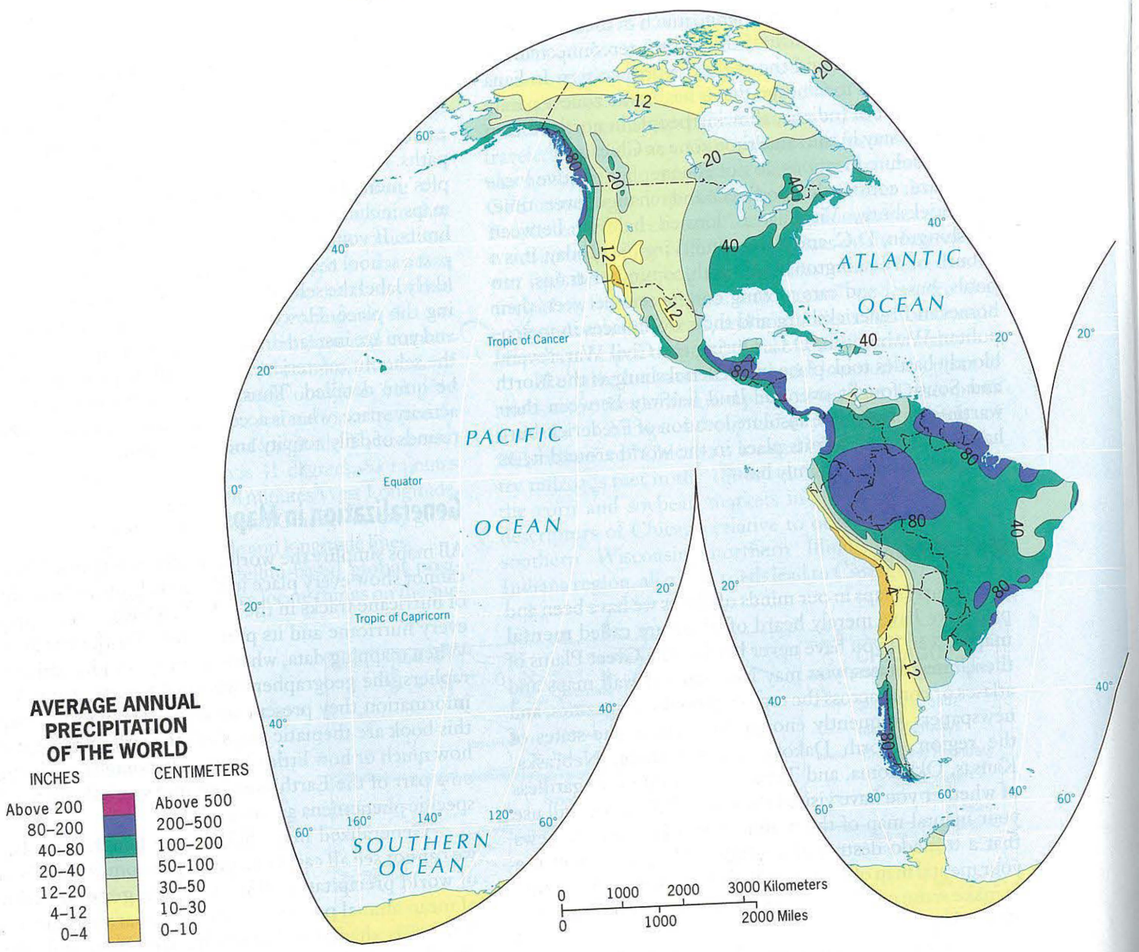

Figure 1.11
Average Annual Precipitation of the World. A generalized map of the mean annual precipitation received around the world. © H. J. de Blij, P. O. Muller, and John Wiley & Sons, Inc.

Remotely sensed data are collected by satellites and aircraft and are often almost instantaneously available. After a major weather or hazard event, such as the 2011 floods in the Mississippi River Valley, the unprecedented hurricane season in the Gulf of Mexico in 2005 (which included Hurricane Katrina), or the 2010 earthquakes in Haiti and Chile, remotely sensed data show us the major areas of impact (Fig. 1.12). A remotely sensed image surveys the damage of the earthquake, and photos taken on the ground show the impact and destruction (Fig. 1.13).

In states that restrict foreign access or that do not reliably allow foreign aid to enter the country, remote sensing can help geographers understand the physical and human geography of the place. Google Earth is a free, web-based user-friendly set of remotely sensed images from around the world woven together and accessible to anyone with Internet access. You can think of

Google Earth as a quilt of remotely sensed images, taken all over the world, coming from several sources, and sewn together. As a result, the resolution (the measure of the smallest object that can be resolved by the sensor, the degree of detail) of the images (each piece of the quilt) differs from place to place.

Remotely sensed images can be incorporated in a map, and absolute locations can be studied over time by plotting change in remotely sensed imagery over time. Advances in computer technology and data storage, increasing accessibility to locationally based data and GPS technology, and software corporations that tailor products to specific uses have all driven incredible advances in geographic analysis based on **geographic information systems** (GIS) over the last two decades. Geographers use GIS to compare a variety of spatial data by creating digitized representations of the environment (Fig. 1.14), combining layers of spatial data, and creating maps in which patterns and processes are superimposed.