NOVA

World in the Balance

Educator Role Plays

The Annenberg Foundation World in the Balance educational outreach is funded by The Annenberg Foundation

Contents

These role plays were developed by Workable Peace. Visit www.workablepeace.org for more role plays where students can explore history and current events as they develop conflict-management skills.

Educator Role Plays

Role play is a form of experiential learning that gives participants direct experience with the content surrounding an issue, and provides an opportunity to develop and practice skills such as perspective-taking, problem-solving, and negotiation. Participants take on the personality and background of an individual or group and interact with others in the context of a specific situation, gaining exposure to multiple perspectives while exploring the challenges of solving complex public-policy issues. At the end of the dialogue, participants look at the content from a much wider perspective from having "stood in the shoes" of the actual participants, and they can reflect on the outcomes and the effects of different approaches to problem solving that they and their peers used during the experience.

Use these two role plays to explore the interplay between population and the environment introduced in NOVA's "World in the Balance" program—in classrooms, community organizations, faith-based organizations, and other settings.

1 Who Will Take the Heat?

Today, the U.S. is the biggest contributor to emissions that cause global warming. In a few short years, China is expected to assume that role. In this role play, students look at how these two countries might work together to address global climate change.

Roles:
U.S. government official
China government official
Environmentalist
Business leader

2 The Growing of America

The U.S. population is aging and becoming more ethnically diverse. The birth rate is at an all-time low. However, America's population is expected to increase from 281 million in 2000 to 394 million or more in 2050, an increase driven primarily by immigration. In this role play, participants assume the role of a variety of groups to explore how immigration, an aging population, and the environment intersect.

Roles:
Global environmental group
U.S. environmental group
Pro-immigration elderly advocacy group
Anti-immigration elderly advocacy group

Who Will Take the Heat?

Teacher Instructions

Objective

Participants will learn about the environmental, economic, and political issues surrounding global climate change policy.

Materials

- Background
- Confidential Instructions—People's Republic of China Representative
- Confidential Instructions—United States
- Confidential Instructions—Environmental Movement
- Confidential Instructions—International Business
- Resources
- Debriefing Questions

Time Allotted

Session One:	Review role-play format, the conflict, and the roles, and assign teams (45 minutes)
Session Two:	Negotiate (45 minutes)
Session Three:	Debrief role play (45 minutes)

Note: You may decide to extend the negotiation period over two sessions, depending on the involvement of your students. You could also add more time up front to allow students to do additional background research (or you could assign this research as homework). Three sessions is the minimum necessary for this activity, but you should decide what the most appropriate time is given your class period length and students.

Procedure

Session One

Step 1

Explain to students that the United States is the biggest contributor to emissions that cause global warming, but in a few years China is expected to assume that role. To explore global climate change and the options available to tackle this issue, the class will conduct a role play.

Tell students that a role play is different from a debate or persuasive speaking; it is a negotiation exercise. Negotiation is a process in which two or more parties seek to understand one another's interests and create options that will reduce or remove a conflict between them. Each group's goal in negotiation is to fulfill the needs of its group, by crafting an agreement that the other groups can also live with. Negotiation is not simply about making compromises or "being nice" but rather about finding creative options that address everyone's most important needs. Effective negotiation is assisted through the use of specific skills and behaviors to maximize the opportunities for all sides to get what they need in a way that satisfies the primary needs of the other sides as well.

Step 2
Explain to students that in order to effectively negotiate they need to understand what is going on in the conflict. Review the following sources of conflict:

Interests: What a group wants and its reasons for wanting them.

Beliefs: There are two types of beliefs—values and truths. Values are the group's belief that it has a "right" to something or a belief in the way the world "should" be. Truth is its understanding of how and why things happen and how the world "is."

Identities: These are the words a group uses to name itself and encompasses its history, culture, qualities, and characteristics.

Emotions: This is how a group feels about something.

Discuss with students that it is important not only to identify their group's own sources of conflict but also those of their negotiating partners. And while it is important that they effectively voice the needs and concerns of their role and do not give in on the interests that are most important to them, they also need to listen to the needs and perspectives of others, and to seek a resolution on which all parties can agree. The goal is not for them to simply demand and argue for what they want, or to give in and concede to any solution, but to develop an agreement that can be good for them and other groups, and persuade the other groups to accept it.

Spend some time constructing ground rules and expectations for the role play. Let students know that they will be expected to behave like delegates to a global climate change conference, to embody the concerns and perspective of their role but to behave with decorum. You may even encourage appropriate professional attire. Brainstorm with the students helpful actions and behaviors for the classroom and post them as a reminder. Some examples: no personal attacks; only one person speaks at a time, while others listen; respond to one another's ideas; don't just state what you want, explain why it is important.

Step 3

As a class, review the general instructions, the names of each team, and the issue it is trying to resolve. Explain that the negotiations will take place in two rounds. The first round should be focused on discussing the needs and perspectives of the groups, while the second round should be focused on brainstorming and agreeing upon a resolution.

Assign the students roles. Since there are four roles in this activity, this will leave teams of four to seven students in each role, depending on the size of your class. Note: When you are making up teams, review the skill set of each of your students. Be sure to balance those students who you expect can master the negotiation scenario—understand and "get into" their role and negotiate effectively—with those students who may have difficulty with this.

Tell the students that their team will be given general background about the conflict, a set of confidential instructions, and a list of resources to begin their research. As a team they will:

- review the sources of conflict listed above (their interests, beliefs, emotions, and identities) to determine their team's perspective on the issues;
- think about the interests, beliefs, emotions, and identities of the other groups;
- conduct additional research on the issues (students should start with the list of resources provided);
- develop options to propose on each issue;
- decide which members of the group will give the opening statement, negotiate the first round, and negotiate the second round; and
- develop an opening statement. This should state who they are and a little about what is important to them.

Session Two

Step 1

Begin the negotiation. Set up the room with chairs around a table or with chair-desks in a circle, one for each role. Each seat at the table should have the group's name-plate. Try and seat groups closest to their allies. One representative from each group is seated at the table. Other team members sit behind their representative.

Step 2

Begin with opening statements. (The representative sitting at the table makes the group's opening statement.) Representatives may also ask questions about one another's opening statements. Encourage team members to participate by passing notes to their representative, but remind them that only the representative can speak.

After the opening statements, the formal negotiations begin. Begin by discussing the needs and perspectives of the groups. As they negotiate, they should aim to learn what is important to the other groups and test this against their team's perceptions. They also need to make sure that the other groups understand what is important to their team, instead of just making assumptions. Make sure each group gets a chance to speak and that groups can ask clarifying questions about why things are important and how they prioritize the things that are important. They might then try to identify points of commonality and points of difference.

Step 3

The second round is focused on brainstorming and agreeing upon a resolution. Once the students understand one another's needs, they can begin to brainstorm options—"what ifs"—that might meet those needs. Remind them not to immediately judge these ideas: the more creative the students are, the more opportunities there are for acceptable solutions. Tell them to think about their priorities and identify the things they are willing to give up in order to get things that are more important. To move toward resolution, the group will need to establish objective criteria to help decide what is "fair." In situations where it is impossible to fully satisfy the interests and needs of all groups on an issue, they will need to think of reasons why the group should select one solution rather than another, finding criteria of fairness (precedent, expert advice, cultural norms) agreeable to all groups.

At the end of the allotted time, have the students write down any agreements they have reached and any points of disagreement that remain. They may also record any next steps that they agree the participants should take. This will be the final outcome from the negotiations. Remind them that (theoretically) they will need to defend this document to their constituents.

Step 4

At the end of each class, ask students to reflect on the day's negotiations.

- What issues were discussed?
- What were the main points offered by your group?
- How did the other groups respond? What were their main points?
- What was the outcome?
- What was one thing someone at the table did that escalated the conflict? What was one thing someone at the table did that helped de-escalate the conflict and advance the negotiations?
- Are you satisfied with today's negotiation? What one thing could your representative have done differently to improve the outcome? What one thing could another group's representative have done better?
- What do you think will happen next?

Session Three

Debriefing is a critical step in the role play. During debriefing students can reflect on and analyze the experiences they had during the negotiation process, share different perspectives, and integrate new learning into their larger conceptual framework. Print out the Debriefing Questions and use them as a guide for classroom discussion on the experience of the role play, the conflict, and the resolution.

Assessment

There is a wide range of options for assessing role play. What follows is a menu of potential components. We recommend that you inform students at the beginning how this unit will be graded, so that they have a clear understanding of your expectations.

