

Chapter 17 Water Use and Management

This chapter deals with the vital resource, water. Water use varies throughout the world, and it is important to know why this happens. Also, where water is stored on Earth is fundamental information; it is necessary to explain the role of the hydrologic cycle with specific reference to aquifers or groundwater supplies.

Familiarity with aquifer depletion and other cases of water withdrawal, such as the Aral Sea, are intrinsic to understanding water use and management. The Ogallala aquifer in the United States is a prime example of water removal faster than it can be recharged. The Aral Sea has been depleted due to agricultural irrigation.

Water diversion projects, including the nature of these projects and their consequences to both the environment and humans, are a key issue. Even though these projects provide freshwater to areas that would not otherwise have water, dams and canals have detrimental effects. Cost/benefit analysis can be useful in describing the effects of dams.

Finally, water conservation methods are imperative to understand. Many such methods are common sense. Other methods, such as desalination and cloud seeding, can bring freshwater to dry areas.