

Water and World History

Overview

Throughout history, water has been a focal point for societies. From the ancient civilizations of the Indus Valley and the Roman Empire to today's cities and towns across the world, proximity to a water source is a vital resource for human life. A city or town's proximity to a waterway increased its availability to trade routes, and therefore wealth and power. Water-related innovations in agriculture, sanitation and science have allowed for population growth and migration. However, with this growth and movement, there is a strain on available fresh water, and conflicts over water continue to arise.

Settlement and Migration

- What has been water's role in the settlement and development of civilizations throughout history? Why were rivers ideal for settlement? How does water affect settlement and development today?
- How do environmental conditions, such as flooding or drought, affect settlements and population movement? Compare the migration of civilizations in the Indus Valley to migrations today caused by environmental factors.
- How were environmental factors such as geography and climate linked to the rise of pastoral societies? What are some examples of pastoral societies today?
- In the past, geographic, environmental and economic factors favored hunter-gatherer, pastoral and small-scale agricultural ways of life over urban ones. Why would this be? Is this still true today? Why or why not?
- What was the role of the environment on the fall of past societies? What are some examples of this today? Explore the effects of climate change, such as drought and rising sea levels, on current migration.
- What are the causes of urbanization? Are any causes related to water? What are the effects of urbanization on water (sanitation, availability, etc.)? Compare urbanization of the 15th-18th centuries to urbanization today with a focus on water.

Trade

- How did geography and climate affect trade and communication? How did trade networks affect civilizations and empires?
- Explore the link between settlements near water sources and trade routes. Why would a settlement want to be located on a trade route? What were the benefits?
- How did ocean currents affect trade and the spread of religion? How did they affect communication between societies?
- Compare the British and French Trading Companies in India to companies like Coca-Cola and other big industries in India. How does the presence of these companies and industries affect the water supply in India? How does it affect the health of those living near the facilities?

Conflict

- What are the characteristics of pastoral and agrarian societies? Explore how conflict can arise between these two types of societies. What is water's role in these conflicts? Compare conflicts during past civilizations to those of today.

- What wars have been fought and what conflicts have taken place because of water? Are there more or less conflicts over water today? Why or why not?
- How do governments and policies affect water? How can these policies be an instigator of conflict?
- What are the effects of war on a population's water supply?
- What were the environmental effects of WWI and WWII? Are they still felt today?
- Identify changes to political boundaries after WWI and WWII. How were these determined? How did water affect these decisions? Creating boundaries/borders through water sources – how did this affect people's lives?
- War creates refugees? How does this population movement affect water?
- Examine the creation of the United Nations. How does the UN address water? Does it see water as a human right? What is the connection between water and the UN Millennium Development Goals?
- How and why was Israel created? What are the implications of Israel's borders today? What conflicts over water are happening today as a result of national borders in this region?

Innovation

- Explore water-related innovations of past societies. What was the impact of these innovations? Are any of them still used/relevant today?
 - Agriculture: irrigation, canals, crop rotation
 - Science/Health: water filters, sanitation, the microscope (in relation to Cholera)
 - Global Expansion: shipbuilding, navigation, compass, naval warfare
- What were the effects of the industrial and agricultural revolutions of 18th Century England on water? How did these revolutions affect things like population growth and movement and industries like textiles? What effect did that have on water? How did the amount of water used by industry change after the industrial and agricultural revolutions? How did the cleanliness of water change because of the industrial and agricultural revolutions?
- What were the beneficial and detrimental effects of the industrial revolution

Agriculture

- Explore the connection between the spread of agriculture and the acceleration of world population growth.
- How did geography and climate affect agriculture? How did these impact the innovation of new farming techniques?
- Thinking about geography and climate, specifically in relation to water, how does farming differ from one region of the world to another? Compare farming techniques in drought-stricken areas to farming in areas subject to flooding.
- What did water have to do with food surplus? What techniques did the early cities use to control water for farming (irrigation, canals)? Are these techniques still used? What role does water play in farming today?
- Compare agriculture characteristics and techniques in Olmec culture to those in other parts of the world at that time. Is farming the same all over the world today? What techniques are used in which parts of the world?