Participation assessment

Role play requires active participation, which provides many opportunities for assessment of student performance of skills and behaviors. These include:

- Preparation (demonstration of content understanding)
- Oral skills (talking clearly, slowly, loudly; not reading from a paper)
- Group work skills (listening to others, support for peers, providing input/feedback)
- Performance in role (emotional commitment, demonstrated knowledge of role's interests, beliefs, and identity)
- Debriefing (ability to examine self and group's learning and performance)
- Overall participation (attitude, motivation, commitment/engagement, development)

Follow-up assignments and final projects

You could also use these role plays to lead to additional essays or projects to assess student knowledge of the content, understanding of the process, and reflection on the experience of the role play and debriefing. You can use the Debriefing Questions to shape your assignment, or you can build from the following suggestions of essay topics and other projects.

Analytic essay: Have students analyze the issues at stake in the role play and discuss: What are the most important issues? Where are the primary areas of agreement? Where are the major areas of disagreement? How can/should this conflict be resolved? Is negotiation a viable strategy for reaching a solution—why or why not?

Reflective essay: Assign an essay in which students reflect on and evaluate their learning experience doing the role play. Ask students to examine the lessons they learned and the process they used to learn them. Use some of the Individual and Community Application questions from the Debriefing Questions.

Position paper: Have students write their perspective on what the "proper" resolution to the conflict should be, supported with evidence from their readings and experiences. Or have them write a position paper from an assigned perspective—as their role or as an opposite role.

Research paper: Ask students to conduct further research into a specific area.

Standards

The "Who Will Take the Heat?" role play aligns with the following NCSS National Standards for Social Studies Teachers.

Grades 7–12

III People, Places, and Environments

- provide learners with opportunities to observe and analyze social and economic effects of environmental changes and crises;
- challenge learners to consider, compare, and evaluate existing alternative uses of resources and land in communities, regions, nations, and the world.

VII Production, Distribution, and Consumption

- provide opportunities for learners to assess how values and beliefs influence economic decisions in different societies.

IX Global Connections

- challenge learners to analyze the causes, consequences, and possible solutions to persistent, contemporary, and emerging global issues, such as health care, security, resource allocation, economic development, and environmental quality;
- guide learner analysis of the relationships and tensions between national sovereignty and global interests in such matters as territorial disputes, economic development, nuclear and other weapons.

X Civic Ideals and Practices

- acilitate learner efforts to locate, access, analyze, organize, synthesize, evaluate, and apply information about selected public issues—identifying, describing, and evaluating multiple points of view;
- provide opportunities for learners to practice forms of civic discussion and participation consistent with the ideals of citizens in a democratic republic.

Who Will Take the Heat?

Background

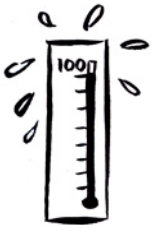
The challenge of climate change

Today the U.S. is the biggest contributor to global warming, also called global climate change. Fifty years from now, China is expected to be the biggest. How can these two countries work together to deal with the problem of global warming?

Here are some key facts:

People around the world, especially in richer, industrialized countries, are burning more and more coal, oil, and gas ("fossil fuels"). Over the past 150 years, the Industrial Revolution in the U.S., Western Europe, the former Soviet Union, and Japan has created societies that depend on fossil fuels for most of their energy. Today, people in the U.S. use more fossil-fuel energy per person than in any other country.

Over the past century, Earth has warmed by about 1 degree F. In fact, ten of the warmest years have occurred since 1983, with seven of them since 1990. Earth could be getting warmer on its own, but many of the world's leading climatologists believe the things people do are helping to make Earth warmer. When we use fossil fuels to drive our cars, run power plants, and heat and cool our homes and offices, one of the byproducts is a gas called carbon dioxide (CO_2). Carbon dioxide goes into the atmosphere, where it traps heat rising from the Earth's surface (acting like glass in a greenhouse). Figuring out to what extent the human-induced accumulation of greenhouse gases is responsible for global climate change is difficult, because other factors, both natural climatic variations and human actions, affect Earth's temperature.



Global climate change could cause very serious problems. Though scientists are not sure how serious the impact of global warming will be, they believe that it could:

- lead to stronger, more damaging storms, and longer, more costly droughts all over the world;
- seriously damage food production in parts of the world that are already warm and dry;
- cause the extinction of many plant and animal species; and
- possibly raise sea levels by enough to put large coastal areas where millions of people now live underwater.

Over the next 20 years, some large developing countries, especially China, are likely to burn much more coal and oil, increasing global warming. In the past 20 years, China and some other large developing countries have developed their industries, their cities, and their roads very quickly. Now, China and others are about to make big new investments in industry, power plants, city buildings, roads, and cars. Because China has huge amounts of coal, it is planning to use coal as the main fuel for its power plants and industries. China will also need to use huge amounts of oil for the large number of cars it is planning to build for the new Chinese middle class. If things continue the way they are now, by 2020 China is likely to burn more fossil fuel and contribute more to global warming than the U.S.

International negotiations on climate change

The U.S. and China have both signed the Framework Convention on Climate Change, an international treaty that commits the nations of the world to work together to reduce global warming. The Convention says, however, that the U.S. and other rich industrial countries should take most of the responsibility for action. During negotiations, the governments of China and other developing countries argued that the climate change problem had been created by the richer countries over the past 150 years. They also pointed out that rich countries still use much more fossil fuel per person than poor countries, and that they have more resources to deal with the problem. For all these reasons, China and other developing countries insisted that the U.S. and other industrialized countries should reduce their greenhouse-gas emissions first, and should help poorer countries protect themselves from the impacts of climate change.

However, the governments of the U.S. and other industrialized countries have been reluctant to take strong action to reduce climate change. There are three main ways to reduce greenhouse-gas emissions: switching to non-fossil energy sources (such as hydroelectric, solar, wind, and nuclear), increasing energy efficiency, and taking carbon out of the atmosphere by planting trees. The problem is that all of these strategies cost money in the short run, even though many environmentalists and some economists argue that they will make the environment and the economy better off in the long run.

All of the richer countries have democratically elected governments whose leaders are focused on doing things that benefit voters today. It is politically very difficult to convince leaders or voters to take action that costs money now and provides benefits many years in the future. It's even more difficult to convince them to take actions that are likely to have more benefits for the children and grandchildren of people living in poor countries than for their own children and grandchildren. These basic economic and political problems have made it difficult for the richer countries to take strong action to reduce their greenhouse-gas emissions.

The U.S., China, and climate change

The U.S. and China are in many ways the world's two most important countries when it comes to the issue of climate change. The U.S. is the world's wealthiest country and the biggest emitter of greenhouse gases. American scientists have led much of the research on climate change, while American industries, workers, and political leaders have been politically divided on what to do about climate change. Some people and politicians want to take action to reduce U.S. greenhouse-gas emissions even if it requires some economic sacrifices. Others do not think that the problem is significant enough to justify any costly action.

China is soon to become the second-biggest emitter of greenhouse gases and will likely overtake the U.S. as the biggest emitter sometime in the next 20 years. With 1.3 billion people, a very rapidly growing economy, and huge coal fields that it plans to continue using to generate electric power and heat, the decisions China makes on climate change over the next 20 years will be absolutely critical to the long-term impact of humans on the global climate. Traditionally, China's Communist Party leadership has emphasized economic growth over environmental protection, and China's people are just beginning to become aware of environmental issues. Still, China is changing very fast politically, and there is a strong movement to deal with the environmental problems created by burning coal. Many of those problems affect Chinese people's health today, so it might be in China's interest to reduce its use of coal even if it didn't care about global warming.

