

## Water Resources/ Water Wars

Water is an essential resource in everyday life. It is used to drink, farm, and in daily activities such as washing clothes. It is also used in industrial power plants (to cool machines), for hydroelectric power, in oil refineries (for chemical processes), and in manufacturing plants as a solvent.

However, water is often misused, and demand in many areas exceeds supply. Water is also polluted by chemical wastes, which renders the water unusable. In arid areas such as Israel, water causes extreme conflicts, known as Water Wars.

- There are 3 types of Water Wars: International, Intranational, and Totalitarian.
- Water Wars are all about power; someone has access to water, and someone else wants it.
- Water Wars can take place because an area is overpopulated and needs more water than they have access to, water is overused, or water resources are polluted or misused.
- Some Water Wars are on a large scale, some on a small scale.

A well-known water war is the Israel-Palestine Water War. This Water War is over the Gaza Strip. From an Jewish or Israeli point of view, Israel needs this water. The population of Israel is increasing very quickly, and more people mean more water is needed. But that's from a Jewish point of view; in truth, however, they already use much more water than they need. Israel overuses their water by 25%. The Gaza Strip is threatened for over-salinity, which would make it as unusable as the Dead Sea for human use. In February, 2008, this water war intensified with rockets launched by Palestinians on Israeli cities, and Palestinian militants being attacked by Israeli soldiers. Israel took heavy military action on March 1, resulting in over 100 Palestinian deaths.

This is an example of an International Water War taken to extremes.

# Mountain and Coastal Aquifers



This is a diagram of the Aquifers in the West Bank. An issue with these aquifers is the depth. Israel's aquifers go down deeper than Palestinian ones, and they are at an angle so the Israelis can “steal” water from the Palestinians.

Other Water Wars are more of water conflicts. An example of these conflicts is the intranational Los Angeles – Owens Valley water war. This dispute stems from Los Angeles's location in an arid area, and the convenient availability of water in the Owens Valley. The conflict began in 1898, when William Mulholland, superintendent of the newly-created Los Angeles Department of Water and Power, realized that the Owens Valley had a large amount of runoff from the Sierra Nevada, and an aqueduct could deliver the Owens water to Los Angeles. The systems that were set up oversaturated the soil to the point where crops could not be raised, and significantly lowered the water level in the Owens Lake, preventing most farming in the area. Later, while Owens Valley fought for their water back, Mulholland allowed building of the Los Angeles Aqueduct instead. In 1970, a second aqueduct was built.



Los Angeles Aqueduct

In the 1930s, Los Angeles needed more water. So, they started buying water rights to the Mono Basin. The water levels dropped, and animals such as the brine shrimp began to suffer, and birds' eggs on the two islands in the Basin were disappearing to predators. So it was required that enough water be let into the basin for the water level to be 20 feet.



Mono Lake

An example of a totalitarian water war is the China Water Crisis. This Crisis is taking place for a number of reasons. First, with China's tremendous overpopulation, the water demand highly exceeds the supply. Second, the water in the Yangtze River is the only river besides the Pearl which has potable (drinkable) water. Water contamination is a big issue in China. Third, the Chinese government adds to the conflict.

Sections of the Chinese government are held responsible for some of the pollution to water supplies. These are areas where the government failed to act on an issue, approved an issue, or actively took part in creating an issue and so creating a worse situation: pollution, excessive mining and the

failure to carry out environmental impact assessments.

A main water issue caused by the Chinese government is the Three Gorges Dam. It is the largest hydro-electric power station in the world, and it is still not complete. The Dam is expected to be operational in 2011. It has or will flood some 1,300 archaeological sites and alter the appearance of the Three Gorges as the water level rises over 100 meters at various locations.

In addition, as people are moved from the reservoir site, deforestation will occur for agricultural needs. Also, erosion at the site is causing 40 million tons of sediment to fall into the Yangtze annually. This sediment is expected to one day clog the turbines of the dam, so more structures are being built upstream to keep sedimentation down. Unfortunately, this will have undesirable effects:

1. Downstream riverbanks may be more vulnerable to flooding.
2. Shanghai, although far from the Yangtze, rests on silt. If there is no more silt arriving from the Yangtze, Shanghai may be in danger.

The Government placed this dam, and is continuing to build it although they know these unwanted effects may occur.



Three Gorges Dam

Questions:



1. Describe the 3 types of Water Wars. Give Examples.
2. What are the reasons that Water Wars take place? What are people really trying to gain during Water Wars, besides water?
3. In the Israel-Palestine water conflict, describe the two different points of view one could have (the two different sides).

4. What are the issues with the Three Gorges Dam in China?