Global Expansion

- Oceanic travel allowed for larger trading systems between continents and global expansion. What was water's role in global expansion?
- How did global expansion affect the environment of countries visited? What did people introduce to newly explored areas? Explore the effect of the introduction of new flora and fauna on the local soil and the ecosystem in general. What were the water-related effects?
- What role did global expansion play in the spread of disease? What was water's role in the spread of the Black Plague?

Other

- How did the long-term climate change of 14th Century Europe contribute to their economic and social crisis? Compare to climate change today.
- How did the Black Plague affect population, agriculture and economies? How did it affect water?
- What is geography's role in nation-building? How does geography affect borders? What bodies of water are part of more than one country? How do governments determine policies for the use of that water? Political Geography
- Economic and social class divisions with respect to water – populations with the least amount of available water/clean water are the poorest in developing nations. Why are there large disparities between developed and developing nations in regards to water availability and sanitation?
- Compare birth and death rates and infant mortality rates from the 17th through the 21st Centuries. How do waterborne diseases affect populations? Are the same countries and regions' rates the same today?
- Why did mass consumer economies develop in some countries and not others? Connect water (i.e. water bottles) to mass consumer economies.
- How have government policies influenced water use and consumption? Compare a few countries around the world to examine government policies on water and see which are the most effective and why.
- Explore the role of women and water. What are the common gender roles with regard to water around the world, specifically in developing nations?

Possible Topics

- Explore what the effects of climate change on current pastoral societies such as the Tuareg of Northern Africa and those in Darfur.
- Trace the impact of huge multinational corporations like Coca-Cola and PepsiCo. Identify the role these corporations play in both helping and hindering the water supply in countries such as India and China.
- Look at refugees (Burma, Sudan, Somalia etc) around the world and how their receiving country is dealing with water needs in camps and settlements.
- Identify the current issues in Israel regarding water rights, ownership, availability and access.
- Compare and contrast the water policies of a few different countries such as India, Germany, and Israel.

Lesson Plans

Got Water?

<http://www.pbs.org/wgbh/globalconnections/mideast/educators/resource/lesson2.html>

Students will learn that delivering clean, fresh water to citizens around the world involves and affects politics, economics, international relations, and technology.

Commerce in the Indian Ocean

<http://www.nationalgeographic.com/resources/ngo/education/xpeditions/lessons/11/g68/commerce.html>

This lesson will introduce students to the geographic features of the Indian Ocean and the critical role of the monsoon in determining maritime trading patterns before the 16th century.

Who Pays the Price When a Sea Disappears?

<http://www.nationalgeographic.com/xpeditions/lessons/14/g68/disappear.html>

This lesson asks students to learn about the problems in the Aral Sea region and to discover how the sea's water loss is affecting specific groups of people, such as babies and fishers.

Thinkfinity

<http://www.thinkfinity.org/>

Free lesson plans and educational resources. Search by grade level, subject or keyword. Includes lessons and resources from Xpeditions, EconEdLink, Science NetLinks, and more.

Online Resources

United Nations Millennium Development Goals

<http://www.un.org/millenniumgoals/>

The eight Millennium Development Goals (MDGs) – which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 – form a blueprint agreed to by all the world's countries and all the world's leading development institutions. Go to http://www.unesco.org/water/wwap/facts_figures/mdgs.shtml to explore how water relates to each MDG.

UNICEF: Voices of Youth

http://www.unicef.org/voy/explore/wes/explore_wes.php

Voices of Youth is an Internet site created by the United Nations Children's Fund (UNICEF) for young people who want to know more, do more and say more about the world. This section has resources on water, environment and sanitation. Check out the fact sheets, Water Alert! game, and much more.

Water Conflict Chronology

<http://www.worldwater.org/chronology.html>

In an ongoing effort to understand the connections between water resources, water systems, and international security and conflict, the Pacific Institute initiated a project in the late 1980s to track and categorize events related to water and conflict.



