

Lesson Plan: The Global Water Crisis

By Kate Seche and Peter Sawyer, Pulitzer Center on Crisis Reporting

Introduction

Whether it's the steady depletion of groundwater, incremental shifts in rainfall over decades or the drumbeat of deaths from diarrheal disease, water issues don't often generate headlines. Water is a quiet crisis, but it's fundamental to human and environmental health, robust economies, and peace.

With rising populations, increasing standards of living, and climate change, the challenge is only becoming more difficult. Nearly 900 million people lack access to clean water, 2.6 billion don't have a safe way to dispose of feces and urine, and climate change is altering historical weather patterns, affecting where water is found and how much is available.

Few know the extent of the crisis. The Pulitzer Center on Crisis Reporting has spent the last three years covering the water crisis with seventeen multimedia projects from across the globe. These reports are collected on our special Global Gateway, Downstream (<http://pulitzercenter.org/downstream>).

"The Global Water Crisis" lesson plan draws on select video reports from Downstream. After completing this plan your students will have:

- Learned about four manifestations of the world water crisis:
 - lack of access to clean water in Ethiopia
 - unsustainable water policy in Yemen
 - inadequate sanitation in Kenya
 - climate change in Nepal
 - Thought through the consequences of each of these issues
 - Imagined life in a society vastly different from their own
 - Used the C.I.A.'s World Factbook
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Specific Subject-Area Connections

Science

- Ecosystems
- Effect of human activities on the Earth
- Environmental public policy
- Freshwater resources
- Renewable/Nonrenewable resources
- Role of water in natural and human-made environments

Social Studies

- The political and social conditions of developing nations
- U.S. foreign policy since World War II

Materials

- Pulitzer Center World Water Day DVD
- World Political Map e.g., <http://www.eduplace.com/ss/maps/world.html>
- Computers with Internet access
- Attachments A&B

Student Preparation/Background Information

Begin this lesson by having your students use a political map to locate each of the countries that will be highlighted in the videos: Yemen, Kenya, Ethiopia, and Nepal. Depending on the level of background knowledge your students have on these four countries, you may choose to use one, or both of the student preparation activities described below.

Option A

If your students are not very familiar with the social and economic conditions in these four countries, have them complete the country profile sheet (Attachment A) – all of the information required to complete the profile sheet can be found on the C.I.A.'s World Factbook web page:

<https://www.cia.gov/library/publications/the-world-factbook/index.html>.

The profile sheet can be completed independently, in small groups, or as a class. For a large-group activity, you may choose to assign one or two sections of the grid to each student, have them quickly research the answer and contribute to a large, class profile sheet. For a small group activity, you might assign groups of students a specific country or research area (GDP, population, etc.) and once the research is completed, have students break into new groups with one representative from the original country or research area in each new group to share their findings.

After completing the activity, have a brief discussion with your students asking them to compare statistics about life in each of the four countries to statistics about life in the United States. Ask students to identify differences and/or similarities they found surprising, and elaborate on why this information caught their attention.

Option B

Before watching the videos, ask students to consider the following questions given the information they have learned/know about each country.

- In each country, which group(s) of people do you think will be most impacted by the water shortage, sanitation, or climate change issues?
- What do you think will be the primary cause of water and sanitation problems in each country?
- What will be the health, economic, or political implications of the water or sanitation crisis in each country?

You may also choose to have students complete a brief anticipatory matching activity.

1. The capital city of this country could be the first in the world to run out of water.	A.) Kenya
2. Residents of this country's capital pay approximately 7 cents to use public toilets each day.	B.) Ethiopia
3. Women in this country carry 20L of water over 3 miles a day.	C.) Yemen
4. Glacier melt in this country affects rivers in India and Bangladesh.	D.) Nepal

As students watch the videos, have them complete the grid (Attachment B) comparing water and sanitation issues in Kenya, Yemen, Ethiopia, and Nepal.

World Water Day Videos

Discussion Questions and Follow-Up Activities

1. ETHIOPIA

“Words from a Water Walker”

By Sarah Stuteville

Link: <http://pulitzercenter.org/slideshows/words-water-walker>

1. Why do you the people who live in Fadi Jillo’s village get sick from the water? If they know they will get sick, why do you think they continue to use it?
2. How would a water supply system help the village? Who do you think would benefit the most from the installation of a water system?
3. How do you think the lack of accessible, clean water influences issues of gender equality?
4. How much is 20L of water? Can you carry 20L of water?
 - a. For this activity, you may choose to conduct a water-walking relay in which all of the students in your class carry a bucket or jerry can of water for a portion of a 3-mile walk to simulate the experience of women and children around the world. The bucket of water could also be replaced by a backpack full of textbooks to represent the weight of a water can.
5. Students may choose to put together a water awareness event for the school or larger community. For an example visit the Pulitzer Center’s Student Reporting page and view the Nerinx Hall Water Haul video (<http://pulitzercenter.org/your-story/nerinx-hall-water-haul-st-louis>).