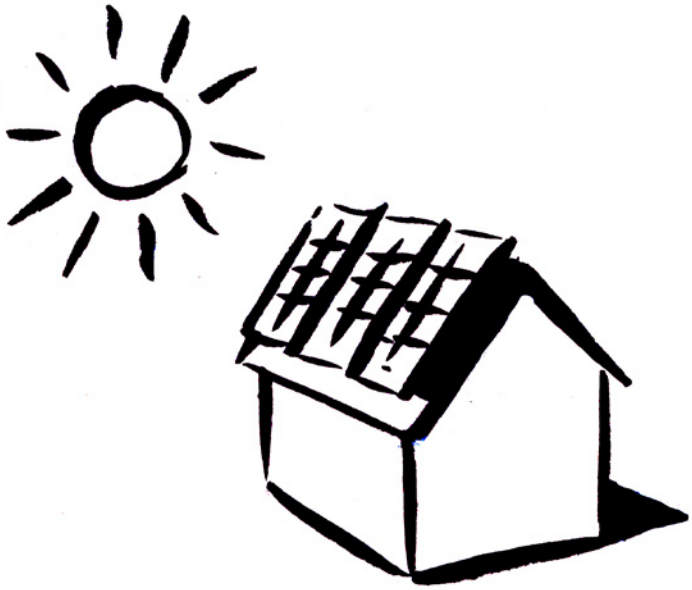
Political leaders in the U.S. and China will respond to domestic public opinion and interest groups. But international businesses and environmental groups will also shape their actions. International business groups want to have more certainty about whether and how greenhouse-gas emissions may be regulated. They can offer new technologies to improve energy efficiency and bring down the cost of low-carbon fuels. Technology transfer of this type—providing China and other developing nations with more efficient technologies before they begin implementing them on a large scale—offers a lot of potential. However, China may need financial assistance to adopt them. Environmental groups want the U.S. and China to make firm commitments to limit their greenhouse-gas emissions. They can help build political support for action on climate change through public awareness campaigns.

Your assignment

Political leaders in the U.S. and China have agreed to send representatives to a special meeting to discuss how the two countries can work together to deal with the problem of climate change. They have also invited representatives of international business and the global environmental movement to join them.

They are seeking an agreement for the U.S. and China to work together on climate change, in ways that would set an example for other industrialized and developing countries.

You will take on the role of one of these representatives. You will review confidential instructions for your role and then meet with the other representatives. You will need to consider scientific and economic information about trends and possible futures, and information about the goals and interests of other representatives. Together, you should try to reach an agreement that meets everyone's main goals. But none of you should sign onto an agreement that does not meet your own goals.



People's Republic of China

You are a high-ranking diplomat representing the Chinese government. Your country has the largest population in the world, 1.3 billion people. China's economy is one of the fastest-growing in the world, but most Chinese people are still very poor, earning less than $2.00 a day.

Your government is controlled by the Communist Party, which came to power at the end of a long civil war in 1948. The Communist Party leadership sets the country's goals and policies. The Prime Minister and the State Council lead the ministries and local governments. The government also controls many economic activities, including land use and energy use.

The Party's leaders want China to become a richer and more powerful country. Since the late 1970s, the government has encouraged private investment and private profit, and the country has experienced an economic boom. Many farmers have migrated to China's coastal cities, where there is a growing middle class but a shortage of jobs. To combat the poverty that remains, the Party and the government plan to continue developing China's natural resources to promote manufacturing and international trade, and to increase the number of available jobs.

Your goals

Climate change is a very important issue for China. As China's representative to the meeting with the U.S., and business and environmental representatives, your goals are to:

1. Get a U.S. commitment to reduce its own greenhouse-gas emissions to no more than 1.4 billion tons/year by 2015.
2. Get the other representatives to help China become more energy-efficient in transportation, industry, and home heating. Also get their help to begin reducing China's dependence on coal by investing in natural gas, nuclear power, and hydropower.
3. Only agree to slow down the growth of China's carbon emissions if the U.S. political, business, and environmental representatives agree to help China become more energy-efficient and reduce its use of coal. Even with that help, **China cannot agree to an emissions target any lower than 1.6 billion tons/year by 2015.**

The role of China in global climate change

China produces and uses more coal for electric power and for home and factory boilers than any other country. Coal accounts for roughly two-thirds of your country's fossil-fuel consumption, and air pollution from burning coal has become a big problem. Coal burning is also the biggest source of China's carbon emissions.

Because coal is such a significant source of carbon, China is the world's second-largest carbon emitter (China emitted roughly 760 million tons of carbon in 2000). But when you divide up China's emissions among the country's population of nearly 1.3 billion people, each person in China was responsible for only 0.6 metric tons of emissions.

In contrast, the U.S., the biggest emitter, is putting more than 1.5 billion tons of CO_2 into the atmosphere each year. That's more than double China's emissions. And because the population of the U.S. is so much smaller than the population of China, and Americans are so much richer than the Chinese, each person in the U.S. was responsible for 5.7 tons of emissions—**nearly ten times the number for each Chinese person**.

What China is doing about climate change

You need to explain to the other representatives that China is already making great progress in reducing the amount of energy used to produce goods and services. Over the past 15 years, the amount of energy needed to produce one dollar of goods and services in China has dropped by over 50 percent.

- China is making major investments in energy-efficient power plants and industrial and home boilers.
- China is also increasing the amount of energy it produces from natural gas and nuclear, hydroelectric, and wind power sources. Natural gas produces much less carbon than coal to produce the same amount of energy. Nuclear, hydroelectric, and wind power produce no carbon at all.
- China is planting millions of trees and plants that absorb carbon dioxide and also help improve China's environment.

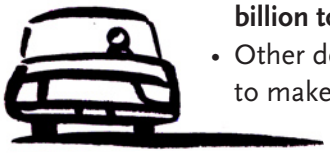
If China tries to do much more than it is already doing to limit the growth of its greenhouse-gas emissions, it will deprive hundreds of millions of poor people the opportunity to improve their lives. Electric power and adequate transportation are basic necessities for any industrial society. China's families need more energy to light their homes and to power their refrigerators, telephones, and computers. They need cars and other forms of transportation to free them to take jobs in areas farther from their homes and to travel for personal needs. Today, China's families use very little electricity and have very little access to home communications or automobiles compared to people in many other countries.

Taking these measures into account, experts expect China's carbon emissions to grow from 760 million tons/year in 2000 to 1.8 billion tons/year in 2015. China can only commit to keeping its emissions below 1.8 million tons/year in 2015 if it receives financial help from the U.S. and other rich countries, plus investments and new technologies from businesses. **If you get financial help from the U.S., investments in your energy and transportation sectors from business, and help in public education from the environmental movement, you can agree to limit China's emissions to 1.6 billion tons/year in 2015**. Limiting China's emissions any more than that would require too much sacrifice from China's people.

Why the U.S. needs to do more

You need to be clear with the U.S. and the other representatives on these points:

- The U.S. emits far more carbon and other greenhouse gases than any other country.
- It is the wealthiest country in the world.
- Its people use more energy per person than almost any other country.
- The U.S., like all the other developed countries, signed the Framework Convention on Climate Change in 1992. That international agreement commits the developed countries to "take the lead in combating climate change." It also says that the developed countries should try to reduce their emissions as soon as possible so that they are emitting no more than they were in 1990.
- **The U.S. has fallen far short of that commitment. In 2000, its emissions, 1.53 billion tons of carbon, were more than 15 percent higher than they were in 1990.**
- Other developed countries (Germany, France, Britain, and Japan) have agreed to make significant reductions in their greenhouse-gas emissions.



What is at stake here is a basic issue of fairness. The U.S. is responsible for more of the greenhouse-gas problem than anyone else. It has more money to deal with the problem than anyone else. It has signed an international agreement committing it to take action. The U.S. simply has no excuse not to reduce its greenhouse-gas emissions by a substantial amount.

As China's representative, **you want the U.S. to agree to bring its emissions down to 1.4 billion tons in 2015**. This would be a reduction of 9 percent from the 2000 emissions of 1.53 billion tons. The U.S. can easily achieve this goal by:

- increasing automobile fuel efficiency,
- replacing some of its coal-fired power plants with natural gas and nuclear, hydroelectric, and wind power, and
- requiring manufacturers to produce more energy-efficient refrigerators, dishwashers, clothes washers and driers, and other appliances.

Strategy for achieving your goals

As noted above, you want the U.S. to bring its emissions down to 1.4 billion tons of carbon in 2015; you want no restrictions on China's emissions unless the U.S., business, and the environmental movement give you help; and the lowest limit you can agree to on China's emissions in 2015 is 1.6 billion tons of carbon.

To achieve these goals, you should:

- emphasize fairness: the U.S. has an obligation to lead the world and take responsibility for its actions;
- remind everyone of China's poverty and the work China is already doing to increase its energy efficiency and reduce its dependence on coal;
- offer to work cooperatively with business and environmental groups to continue improving China's energy efficiency and reducing coal use; and
- offer to limit China's emissions in 2015 to 1.6 billion tons in exchange for an agreement by the U.S. to reduce its emissions to 1.4 billion tons.

