Water Management Projects

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Module: Physical Geography
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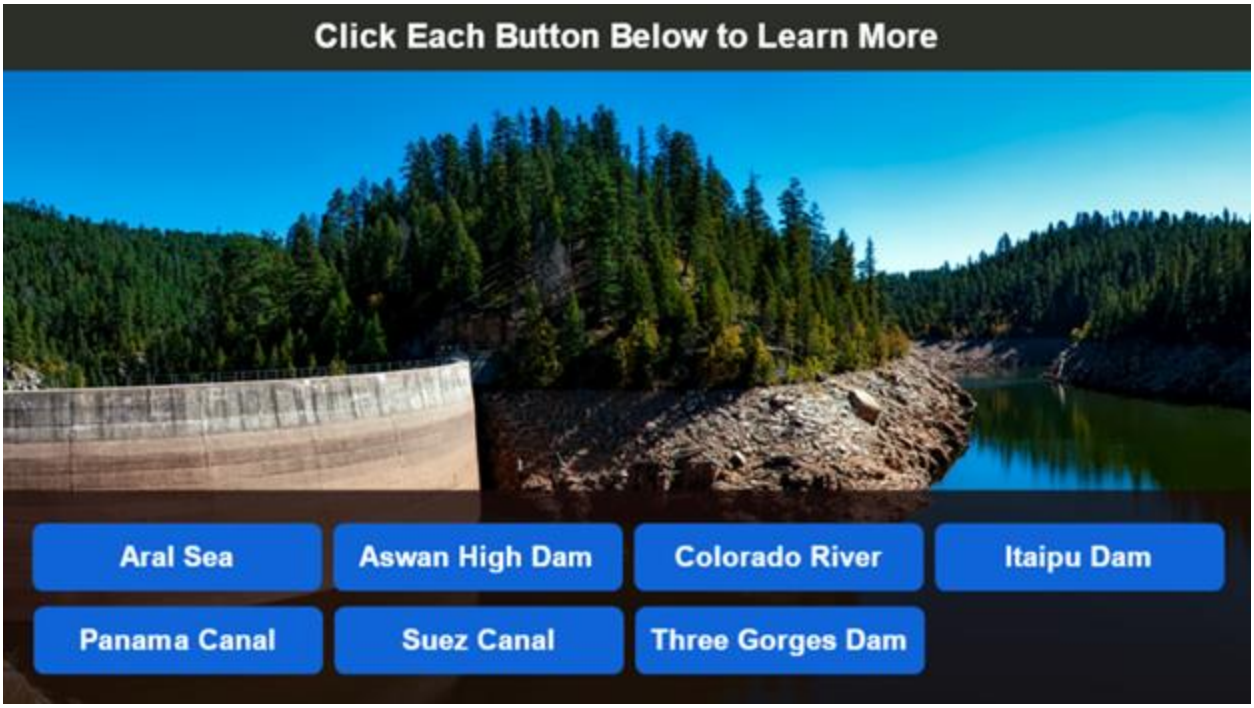
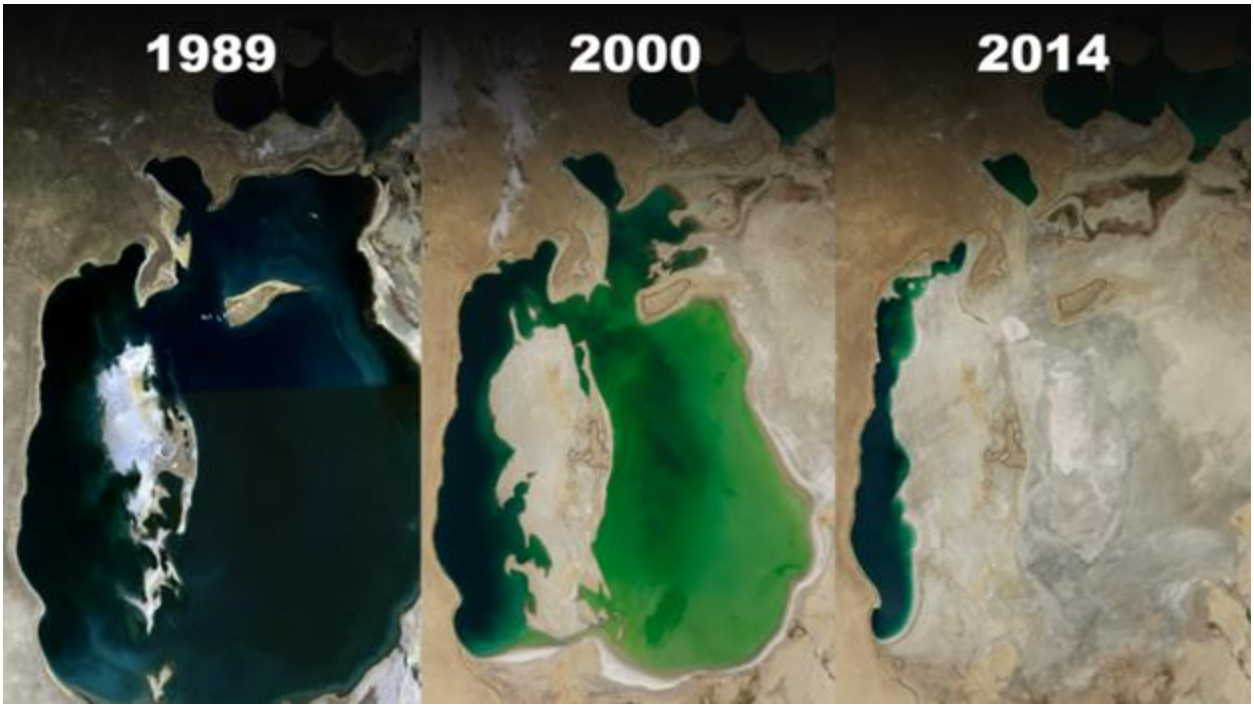


