

LESSON:

Debating the Control of Scarce Resources

Summary: This lesson requires students to read the article “Is Environmental Health a Basic Human Right?” and then, using concepts from the article, stage an informal debate between students advocating government versus private sector management of scarce resources.

EHP Article: “Is Environmental Health a Basic Human Right?”
EHP Student Edition, March 2005: A1006–A1009
<http://ehp.niehs.nih.gov/members/2004/112-17/spheres.html>

Objectives: By the end of this lesson, students should be able to:

1. Compare the strengths and weaknesses of government versus private sector control of natural resources.
2. Describe the history of the movement for establishing a “right” to a clean environment.
3. Evaluate the need for international law governing the allocation of resources to ensure conservation and equitable distribution.

Class Time: 2–3 hours

Grade Level: 9–12

Subjects Addressed: Environmental Health, Social Science, History

► Prepping the Lesson (15 minutes)

INSTRUCTIONS:

1. Obtain a class set of *EHP Student Edition*, March 2005, or download article at <http://www.ehponline.org/science-ed> and make copies.
2. Make copies of the student instructions.

MATERIALS (per student):

- 1 copy of *EHP Student Edition*, March 2005, or 1 copy of the article “Is Environmental Health a Basic Human Right?”
- 1 copy of the student instructions

VOCABULARY:

Environmental justice
 Jurisdiction
 Private sector
 Tariff

BACKGROUND INFORMATION:

The article has a good review of the history of the movement toward accepting environmental health as a basic human right. For further background, see “Global Resources: Abuse, Scarcity, and Insecurity,” <http://ehp.niehs.nih.gov/members/2004/112-3/focus.html>. Other resources for further research are listed below.



RESOURCES:

Environmental Health Perspectives, Environews by Topic page. Choose Natural Resources, <http://ehp.niehs.nih.gov/topic>

Earthjustice, <http://www.earthjustice.org>

Resources for the Future, <http://www.rff.org>

United Nations Committee on Economic, Social, and Cultural Rights, <http://www.unhchr.ch>

Science and Environmental Health Network, <http://www.sehn.org>

Implementing the Lesson**INSTRUCTIONS:**

1. Hand out copies of *EHP Student Edition*, March 2005, and refer your students to the article “Is Environmental Health a Basic Human Right?” or hand out article copies.
2. Hand out the student instructions.
3. Review the instructions with the students, emphasizing the type of information from the article to which they should pay particular attention.
4. Have the students read the article and highlight and/or take notes as needed.
5. Break students into two groups and assign each group a side of the planned debate: How should our natural resources be managed? By government or the private sector?”
6. Write the following issues on the board to help facilitate the development of the students’ arguments: Goals, Accountability, Conservation, Equity, Costs, Stability.
7. Once the class has been divided into two, break the students down into subgroups of 3–4 students and instruct them to write arguments in favor of their assigned position. Each subgroup should select a speaker to share their arguments.
8. Supervise an informal debate between the two large groups, making sure each side uses facts and data from the article.
9. Students submit a summary of their group’s main arguments (this includes all subgroup arguments) and an assessment of which side they felt “won” the debate and why. Students also describe the role of international law in ensuring a safe and healthful environment for all.
10. Lead a discussion with the students summarizing the results of their debate and answers to the questions on the worksheet.

NOTES & HELPFUL HINTS:

- The debate format can be made more informal by doing a role-play instead of a standard debate. Students can play government officials, private contractors, poor farmers, etc., to make various points.
- A videotape could be made of the debate and shown afterward to help students summarize and assess who “won” and why. Did one side have a better command of the facts? A more polished presentation? A more impassioned delivery?
- In order to explore international issues, students could explore how their arguments might change if the country in question was a “developed” country or a “developing” country.
- The debate can be made more comprehensive by focusing on a specific example of resource allocation conflict such as that which occurred in Cochabamba, Bolivia, or the American West as mentioned in the article. This would require several class periods and outside research.

