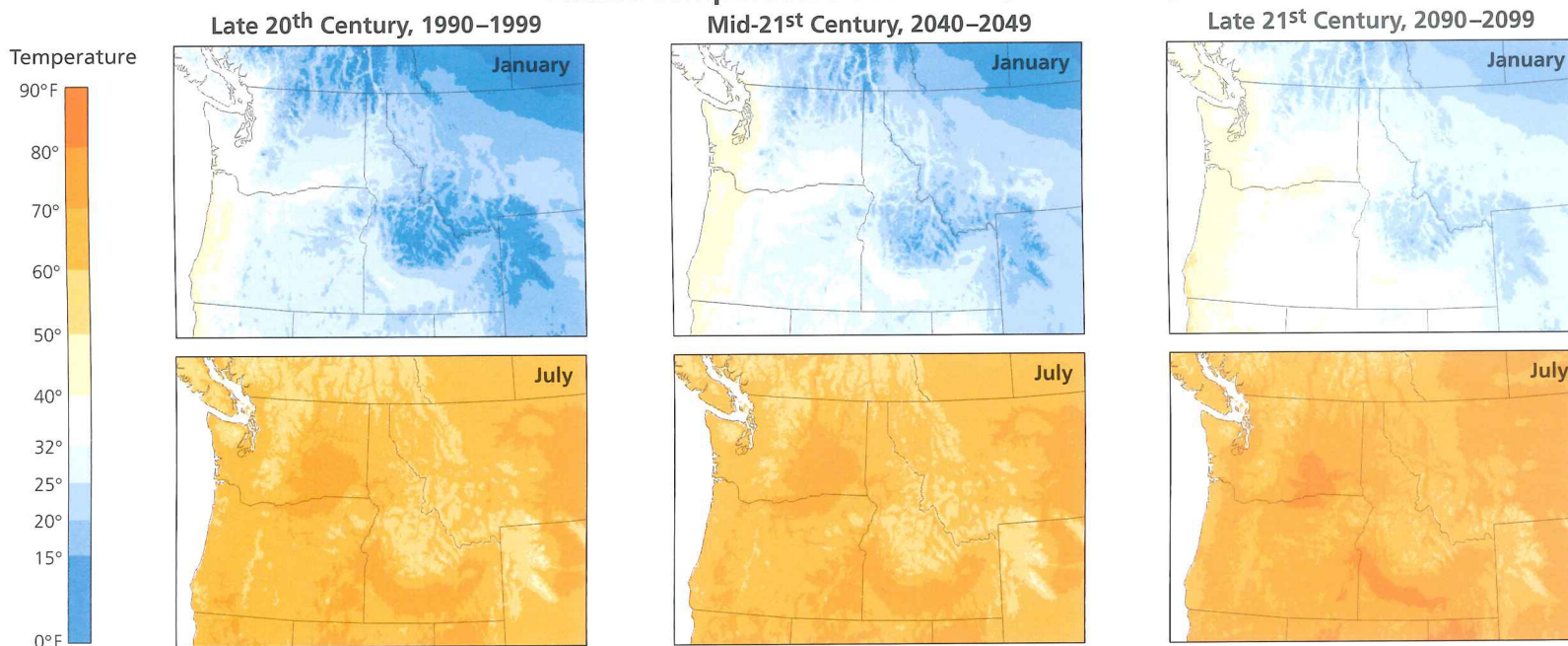


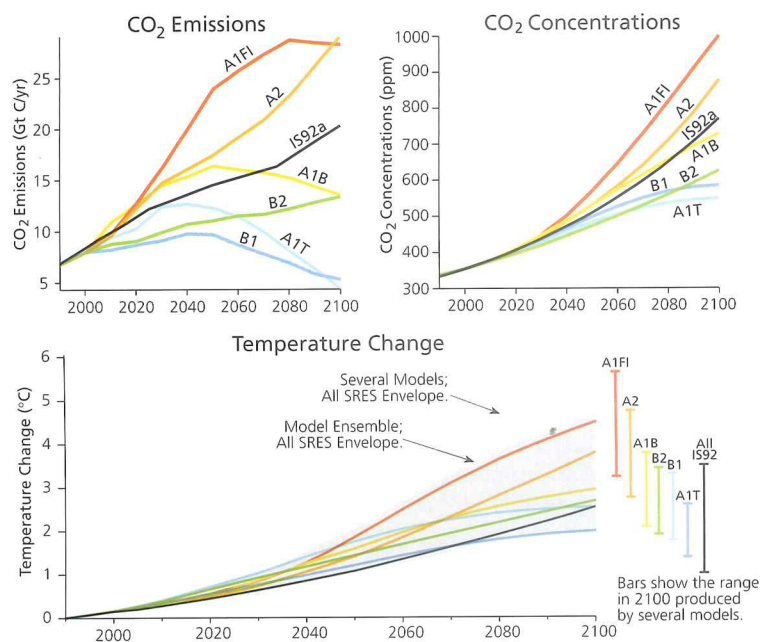
Future Temperature Scenarios (HADCM2 Model)



Future Climates

At the beginning of the twenty-first century there is abundant evidence that global climate is changing as a result of human action. Projections of future climate changes have been made by the Intergovernmental Panel on Climate Change (IPCC), an organization of hundreds of scientists and technical reviewers from more than 100 countries. The projections are made in three steps: (1) estimates of future population, the global economy and energy consumption are used to create various “scenarios” of carbon dioxide emissions, (2) models of the global carbon cycle are used to estimate what proportion of those emissions will remain in the atmosphere and (3) global climate models are used to estimate future climates. The projections shown at right were made using the scenarios in the middle of the range of those produced by the IPCC. The maps show the actual climate for the late twentieth century (1990–1999), and the simulated climate for the mid- and late twenty-first century (2040–2049 and 2090–2099, respectively). January temperature in the projections increases dramatically—by the end of the century nearly all of Oregon experiences above-freezing average temperatures. July temperature also increases, with temperatures now typical of the hottest parts of the Snake River Plain and Columbia Basin covering much of the region. January precipitation increases in the projections, particularly in the western part of the state: warmer air can hold more moisture than colder air, and so Pacific storms may deliver even more precipitation than they do at present, with more falling as rain, less as snow. Projected July precipitation changes the least in these projections, but in other projections summers become even drier across the region.

Climate Projection Modeling



Future Precipitation Scenarios (HADCM2 Model)