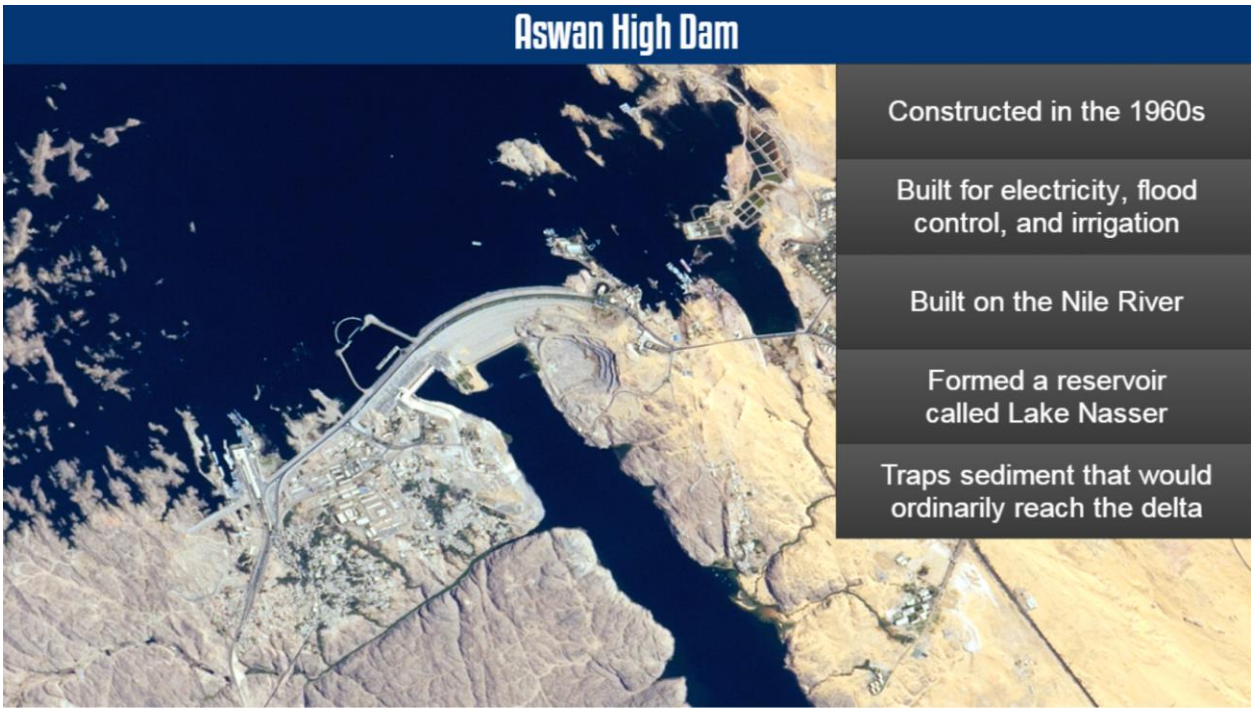
Water management has always been a key aspect of human civilization. Even the earliest human societies developed irrigation techniques to support the production of crops. Modern water management projects can be massive in size, and have the potential to drastically change the environment. Click each button to explore different examples of water management projects.