Good luck!

United States

You represent the United States government and carry out the foreign policy goals of the President. You are a career diplomat, and you have worked in many countries in Asia, including China. For the last ten years, you have focused on the climate-change problem.

Of all the issues you have dealt with in your long and successful career, climate change may be the most difficult. You have your work cut out for you in the upcoming meeting with representatives of China, the global business community, and the environmental movement.

Your goals

Your goals for the meeting are

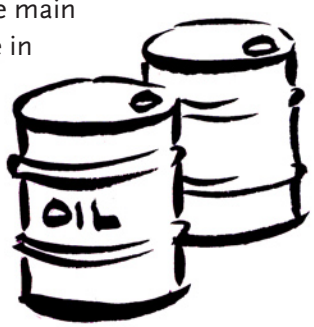
1. Persuade the other representatives that the U.S. cannot do much to reduce its greenhouse-gas emissions without hurting the U.S. economy—and indirectly, the world economy. You cannot commit to U.S. emissions lower than 1.6 billion tons/year in 2015.

2. Convince China that it must slow down its rapidly rising greenhouse-gas emissions. Unless China starts to do something soon to limit its use of coal and gasoline, it will overtake the U.S. as the biggest greenhouse gas emitter. You want China to agree to limit its carbon-dioxide emissions to 1.5 billion tons by 2015 (slightly less than twice the amount China emitted in 2000).

The role of the U.S. in global climate change

Your biggest problem is that it is not easy to defend the current U.S. policy on climate change. The U.S. is the strongest country in the world, both economically and militarily. It also has the biggest impact on the global environment and natural resources of any country. The U.S. has about 5 percent of the world's population (290 million people out of a total global population of 6.3 billion people). But because of the size of the U.S. economy and the wealth of its people, the average American uses five times as much water for drinking, washing, and irrigation; land for food; and forests for wood products as an average Mexican, ten times as much as an average Chinese, and 30 times as much as the average person in India.

When it comes to energy use, the U.S. is also in the lead. Fossil fuels (coal, oil, and gas) that people use for electric power, transportation, and heating are the main source of the greenhouse gases that contribute to global warming. People in the United States use more fossil-fuel energy than in any other country. People using fossil fuels in the U.S. put 5.4 metric tons of carbon dioxide per U.S. citizen into the atmosphere in 2000. The average for the whole world was 1.25 metric tons per person. The total U.S. emissions in 2000 were 1.53 billion tons, more than twice the 760 million tons that China, the second highest country, emitted.



The politics of climate change in the U.S.

Climate change is a complicated political issue in America. Some areas of the country produce a lot of fossil fuel (Texas, Louisiana, and Alaska for oil; Wyoming, West Virginia, and Kentucky for coal) or run large electric power plants that use fossil fuel (many states in the Midwest and Southeast). Politicians and voters in these areas generally do not support taking action to reduce greenhouse-gas emissions, because it could cost jobs and profits. In other areas (the Mountain states and the Southwest, and rural areas around the country), people drive long distances and don't want to pay more for gasoline or for more fuel-efficient cars. On the other hand, on the West Coast and in the Northeast, and in big cities around the country, people don't depend a lot on fossil fuel industries for jobs, don't drive very long distances, and are more inclined to protect the environment. In these areas, people and politicians tend to support action to reduce U.S. greenhouse-gas emissions.

The country is also divided between Democrats and Republicans. Democrats are generally more concerned about global warming and are willing to pay more to reduce that threat. Republicans generally support a strong economy and don't believe that the threat of global warming is serious enough to justify hurting the economy. Public opinion is also very divided, sometimes in confusing ways, because many Americans are not sure how serious a threat global climate change is, or how much it would cost to reduce U.S. greenhouse-gas emissions.

Currently, with a Republican president and a Republican-led Congress, the government does not want to take any action to reduce greenhouse-gas emissions that could hurt the economy. That could change if a Democrat is elected president and the Democrats win a majority in Congress, but the conflicts between the parts of the country that depend more heavily on fossil-fuel industries and those that don't are likely to continue no matter what party is in control of the government.

What the U.S. is doing about climate change

Given the current political situation in the U.S., one of your goals is to convince the others that the U.S. can't do much to reduce its greenhouse-gas emissions any time soon. You should also discuss with them some of the good things that the U.S. has done and continues to do to deal with the problem of climate change.

- Over the last 30 years, the U.S. has reduced the amount of energy needed to power the economy.
- Without any government action to reduce greenhouse-gas emissions, the U.S. is now more energy-efficient than it was 20 years ago. The U.S. is already becoming more energy-efficient without government regulations.
- The U.S. continues to lead the world in developing new energy technologies. Some of these technologies may eventually replace fossil fuels.
- Americans have provided strong support for research on the problem of climate change, and American scientists continue to find out new information that will help the world deal effectively with the problem.
- America's economy is strong, but **any attempt to reduce U.S. greenhouse-gas emissions below 1.6 billion tons/year by 2015 could have a very bad impact on business profits and people's jobs**.

Why China needs to do more

Your second goal is to get China to take action to slow the growth of its greenhouse-gas emissions. The rapid and continuing growth in China's use of coal and gasoline is the biggest long-term threat to the global climate.

- China is the world's largest user of coal for energy production.
- China gets nearly 80 percent of its fuel for electric power, industrial, and home heat from burning coal.

- Though China is becoming more energy-efficient by installing newer power plants and industrial and home boilers, its greenhouse-gas emissions will continue to grow as long as it depends so heavily on coal for electricity and heat.
- Right now, fewer than 1 in 100 people in China own a car. But the number of car owners is increasing very rapidly, and so is their use of gasoline. Ford Motor Company expects that China will be the world's biggest market for new cars over the next 10 years.
- Unless China makes significant new investments in electric power, industrial and home boilers, and public transportation, its carbon-dioxide emissions are expected to increase by 130 percent by 2015, to 1.8 billion tons of carbon dioxide.

Given the trends in China, it's essential that China make a binding commitment to slow the growth in its use of coal and require new cars to meet gasoline fuel-efficiency standards like the ones the U.S. has. You want China to agree to increase its greenhouse-gas emissions to no more than 1.5 billion tons/year in 2015.

Strategy for achieving your goals

You should try to convince the other representatives to agree to your goals. But you will probably need to negotiate with them and make some trade-offs in order to get an agreement that everyone can support. Here are some possibilities to try:

- Offer to help the Chinese. If China will commit to the 1.5 billion tons target for 2015, you can help China buy electric power plant technology from U.S. companies and help American car manufacturers make fuel-efficient cars in China. The U.S. government can give tax breaks and special incentives to U.S. companies to work with China. This strategy would also make the current U.S. government popular with power-plant manufacturers and automobile makers. The environmentalists should also be pleased with this strategy.
- Emphasize scientific and economic uncertainty to defend the U.S. The health of the U.S. economy is important to all the countries of the world. Given how little we know about the effects of climate change, no one should ask the U.S. or any other country to make big economic sacrifices now for an uncertain benefit sometime in the future.
- Offer a commitment to reduce U.S. carbon emissions to 1.6 billion tons/year by 2015. As far as American experts can tell, the U.S. is probably going to be able to reduce its emissions by that amount just by becoming more energy-efficient. So this is something you could commit to with little risk of harming the U.S. economy.

Good luck!

Environmental Movement

You represent millions of people around the world who are committed to protecting the global environment—our air, water, soil, plants, animals, ecosystems, and climate. The environmental movement is motivated and united by these beliefs:

- we must protect the environment for ourselves and for future generations;
- the world's plants and animals have as much right to exist as humans do;
- people in the world's richest countries (including the U.S.) must reduce their consumption and waste; and
- people in developing nations (including China) must find more environmentally sustainable ways to industrialize and raise their standard of living, so that they do not repeat the mistakes of the U.S. and other rich countries.

The environmental movement is deeply concerned about the growing problem of climate change. The climate—the air, its temperature, the winds, clouds, and weather—is the most complex system in the global environment. Over the past 200 years, humans have begun to disrupt one of the most basic parts of that system: the way that the air is heated and cooled by the "greenhouse effect." By burning more and more coal, oil, and natural gas for fuel, we have begun to change the climate.

The impact of climate change on this generation may be small, but we have a responsibility to our grandchildren to begin solving the problem that we created. Do we want them to inherit a world where storms, floods, and droughts make life even more miserable for many of the world's poorest people? Where even the rich cannot escape the misery of burning heat waves and rising seas that wash away thousands of miles of coastal land each year?

