

Water Conflicts in the Middle East: Preview of the Future?*

Many countries in the Middle East face water shortages and rising tensions over water sources they must share. Most water in dry region comes from three river basins: the Nile, the Jordan, and the Tigris-Euphrates.

Three countries—Ethiopia, Sudan, and Egypt—use most of the water that flows in Africa's Nile River. Egypt, where it rarely rains, gets more than 97% of its freshwater from the Nile and is last in line to tap this precious source. To meet the water and food needs of their rapidly growing populations, Ethiopia and Jordan plan to divert more water from the Nile. Such upstream diversions would reduce the amount of water available to Egypt, which cannot exist without irrigation water from the Nile.

Egypt could go to war with Sudan and Ethiopia for more water, cut its rapid population growth, or waste less irrigation. Other options are to import more grain to reduce the irrigation water, work out water-sharing agreements with other countries, or suffer the harsh human and economic consequences of *hydrological poverty*.

The Jordan basin is by far the most water-short region, with fierce competition for its water among Jordan, Syria, Palestine (Gaza and the West Bank), and Israel. Syria, which is projected to double its population between 2007 and 2050, plans to dam and withdraw more water from the Jordan River, decreasing the downstream water supply for Jordan and Israel. If Syria through with its plans, Israel warns that it may destroy the largest dam. In contrast, Israel has cooperated with Jordan and Palestine over their shared water resources.

Turkey, located at the headwaters of the Tigris and Euphrates, controls water flowing downstream through and Iraq and into the Persian Gulf. Turkey is building 24 dams along the upper Tigris and Euphrates to generate electricity and irrigate a large area of land.

If completed, these dams will reduce the flow of water down stream to Syria and Iraq by as much as 35% in normal and by much more in dry years. Syria also plans to build a dam along the Euphrates to divert water arriving from This will leave little water for Iraq and could lead to a water war between Iraq and Syria.

Resolving these water distribution problems will require developing agreements to share water supplies, slowing population growth, wasting less water, raising water prices to help improve irrigation

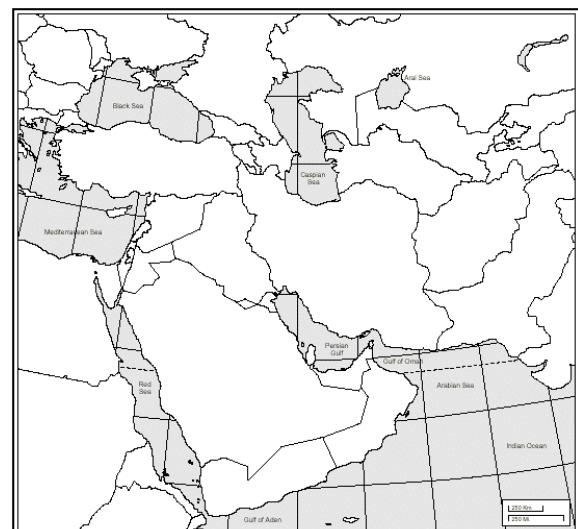
efficiency, and increasing grain imports to reduce water needs.

Two or more countries share some 263 of the world's water basins but countries in only 158 of the basins have water-sharing agreements. This explains why conflicts among nations over shared water resources, especially in Asia, are likely to increase as populations grow and the demand for water increases.

The world faces three major water resource problems: too little water in some areas, too much water in other areas, and water pollution. To many analysts, emerging water shortages in many parts of the world—along with the related problems of biodiversity loss and climate change—are the three most serious environmental problems the world faces during this century.

Jordan's freshwater resources are 750 million kL/year and water use is over 1.3 billion kL/yr. The population is growing at about 3% per year (world average=1.4%). Long-term solutions include buying water from other countries and building a canal between the Red Sea and Dead Sea and desalinating Red Sea water.

1. Why might this approach work for Jordan and not for Haiti?
2. What are the disadvantages of importing water? Of desalinating water?
3. What do you believe are the three most important priorities for dealing with water shortages in the Middle East?
4. Locate the Tigris, Euphrates, and Nile Rivers.



*G. T. Miller and S. Spoolman. 2008. *Environmental Science*. Belmont CA: Thomson.