Aral Sea



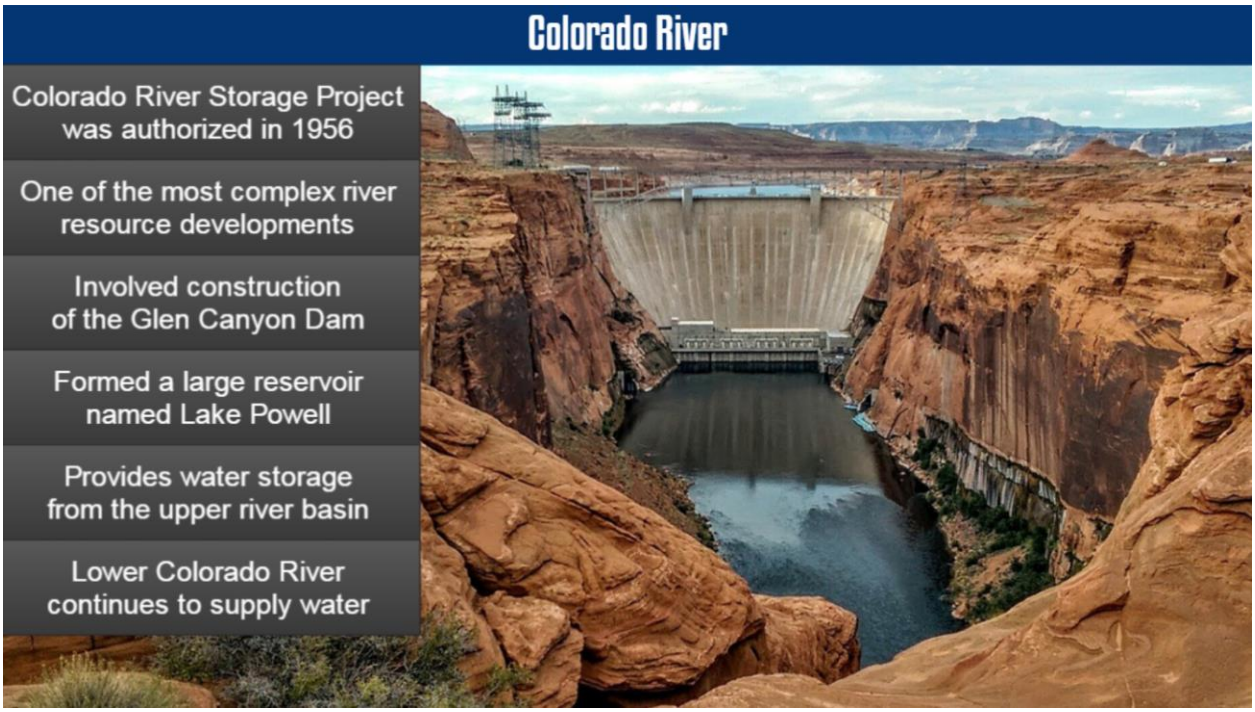
The Aral Sea was once the fourth largest lake on Earth. In the 1960s, two rivers that fed the Aral Sea were diverted for Soviet irrigation projects. By diverting these two rivers, the size of the Aral Sea was dramatically reduced. Gradually, the once giant lake separated into smaller lakes, which continued to decrease in size and depth.