We have the power to protect the global climate and reduce the risks that we pass on to future generations. We need the political will to act.

Your goals

So far, the governments of the world have done almost nothing to begin reducing their greenhouse-gas emissions. They've signed agreements, but those agreements don't amount to much unless governments, businesses, and individuals take action. To move governments and business toward real action, your goals are:

1. Get the U.S. and China to make real progress on climate change, by increasing energy efficiency, switching to renewable fuels, and planting trees to capture carbon.
2. Get the U.S. and China to commit to real limits on their carbon emissions. The U.S. emitted about 1.53 billion tons of carbon in 2000. By 2015, the U.S. should reduce its emissions to no more than 1.4 billion tons. China should agree to slow down the growth in its emissions to reach the same target, 1.4 billion tons in 2015.
3. Get the international business community to make carbon commitments and investments in energy-efficient technologies and carbon-free energy (solar, wind, and hydroelectric power).
4. Get governments and business to agree not to expand the use of nuclear power.

Why the U.S., China, and the business community must take the lead

Because all countries and all people share the climate, and all are hurting the climate to some degree by burning fossil fuels, all countries have a responsibility to deal with this problem. However, the United States is releasing far more carbon into the atmosphere than any other country. The U.S. has about 5 percent of the world's people, but it's responsible for 25 percent of the world's total carbon emissions. That means the U.S. also emits more carbon per person than almost any other country.

The underlying problem is that American businesses and consumers are behaving in irresponsible ways. A large percentage of all new cars sold in the last decade have been sport utility vehicles (SUVs). These gas-guzzling monsters are among the most energy-inefficient cars ever built, but they are very profitable for automobile manufacturers. Americans are also using more electric power each year for air conditioning, heating, and home electronics. That wouldn't be a problem if the sources of energy for electricity were carbon-free (solar, wind, or hydroelectric), but most electric power in the U.S. continues to come from coal-fired power plants. The U.S. government simply must get businesses and consumers to become more energy-efficient and use lower-carbon fuels.

China must also change the path that it is on. China produces and uses more coal for electric power and for home and factory boilers than any other country. Coal accounts for roughly two-thirds of China's fossil-fuel consumption, and air pollution from burning coal has become a big problem. Coal-burning is also the biggest source of China's carbon emissions. Because coal is such a big source of carbon, China is the world's second-largest carbon emitter. China emitted roughly 760 million tons of carbon in 2000. If its government doesn't take strong action soon, China will more than double its carbon emissions by 2015, to 1.8 billion tons. At that point, China will probably be the leading contributor to climate change, emitting more carbon than the U.S.

The world's large corporations (the organizations that the international business representative speaks for) have played a major role in creating the problem of climate change, and they must also help solve it. They produce the coal, oil, and gas. They build the power plants, automobiles, home boilers, office buildings, and homes that use the fuel. They profit from all of these activities, but many of them don't want to pay the cost to make our fuels, transportation, homes, and offices more climate-friendly.

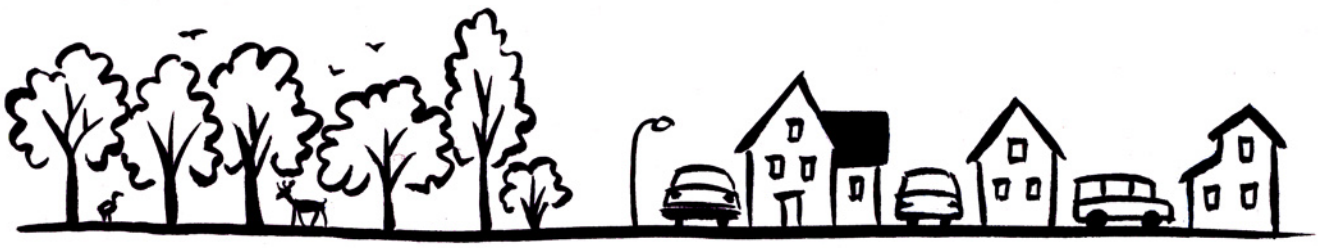
What the U.S., China, and the business community need to do

There are three main ways to reduce carbon emissions: increasing energy efficiency, switching to non-carbon fuels, and taking carbon out of the atmosphere. The U.S., China, and the business community need to take action on all three. In addition, to ensure that they make progress in all three areas, you want them to agree to limit carbon emissions significantly by 2015.

Increase energy efficiency

There are many ways that the U.S., China, and the business community can increase energy efficiency. The most important action that the governments of the U.S. and China can take is to increase standards for energy efficiency. Both countries already have some standards covering energy use in some of these areas: automobiles (miles per gallon), buildings (insulation and heating and cooling systems), and appliances (energy use per hour for TVs, computers, and refrigerators). But many of the standards are set too low, and many are voluntary, meaning that business does not have to meet them. By increasing existing standards and forcing business to meet them, the U.S. and China can take dramatic steps to reduce greenhouse-gas emissions while also saving energy, reducing local air pollution, and encouraging businesses to develop new technologies. As the biggest emitters of greenhouse gases, the U.S. and China can have a truly powerful impact on the global environment if they work together.

For example, the U.S. should increase its fuel-efficiency standard for SUVs from 20.7 miles per gallon to 27 miles per gallon immediately, and raise it to 36 miles per gallon over the next five years. There is technology already available that automobile manufacturers could use to meet this goal at low cost. People who buy higher-mileage SUVs would actually save money by spending less money on gasoline over the period of time they own the car! Since the U.S. drives the design of automobiles around the world, the same automobiles would soon be sold in China, helping it reduce its emissions.



Switch to non-carbon fuels

Both the U.S. and China have great potential to increase the use of fuels that do not produce carbon. These fuels include renewable sources: wind, solar, hydroelectric, and geothermal. In both countries, what is needed are laws requiring that power companies produce more and more electricity using renewable energy. Nuclear energy also produces no carbon, but it is so dangerous to people and the environment in other ways that we strongly oppose any increase in nuclear power as a response to climate change.

In the U.S., there is currently no national law requiring power companies to use renewable energy, although there are some state laws that do. The U.S. has enormous renewable-energy resources that could be developed if the national government required business to do so. In China, renewables currently supply less than 1 percent of all electricity. The government's current commitment is to produce 2 percent of all electricity with renewable fuels by 2015.

You want both countries to commit to producing at least 10 percent of all electricity using renewable energy by 2015. Whatever the business community says, there is a lot of evidence that it is possible to increase the use of renewable energy quickly without increasing the price of energy.

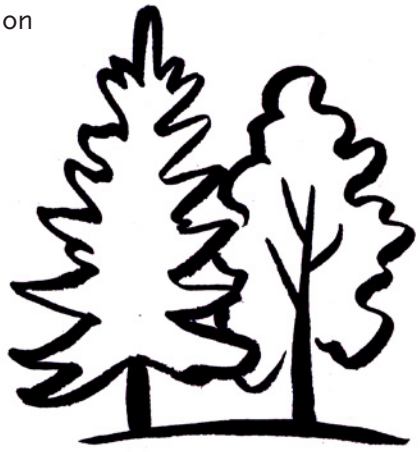
Capture carbon through reforestation

The U.S. and China both have large amounts of land that could be planted with trees to capture carbon from the atmosphere. Although both countries have good forestry programs, both can and should do more to require timber businesses and landowners to plant trees. A recent international study found that planting trees in developing countries like China could be one of the least expensive ways to reduce the amount of carbon in the atmosphere.

Commit to emissions targets for 2015

Because there are so many opportunities for carbon reductions through energy efficiency, renewable fuels, and tree planting, the U.S. and China should have no problem making national commitments to reduce their carbon emissions. If the U.S. does nothing more than it is already doing to reduce carbon emissions, its emissions will probably grow from 1.53 billion tons to nearly 1.8 billion tons in 2015. If China does nothing more, its emissions will probably grow from 760 million tons to 1.8 billion tons by 2015.

You want both countries to commit to emissions targets of 1.4 billion tons in 2015. This would mean a 10 percent reduction from 2000 emissions for the U.S. This target would still allow China's emissions to nearly double, but it would still be less than the 1.8 billion tons that China will likely emit if it doesn't make a commitment. You think this target is fair and reasonable for both countries. The U.S. can afford to make the investments to start reducing its emissions. China must make major investments in manufacturing and energy production anyway, so all it needs to do is set standards that require those investments to be climate-friendly.