Aligning with Standards**SKILLS USED OR DEVELOPED:**

Communication (note taking, oral, and written—including summarization)

Comprehension (listening & reading)

Critical thinking and response

SPECIFIC CONTENT ADDRESSED:

Water resources, international resource regulation, environmental justice



NATIONAL SCIENCE EDUCATION STANDARDS MET:**Content Standards:**

Science in Personal and Social Perspectives Standards

- Personal and community health
- Population growth
- Natural resources
- Environmental quality
- Natural and human-induced hazards
- Science and technology in local, national, and global challenges

History and Nature of Science Standards

- Science as a human endeavor
- Nature of scientific knowledge
- Historical perspectives

Teaching Standards:

Plan an inquiry-based science program

- Develop student understanding and nurture community of science learners
- Work within and across disciplines and grade levels

Guide and facilitate learning

- Support inquiries when interacting with students
- Orchestrate discourse among students about scientific ideas
- Challenge students to accept and share responsibility for their own learning
- Recognize diversity and encourage all students to fully participate

Ongoing assessment of teaching and student learning

- Guide students in self-assessment

Create learning environments that provide time, space, and resources for learning science

- Structure time to allow extended investigations
- Create setting that is flexible and supportive of inquiry
- Make tools, materials, media, and resources available to students
- Use resources outside of the school

Develop communities of science learners that reflect the intellectual rigor of scientific inquiry and attitudes as well as social values conducive to scientific learning

- Give students a voice in decisions and require students to take responsibility for the learning of all members of the community
- Nurture collaboration among students

Assessing the Lesson

In their debate, students should cite facts mentioned in the article.

Students arguing for government control should emphasize:

- the importance of public ownership
- the pursuit of social goals such as conservation
- increased stability of pricing under a not-for-profit system
- the increased equity of a government-provided resource

Those arguing for private sector control should mention:

- lowered administrative costs
- more rapid accountability
- pricing providing a measure of a resource's value resulting in reduced waste
- the profit motivation for investment and provision of high-quality service

Each of the issues written on the board should be mentioned.

- Goals—Many governments have a specific goal of providing services for everyone and preserving the natural environment and natural resources. Private companies have goals that relate to profits and shareholder interests. On the



other hand, private companies may have greater motivation to provide good service to consumers than do government bureaucracies.

- **Accountability**—Private companies that fail to provide promised services can be fired, and democratically elected governments can be voted out of office.
- **Conservation**—Governments have a long-term view that private companies generally lack. Regulations are necessary to ensure that in the interest of efficiency natural resources are not depleted.
- **Equity**—Private companies are generally interested in providing services to those who pay. Government has the power to collect taxes across the whole society to make services which do not “pay for themselves” available to all.
- **Costs**—Private companies may be able to provide services more efficiently than government. However, inability to pay for services may result in poor people being denied services or utilities that are necessary to life and public health.
- **Stability**—Governments are generally thought of as being more stable than private companies, although in areas which are conflict-ridden this is not always a certainty. Governments in which corruption is a large problem can be unstable and unreliable protectors of a state’s natural resources. Students should mention the complexity and difficulty of enforcing an international guarantee of environmental health given the scarcity of resources and the wide variability of environmental standards across nations.

► Authors and Reviewers

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Debating the Control of Scarce Resources

Step 1: Read the article "Is Environmental Health a Basic Human Right?" *EHP Student Edition*, March 2005.

Step 2: Your teacher will divide the class into two groups to debate the question "How should the world's natural resources be managed—by government or the private sector?"

Step 3: Once the class has been divided in two groups, break up into smaller subgroups of 3–4 students and write ideas/arguments in favor of the side for which you are arguing.

Step 4: Select a spokesperson for your subgroup. During the debate each spokesperson will share his/her group's ideas and arguments with the class.

Step 5: Take notes during the debate to collect other ideas and arguments from other subgroups on YOUR side of the argument.

Step 6: After your debate, write down a summary of your side's argument (all of the subgroups ideas combined with your subgroup's ideas).

Step 7: Answer the following question in a short paragraph: Did your side win the debate? Why or why not?

Step 8: Answer the following question in a short paragraph: What role do you think there is for an international guarantee of a safe and healthy environment for everyone?