Aswan High Dam



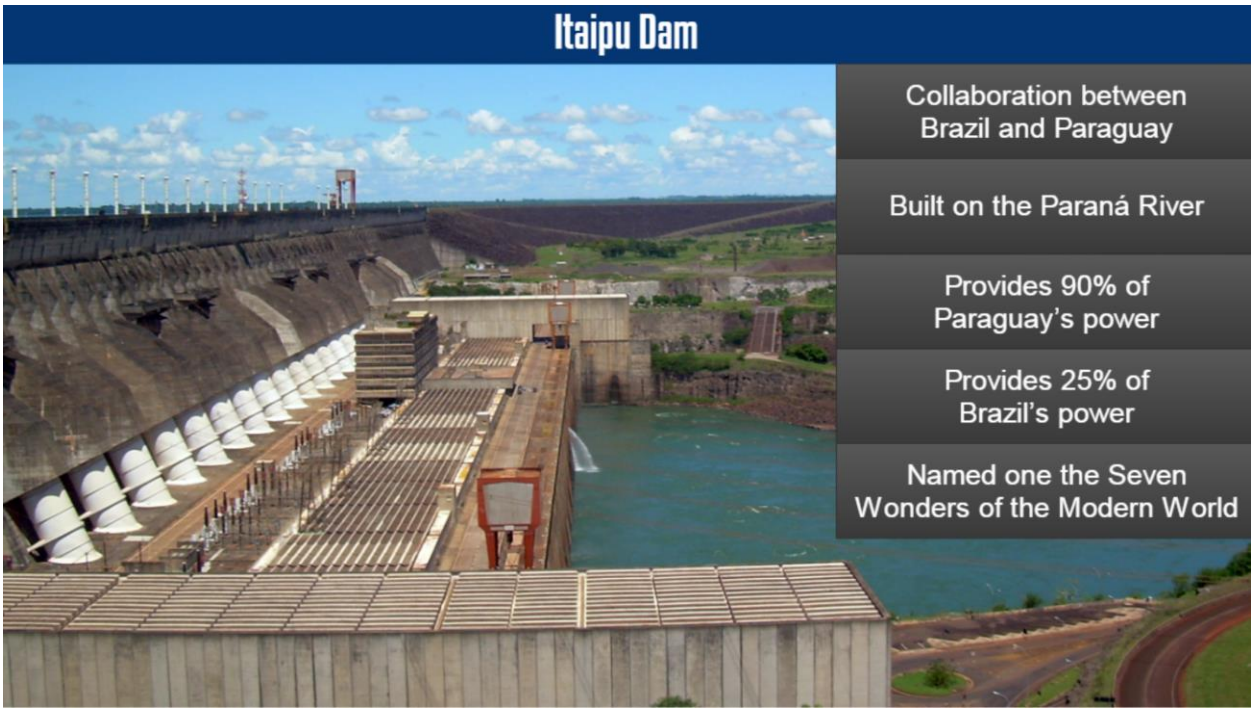
In the 1960s, the Egyptian government constructed the Aswan High Dam in an effort to generate hydroelectricity, control flooding, and irrigate crops. The High Dam was built on the Nile River, and created a reservoir, or artificial lake, called Lake Nasser. The dam also traps sediment that would ordinarily reach the Nile River Delta, which has caused decreased soil fertility and erosion at the mouth of the river.