Strategy for achieving your goals

You realize that the U.S., China, and the international business community may be reluctant to agree with your goals. To encourage them, you should:

- Make a moral argument for action now. We know there is a serious problem. We know that there are low-cost solutions. And although we may not know exactly how bad the climate will be if we don't act, we know that our grandchildren will pay the price, and that the poorest will be hurt the most.
- Remind governments that they have the power to direct business, and that business can afford to make the necessary investments.
- Remind business that they can benefit from investing in climate-friendly technologies once government policies create demand for those technologies.
- Offer the help of the global environmental movement in raising public awareness, in working directly with the business community, and in giving public recognition to leaders in business and government who take on the challenge of climate change.

Good luck!

International Business

You represent large corporations that do business in many countries around the world. The largest 1,000 corporations employ more than 50 million people. You produce about 20 percent of the world's goods and services, and 80 percent of the world's manufactured products.

The businesses you represent have a very strong interest in the issue of global climate change for several reasons. Their operations depend on reliable energy supply; the cost of energy is a significant portion of all their costs; and they develop most of the technologies that could improve energy efficiency in power plants, factories, automobiles, and household appliances (televisions, refrigerators, etc.).

Large corporations have been accused by some environmentalists of trying to stop governments from taking action on climate change. Nothing could be further from the truth. You agree that climate change is a potentially serious long-term problem. The key question is how to manage that problem in ways that allow businesses to keep on producing profits and jobs.

In the meeting that you will be attending, the stakes will be very high for international business. The U.S. and China are two of the world's most important economies. The U.S. economy is the biggest in the world, and its consumers drive the demand for energy and manufactured goods more than any other country's. China is fast becoming one of the world's biggest producers of low-cost goods, because it has a huge, inexpensive labor market. China is also becoming one of the world's biggest markets for consumer goods.

Your goals

At the meeting, you want to:

1. Get the group to agree that neither the U.S. nor China agrees to limit its greenhouse-gas emissions too quickly, because that could seriously hurt the global economy. You think that holding U.S. carbon emissions to 1.53 billion tons/year in 2015 would be as much as the U.S. can handle. China should be allowed to increase its emissions to at least 1.6 billion tons/year in 2015.

2. Get the U.S. and China to agree that business needs certainty and flexibility to reduce greenhouse-gas emissions. If the U.S. and China reach an agreement today that covers the period to 2015, that agreement should not be changed later, requiring business to shift gears yet again. Also, governments should let businesses figure out how to reduce emissions, rather than telling business what technologies to use.
3. Get a lot of financial incentives (low-cost loans and tax breaks) for business to help China become more energy-efficient and less dependent on coal. Without those incentives, business cannot make a profit on those activities.
4. Get the U.S. government to agree to use financial incentives (loans and tax breaks) rather than penalties (taxes or fines) to motivate business to reduce greenhouse-gas emissions in the U.S.

The international business role in climate change

Most greenhouse-gas emissions from human activity come from the use of energy. Energy is at the center of business operations. It takes energy to run factories; move goods on trucks, trains, and ships; move people in cars, buses, trains, and planes; and run the household goods that businesses produce, like TVs and refrigerators.

The international business community agrees that climate change is a significant problem and that the world should take steps to address it. There are three main ways that the world can address the problem. Each could have a serious impact on business and the economy if it's done too fast or at too high a cost.

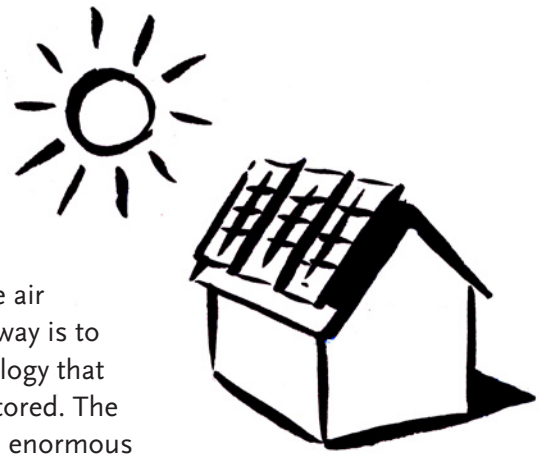
Increase energy efficiency

In fact, business has been increasing energy efficiency for nearly 30 years, since the oil crisis of the early 1970s raised the costs of energy dramatically. However, there's a limit to how quickly we can improve energy efficiency. If we have to invest a large amount of money in research and development of new technologies quickly, it will raise the cost of manufacturing them to a point where consumers won't pay for them. For example, five years from now we might be able to produce an SUV that gets 80 miles to the gallon, but it would cost much more than an SUV costs today. If we have 10 years to reach that mileage target, we could probably produce the SUV for no more than it costs today.

Switch to lower-carbon fuels

In general, we support the goal of moving away from coal and oil toward natural gas, and gradually increasing the amount of energy we get from hydroelectric, wind, and solar power (and possibly nuclear power). Many of the leading oil and gas companies are making investments in other kinds of energy. However, making this shift too quickly will raise the cost of energy dramatically, and could seriously hurt the profitability of business, lead

to unemployment, and slow the growth of the world economy. For example, we could shut down our coal-fired power plants over the next three years and install huge sets of photovoltaic cells and wind turbines around the world to generate electricity, but the electricity would cost many times as much, and many businesses and families would be unable to afford it. If we have 30 years to make that shift, we might be able to do it without increasing the price of energy more than a few percentage points a year.



Recapture carbon from the atmosphere and store it

The simplest way to do this is by planting trees or other plants, because trees and other plants use carbon from the air as food, and turn it into roots, stalks, and leaves. Another way is to capture carbon emissions from power plants using technology that converts the carbon gas into a liquid or solid that can be stored. The option of planting trees is a good one, but it would take an enormous amount of planting to make a real impact on carbon emissions, and it's doubtful that business could make profits in this way. The option of capturing emissions from power plants is worth exploring further, but it currently looks to be much more expensive than improving efficiency or switching fuels.

What business needs from the U.S. and China

The international business community provides millions of jobs and produces the majority of the technologies and manufactured goods that people around the world need. Because businesses are so directly involved in all of the activities that produce greenhouse gases, environmentalists are demanding that governments force the business community to make huge investments immediately to reduce carbon-dioxide emissions. That would be a big mistake, one that could seriously hurt the economies of the U.S., China, and the rest of the world.

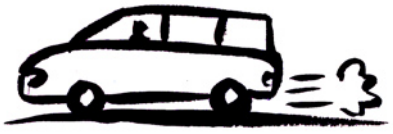
Business is willing to take a major role in managing the problem of climate change. To do that, you need four things from the U.S. and Chinese governments:

- gradual change
- certainty
- flexibility
- financial incentives

Gradual change

As discussed above, the key to making products much more energy-efficient or making big changes in fuel sources is to do it gradually enough so that it isn't too costly to business and consumers.

The U.S. is currently emitting about 1.53 billion tons of carbon a year. The economy is growing well and demand for goods, services, and energy is continuing to rise. To start making a serious impact on climate change and keep the economy strong over the next decade, **the U.S. could agree to keep its carbon emissions at their current level, 1.53 billion tons/year, through the year 2015**. To keep carbon emissions at their current level while producing more goods and services, business will have to make significant investments in energy efficiency, low-carbon fuels, and perhaps recapturing carbon. But those investments will not be so big that they hurt the economy.



China is currently emitting about 760 million tons of carbon a year, but its economy is growing much faster than the U.S. economy, and it will continue to need to use coal as its primary source of energy. If China does no more than it is already doing on climate change, its emissions will probably increase to about 1.8 billion tons of carbon/year in 2015. However, there are big opportunities to increase energy efficiency in China, because the country is making huge investments in power plants, automobiles, and energy-using goods like refrigerators. You believe that **China could cut the growth in carbon emissions to 1.6 billion tons/year in 2015, about 11 percent lower than they otherwise would be**, without hurting its economy.

Certainty

In order for businesses to make the long-term investments necessary to achieve these goals, the governments of the U.S. and China need to make a firm commitment today that they will not change the emissions targets that they agree to now. Businesses cannot figure out the least expensive way to reduce emissions if governments keep changing the emissions targets. You want the U.S. and China to make a firm commitment not to change any emissions targets they agree to until after 2015.