Water for Life, 2005-2015

<http://www.un.org/waterforlifedecade/index.html>

The United Nations General Assembly, in December 2003, proclaimed the years 2005 to 2015 as the International Decade for Action 'Water for Life'. A decade of action! The primary goal of the 'Water for Life' Decade is to promote efforts to fulfill international commitments made on water and water-related issues by 2015. Learn about water issues such as scarcity, sanitation, gender, transboundary waters, and more.

Videos

Water: Drop for Life

<http://www.un.org/waterforlifedecade/index.html>

Watch the 'Water, Drop of Life' Video of the Decade and discover the issue (*located on in the middle-right side of page*).

Food & Water Watch Library

<http://www.foodandwaterwatch.org/water/films/library>

A great selection of water-related films available on loan from Food & Water Watch.

Rx for Survival

<http://www.pbs.org/wgbh/rxforsurvival/series/video/index.html>

A PBS series about global health that explores past innovations in health, as well as current global health issues and their solutions. Watch various segments from the series, many dealing with water-related diseases such as River Blindness, Dehydration, and Malaria.

The Risks of Desert Farming – 3 min

http://www.nytimes.com/2008/08/10/business/worldbusiness/10feed.html?_r=1&th&emc=th&oref=slogin (*scroll halfway down page of article to find video*)

Israel is at the forefront of desert farming, but even the world's most high-tech farms can't control the weather.

Farming the Desert – 3 min

<http://video.nytimes.com/video/2008/07/14/business/1194817102867/farming-the-desert.html?scp=2&sq=desert&st=cse>

Egypt is relying on an ambitious agricultural project in the Sahara Desert to reinvigorate national food production.

Articles

Analysis: Middle East Water Wars

http://news.bbc.co.uk/2/hi/middle_east/2949768.stm

After signing the 1979 peace treaty with Israel, Egyptian President Anwar Sadat said his nation will never go to war again, except to protect its water resources.

Thirsting for Justice in Palestine (link to PDF of article)



The conflict between Israel and the Palestinians is, of course, about religion and power and history. But what few outside the region realize is that it is also largely about water.

Talking Dirty – The Politics of Clean Water and Sanitation

<http://www.ghc09.org/files/articles/politics%20of%20clean%20water%20and%20sanitation.pdf>

An overview of the dangers of dirty water and poor sanitation and the international response to this issue.

Beneath Booming Cities, China's Future is Drying Up

<http://www.nytimes.com/2007/09/28/world/asia/28water.html?pagewanted=1>

Groundwater levels are dropping around China, as cities, industry and farming compete for an unbalanced and finite water supply.

Water Scarcity: A Looming Crisis?

<http://news.bbc.co.uk/2/hi/science/nature/3747724.stm>

The world's water crisis is simple to understand, if not to solve.

Indian Farmers, Coca-Cola Vie for Scarce Water Supplies

http://www.pbs.org/newshour/bb/asia/july-dec08/waterwars_11-17.html

In the Indian state of Rajasthan, farmers have accused Coca-Cola factories of drawing too heavily on the area's water supplies and contributing to pollution.

Water Fights Present Dangerous Challenges in Coming Decades

http://www.pbs.org/newshour/extra/features/world/jan-june09/water_03-20.html

By the year 2030, about half the world's population -- 3.9 billion people -- could be living in water-stressed areas where health and sanitation are at risk, according to a new report.

Kenya: The Dangers of Pastoralism

<http://www.irinnews.org/Report.aspx?ReportId=85252>

Increasingly severe and unpredictable droughts are forcing pastoralists in northeastern Kenya to travel further and more frequently to find water and grass for their animals - under increasingly dangerous circumstances.

Iraq Suffers as the Euphrates River Dwindles

http://www.nytimes.com/2009/07/14/world/middleeast/14euphrates.html?_r=1&emc=eta1

The river is drying up as a result of the water policies of Iraq's neighbors, a drought and years of misuse by Iraq.