Additional/Related Reporting

“Wells in Ethiopia Draw on Community Support”

By Fred de Sam Lazaro; PBS Newshour

Link: <http://pulitzercenter.org/video/wells-ethiopia-draw-community-support>

2. YEMEN

“Yemen’s Water Woes”

By Paul Stephens

Link:

1. What are the two main causes of Yemen’s water shortage? Describe how Yemeni short-term solutions to agricultural problems are leading to serious long-term consequences.
2. What role do you believe the Yemeni government, or international governments should play in addressing the misuse of water in Yemen. What incentives can be put in place to encourage the people of Yemen to become better stewards of this natural resource?
3. The United Nations has described water as a human right. If a nation is exploiting their water resources, leaving their population without water, should the international community take action?
4. If Yemen does run out of water, where do you think their water refugees will go? Why?
5. How does the water shortage in Yemen directly affect U.S. security concerns?

Additional/Related Reporting

“India’s Growing Population Strains Water Supplies”

By Fred de Sam Lazaro; PBS Newshour

Link: <http://pulitzercenter.org/video/population-growth-india-strains-water-supply>

3. KENYA

“Kenya: Sanitation in the Slums”

By Fred de Sam Lazaro; PBS Newshour

Link: <http://pulitzercenter.org/video/kenya-sanitation-slums>

1. Do you agree with Kuria’s marketing approach (providing toilets to wealthy neighborhoods first)? Why or why not?
2. What do you think about Novogratz’s theory of “patient capital”? Do you believe it will work?
3. And, do you agree that charity, alone, can never bring about social change? Why or why not? Do you think a community has to support a project like Kuria’s to make it successful? Why or why not?

Additional/Related Reporting

“The World’s Toilet Crisis”

By Vanguard Documentary Series

Link: http://current.com/shows/vanguard/92482205_the-worlds-toilet-crisis.htm

4. NEPAL

“Consequences of Himalayan Glacier Melt”

By William Wheeler

Link: <http://pulitzercenter.org/video/consequences-himalayan-glaciers-melt>

1. As the glaciers in Nepal melt, river levels in India and Bangladesh will drop dramatically. Describe the political, health, and economic implications a change like this could have.
2. Even if the government of Nepal were able to consistently provide safe drinking water to the country’s population now, scientists are unable to predict the impact climate change will have across the globe – what challenges does this present as governments, scientists, entrepreneurs, and NGOs work to address the global water crisis?

Additional/Related Reporting

“Bangladesh Reels from the Impact of Climate Change”

By Stephen Sapienza

Link: <http://pulitzercenter.org/video/bangladesh-reels-impact-climate-change>

Extension Activities

1. Creative Writing Project:

- Imagine you live in a country that has completely run out of water. Write a story describing your day-to-day life. What is the government like? Do people go to school/work? How is water distributed/rationed? Are there social services in place to support families who cannot purchase sufficient water? Have water refugees fled the country? Has your family stayed together? Include as many details as possible to help the reader imagine life in a country without water.
- Imagine you are a water refugee. Create journal entries to describe your journey out of your home country, to a new location. Where was your family living? Where are you moving? Are other people going with you? Is the new country welcoming you? Where will you live? What will you do? What have you left behind? What are you looking forward to?

2. RAFT Assignment

Role	Audience	Form	Topic
Water refugees	Modern-day American citizens	Blog	Life in a country that has completely run out of water.
A medical professional	Future generations	Creative Writing Story	Clean water is a human right.
Government official	Your community/ Your Peers	Newspaper Article	40% of the world's population lacks access to a toilet.
A young girl	The U.N./ The international community	Poem	Life as a water walker

Other ideas from Kristin Collins, Social Studies Teacher, Parkway West High School, St. Louis, MO
<http://pulitzercenter.org/education/lesson-plan/exploring-downstream-water-resources>

3. Awareness Event

- Have your students create an awareness campaign at school to publicize the plight of people around the world without access to clean water and/or proper sanitation. This could be done through posters, a short video, or a “public service announcement” over the school’s P.A. system. For an example of an awareness event hosted at a school in St. Louis, visit our site: Nerinx Hall Water Haul (<http://pulitzercenter.org/your-story/nerinx-hall-water-haul-st-louis>)
4. Hold a class debate on the international community’s responsibility related to the issue of water.
 5. Have your students research some of the innovations working to make water safe for people to consume.
 6. Have your students research water issues in the United States and/or your local community. What cities/states are most affected by water issues? How are water issues playing out in your community? How are different states, cities, communities coping with water shortages or too much water?
 7. Have your students research ways they can conserve water. Encourage them to calculate how much water they use on average, on a daily basis. Have them compare this to people living in other parts of the world.