Flexibility

Some environmentalists want the governments of the U.S. and China to force businesses to do very specific things to reduce carbon emissions: increase the use of wind and solar power, make all cars more energy-efficient, plant lots of trees. They also want to stop business from doing some things that could help bring down carbon emissions, but that might cause other kinds of problems. For instance, many environmentalists say that the U.S. and China should not build any nuclear power plants.

You want the two governments and the environmental representatives to agree that business should be allowed to bring down carbon emissions in any way that is profitable and legal. Government should not tell business how to do it.

Financial incentives

This last point is absolutely critical. If the U.S. and China want business to make investments to develop more energy-efficient cars or refrigerators, or to make power plants that run on wind instead of coal, they have to realize that those investments will cost you more and may earn you lower profits than continuing "business as usual." **You want the U.S. and China to give you tax breaks and other financial incentives** (like low-interest loans or free land for planting trees) to make sure that these investments don't end up hurting your companies. Under no circumstances can you accept any agreement that uses taxes or other financial penalties to force business to take action on climate change. Taxes would be unfair to business and harmful to the two countries' economies.

Strategy to achieve your goals

Your main concern is that the environmental representative will make extreme demands for the U.S. and China to reduce their carbon emissions and for business to make very expensive investments to achieve those reductions. To avoid this, you should

- Emphasize that climate change is a long-term problem that cannot be solved overnight.
- Explain that the world's leading corporations are committed to helping solve the problem—and the problem cannot be solved without their help.
- Make it clear that business can only help the U.S. and China if they agree to make gradual reductions, and give certainty, flexibility, and financial incentives to business.
- Argue that emissions targets of 1.53 billion tons/year for the U.S. and 1.6 billion tons/year for China in 2015 are the best that can be achieved without hurting the global economy. **You cannot support any agreement that commits the U.S. or China to have emissions lower than 1.5 billion tons/year by 2015**.

Good luck!

Resources

GENERAL

University Corporation for Atmospheric Research
http://www.ucar.edu/learn/1_4_1.htm
Introduction to climate change

U.S. Environmental Protection Agency
http://yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterPublicationsOutreachMaterial.html#basic
Fact sheets on climate change

United Nations
http://www.grida.no/climate/vital/intro.htm
Introduction to the science of climate change in graphs

http://unfccc.int/resource/iuckit/
Climate change information kit

Carbon Dioxide Information Analysis Center
http://cdiac.esd.ornl.gov/trends/emis/top2000.tot

ROLE PERSPECTIVES

United States

Official government sites
http://yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterPublicationsUSClimateActionReport.html
"Climate Action Report," 2003

http://yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterPublicationsPositionPapers.html
Collection of U.S. government policy papers on climate change, 1992–2003

http://www.eia.doe.gov/emeu/cabs/china/part2.html
Information on China's energy use and carbon emissions from the Department of Energy's Energy Information Network

ENN Environmental News Network
http://www.enn.com/news/enn-stories/2001/09/09172001/global_44956.asp
Results of public opinion polls on climate change

People's Republic of China

Office of National Coordination Committee for Climate Change
http://www.ccchina.gov.cn/english/source/ga/ca2003011801.htm
"China and Global Climate Change," statement on how China sees the issue of climate change

http://www.ccchina.gov.cn/english/
Links to a wide range of information on climate change issues from Chinese government perspective

National Geographic Magazine
http://magma.nationalgeographic.com/ngm/0403/feature4/index.html
"China's Growing Pains: More money, more stuff, more problems. Any solutions?" Article in March 2004 issue.

International business

International Chamber of Commerce
http://www.iccwbo.org/home/environment_and_energy/sdcharter/topics/climate/climate.asp
International business views and advocacy on climate change

U.S. Chamber of Commerce
http://www.uschamber.com/government/issues/environment/climatechange.htm
U.S. business views and advocacy on climate change

National Center for Policy Analysis
http://www.ncpa.org/studies/renew.html
"Why Renewable Energy Is Not Cheap and Not Green"

Environment

Sierra Club
http://www.sierraclub.org/globalwarming/

World Wildlife Fund
http://www.panda.org/about_wwf/what_we_do/climate_change/index.cfm

Environmental Defense
http://www.environmentaldefense.org/article.cfm?contentid=2218
Carbon emissions from U.S. cars and SUVs compared to other countries

http://www.environmentaldefense.org/article.cfm?ContentID=503
Business–environmental partnerships to reduce emissions

Union of Concerned Scientists
http://www.suvsolutions.org/news_events.asp
"Vehicle Experts Unveil Design for a Better SUV"

http://www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=48
Information on benefits of a renewable energy requirement in the U.S.

U.S. Department of Energy
http://www.eia.doe.gov/emeu/cabs/china.html
Information on China's energy use

Environmental Protection Agency
http://www.epa.gov/cleanenergy/energyou.htm
Information on U.S. energy generation

Debriefing Questions

Reviewing experiences and outcomes

What did your team hope to achieve in this negotiation? What did it achieve?
How well did you and your group meet your interests, uphold your values, and affirm your identities?
Are you satisfied with the results? What would you do differently next time?
How did the whole group do at finding a resolution to meet the interests, uphold the values, and affirm the identities of all the participants?
What could the group as a whole do differently next time?

Analyzing the issues

At the beginning, what did your group see as the causes of the conflict?
In what ways did other groups see the causes of the conflict differently?
Did your understanding of the causes of the conflict change by the end of the role play? How? Why?
Is it helpful for all stakeholders in a conflict to share a common understanding of its causes? Why or why not? How can this be done?

Resolving the conflict

At the beginning, what did your group think was the best way to manage the conflict?
In what ways did other groups in the conflict have different ideas about how to do this?
Did your ideas about the best way to manage the conflict change by the end of the role play? How? Why?

Negotiation processes

What did you do to try to convince the other groups of your solution to the conflict? Did you persuade them? Why or why not?
What did other groups do to try to convince you of a different solution to the conflict? Did they persuade you? Why or why not?

Connections to content

In real life, how do you think this conflict would be resolved? Who would benefit and who wouldn't? Would it be fair? What might happen next?
Stepping out of your role, what do you think would have been the best resolution to the conflict? Why? How might you persuade the groups to accept this resolution?

Individual and community applications

What did you learn about your own negotiation style and strategies that you use every day? How will you use this knowledge in your own life?
How could the lessons we've learned be applied to a situation or an issue in your school or the larger community?
Think of a conflict between groups that you have been involved in (or are involved in now). Do you think that these negotiation skills could have been useful to you and your group? Why or why not?

The Growing of America

Teacher Instructions

Objective

Participants will explore the links among population growth, immigration, environment, and support of the elderly in America, using multiple perspectives.

Materials

- Background
- Confidential Instructions—Aging Citizens for American Protectionism (ACAP)
- Confidential Instructions—Council of American Elderly (CAE)
- Confidential Instructions—One World Resources Group (OWRG)
- Confidential Instructions—U.S. Environmental Trust (USET)
- Resources
- Debriefing Questions

Time allotted

Session One:	Review role-play format, the conflict, and the roles, and assign teams (45 minutes)
Session Two:	Negotiate (45 minutes)
Session Three:	Debrief role play (45 minutes)

Note: You may decide to extend the negotiation period over two sessions, depending on the involvement of your students. You could also add more time up front to allow students to do additional background research (or you could assign this research as homework). Three sessions is the minimum necessary for this activity, but you should decide what the most appropriate time is given your class period length and students.

Procedure

Session One

Step 1

Explain to students that America's population is expected to increase from 281 million in 2000 to 394 million in 2050. Much of this growth will come from immigration and children born to immigrants. At the same time, the distribution of ages in the population is shifting older and older, meaning that there will be fewer workers to support the national economy and the needs of the elderly. To explore these issues and the options available to tackle them, the class will conduct a role play.

Tell students that a role play is different from a debate or persuasive speaking; it is a negotiation exercise. Negotiation is a process in which two or more parties seek to understand one another's interests and create options that will reduce or remove a conflict between them. Each group's goal in negotiation is to fulfill the needs of its group, by crafting an agreement that the other groups can also live with. Negotiation is not simply about making compromises or "being nice" but rather about finding creative options that address everyone's most important needs. Effective negotiation is assisted through the use of specific skills and behaviors to maximize the opportunities for all sides to get what they need in a way that satisfies the primary needs of the other sides as well.

Step 2

Explain to students that in order to effectively negotiate they need to understand what is going on in the conflict. Review the following sources of conflict:

Interests: What a group wants and its reasons for wanting them.