Colorado River



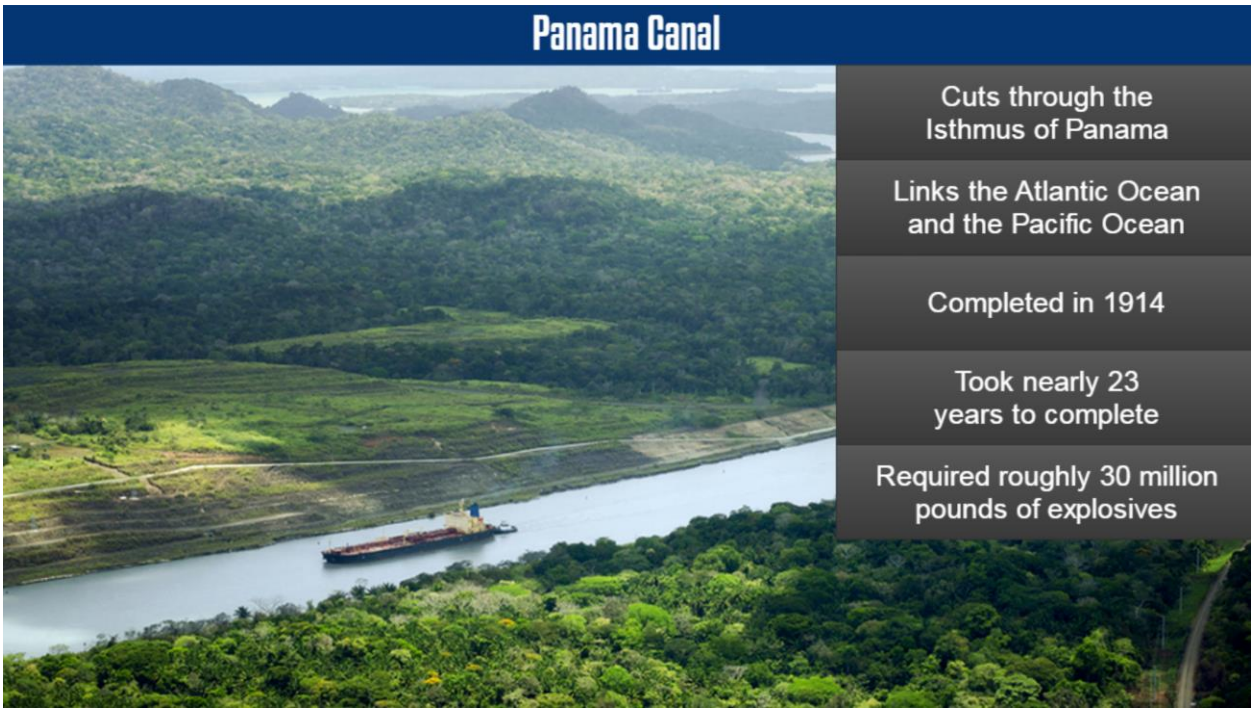
In 1956, the United States Congress authorized the Colorado River Storage Project. This project was one of the most extensive and complex river resource developments in the world. The Glen Canyon Dam was built on the Colorado River and formed Lake Powell, which is one of the largest man-made reservoirs in the country. The dam not only provides vital water storage to Utah, Colorado, Wyoming, and New Mexico from the upper Colorado River Basin, it also allows water from the lower Colorado River to continue to supply California, Nevada, and Arizona.

Itaipu Dam



Brazil and Paraguay collaborated in the construction of the Itaipu Dam, in an attempt to harness the power of the Paraná River along their shared border. The effort was incredibly successful, as the dam currently provides 90% of Paraguay's power, and 25% of Brazil's power. The American Society of Civil Engineers noted this impressive engineering project as one of the Seven Wonders of the Modern World.

Panama Canal



The Panama Canal cuts through the Isthmus of Panama, linking the Atlantic and Pacific Oceans. The construction of the canal, which was completed in 1914, was a monumental undertaking. It took nearly 23 years to complete, and required roughly 30 million pounds of explosives. At the time it was the most expensive construction project in U.S. history. Before the Panama Canal was built, ships traveling between the Atlantic and Pacific Oceans were required to sail approximately 8,000 miles around South America. Now, that journey is only 50 miles long.

Suez Canal

The Suez Canal is a man-made artificial waterway that cuts across the Isthmus of Suez in Egypt. This canal connects the Mediterranean Sea and the Red Sea, and is the shortest maritime route between Europe and the Indian Ocean. An average of 50 ships pass through this waterway each day. Without the Suez Canal, ships would be required to sail all the way around the southern tip of Africa.

Three Gorges Dam

Roughly one and a half miles wide, and more than 600 feet high, China's Three Gorges Dam is the largest in the world. By the time construction was completed, the dam had flooded the Three Gorges region of the Yangtze River, creating a massive reservoir hundreds of feet deep and nearly 400 miles long. The Three Gorges Dam is also one of the world's largest power plants, with turbines that generate as much electricity as 18 nuclear power plants.