Beliefs: There are two types of beliefs—values and truths. Values are the group's belief that it has a "right" to something or a belief in the way the world "should" be. Truth is its understanding of how and why things happen and how the world "is."

Identities: These are the words a group uses to name itself and encompasses its history, culture, qualities, and characteristics.

Emotions: This is how a group feels about something.

Discuss with students that it is important not only to identify their group's own sources of conflict but also those of their negotiating partners. And while it is important that they effectively voice the needs and concerns of their role and do not give in on the interests that are most important to them, they also need to listen to the needs and perspectives of others, and to seek a resolution on which all parties can agree. The goal is not for them to simply demand and argue for what they want, or to give in and concede to any solution, but to develop an agreement that can be good for them and other groups, and persuade the other groups to accept it.

Spend some time constructing ground rules and expectations for the role play. Let students know that they will be expected to behave like delegates to a global climate change conference, to embody the concerns and perspective of their role but to behave with decorum. You may even encourage appropriate professional attire. Brainstorm with the students helpful actions and behaviors for the classroom and post them as a reminder. Some examples: no personal attacks; only one person speaks at a time, while others listen; respond to one another's ideas; don't just state what you want, explain why it is important.

Step 3

As a class, review the general instructions, the names of each team, and the issue it is trying to resolve. Explain that the negotiations will take place in two rounds. The first round should be focused on discussing the needs and perspectives of the groups, while the second round should be focused on brainstorming and agreeing upon a resolution.

Assign the students roles. Since there are four roles in this activity, this will leave teams of four to seven students in each role, depending on the size of your class. Note: When you are making up teams, review the skill set of each of your students. Be sure to balance those students who you expect can master the negotiation scenario—understand and "get into" their role and negotiate effectively—with those students who may have difficulty with this.

Tell the students that their team will be given general background about the conflict, a set of confidential instructions, and a list of resources to begin their research. As a team they will:

- review the sources of conflict listed above (their interests, beliefs, emotions, and identities) to determine their team's perspective on the issues;
- think about the interests, beliefs, emotions, and identities of the other groups;
- conduct additional research on the issues (students should start with the list of resources provided);
- develop options to propose on each issue;
- decide which members of the group will give the opening statement, negotiate the first round, and negotiate the second round; and
- develop an opening statement. This should state who they are and a little about what is important to them.

Session Two

Step 1

Begin the negotiation. Set up the room with chairs around a table or with chair-desks in a circle, one for each role. Each seat at the table should have the group's nameplate. Try and seat groups closest to their allies. One representative from each group is seated at the table. Other team members sit behind their representative.

Step 2

Begin with opening statements. (The representative sitting at the table makes the group's opening statement.) Representatives may also ask questions about one another's opening statements. Encourage team members to participate by passing notes to their representative, but remind them that only the representative can speak.

After the opening statements, the formal negotiations begin. Begin by discussing the needs and perspectives of the groups. As they negotiate, they should aim to learn what is important to the other groups and test this against their team's perceptions. They also need to make sure that the other groups understand what is important to their team, instead of just making assumptions. Make sure each group gets a chance to speak and that groups can ask one another clarifying questions about why things are important and how they prioritize the things that are important. They might then try to identify points of commonality and points of difference.

Step 3

The second round is focused on brainstorming and agreeing upon a resolution. Once the students understand one another's needs, they can begin to brainstorm options—"what ifs"—that might meet those needs. Remind them not to immediately judge these ideas: the more creative students are, the more opportunities there are for acceptable solutions. Tell them to think about their priorities and identify the things they are willing to give up in order to get things that are more important. To move toward resolution, the group will need to establish objective criteria to help decide what is "fair." In situations where it is impossible to fully satisfy the interests and needs of all groups on an issue, they will need to think of reasons why the group should select one solution rather than another, finding criteria of fairness (precedent, expert advice, cultural norms) agreeable to all groups.

At the end of the allotted time, have the students write down any agreements they have reached and any points of disagreement that remain. They may also record any next steps that they agree the participants should take. This will be their final outcome from the negotiations. Remind them that (theoretically) they will need to defend this document to their constituents.

Step 4
At the end of each class, ask students to reflect on the day's negotiations.

- What issues were discussed?
- What were the main points offered by your group?
- How did the other groups respond? What were their main points?
- What was the outcome?
- What was one thing someone at the table did that escalated the conflict? What was one thing someone at the table did that helped de-escalate the conflict and advance the negotiations?
- Are you satisfied with today's negotiation? What one thing could your representative have done differently to improve the outcome? What one thing could another group's representative have done better?
- What do you think will happen next?

Session Three
Debriefing is a critical step in the role play. During debriefing students can reflect on and analyze the experiences of the negotiation process, share different perspectives, and integrate new learning into their larger conceptual framework. Print out the Debriefing Questions and use them as a guide for classroom discussion on the experience of the role play, the conflict, and the resolution.

Assessment

There is a wide range of options for assessing role play. What follows is a menu of potential components. We recommend that you inform students at the beginning how this unit will be graded, so that they have a clear understanding of your expectations.

Participation assessment
Role play requires active participation, which provides many opportunities for assessment of student performance of skills and behaviors. These include:

- Preparation (demonstration of content understanding)
- Oral skills (talking clearly, slowly, loudly; not reading from a paper)
- Group work skills (listening to others, support for peers, providing input/feedback)
- Performance in role (emotional commitment, demonstrated knowledge of role's interests, beliefs, and identity)
- Debriefing (ability to examine self and group's learning and performance)
- Overall participation (attitude, motivation, commitment/engagement, development)

Follow-up assignments and final projects
You could also use these role plays to lead to additional essays or projects to assess student knowledge of the content, understanding of the process, and reflection on the experience of the role play and debriefing. You can use the Debriefing Questions to shape your assignment, or you can build from the following suggestions of essay topics and other projects.

Analytic essay: Have students analyze the issues at stake in the role play and discuss: What are the most important issues? Where are the primary areas of agreement? Where are the major areas of disagreement? How can/should this conflict be resolved? Is negotiation a viable strategy for reaching a solution—why or why not?

R*eflective essay:* Assign an essay where students reflect on and evaluate their learning experience doing the role play. Ask students to examine the lessons they learned, and the process they used to learn them. Use some of the Individual and Community Application questions from the Debriefing Questions.

Position paper: Have students write their perspective on what the "proper" resolution to the conflict should be, supported with evidence from their readings and experiences. Or have them write a position paper from an assigned perspective—as their role or as an opposite role.

Research paper: Ask students to conduct further research into a specific area.

Standards

The "Growing of America" role play aligns with the following NCSS National Standards for Social Studies Teachers.

Grades 9–12

II Time, Continuity, and Change

- provide learners with opportunities to investigate, interpret, and analyze multiple historical and contemporary viewpoints within and across cultures related to important events, recurring dilemmas, and persistent issues, while employing empathy, skepticism, and critical judgment; enable learners to apply ideas, theories, and modes of historical inquiry to analyze historical and contemporary developments, and to inform and evaluate actions concerning public policy issues.

V Individuals, Groups, and Institutions

- help learners analyze group and institutional influences on people, events, and elements of culture in both historical and contemporary settings;
- guide learner analysis of the extent to which groups and institutions meet individual needs and promote the common good in contemporary and historical settings.

VII Production, Distribution, and Consumption

- enable learners to explain how the scarcity of productive resources (human, capital, technological, and natural) requires the development of economic systems to make decisions about how goods and services are to be produced and distributed.

X Civic Ideals and Practices

- facilitate learner efforts to locate, access, analyze, organize, synthesize, evaluate, and apply information about selected public issues—identifying, describing, and evaluating multiple points of view;
- provide opportunities for learners to practice forms of civic discussion and participation consistent with the ideals of citizens in a democratic republic.

The Growing of America

Background

Environmental protection, aging, and immigration

Since 1800, human population has soared from one billion to six billion today. Over the next half century, our numbers will increase again—to a staggering nine billion people. Yet nearly all of this growth will take place in developing countries, where the demand for food and water already outstrips the supply of these resources. In stark contrast, most industrialized nations will see their populations shrink and rapidly age, with one out of every three people over 65. Our world appears poised on the brink of a profound demographic divide.

How will our world cope with both three billion more people and unprecedented aging? The impacts of these two demographic trends will reverberate around the globe. Although the forces that compel them are already in place, their outcomes are far from fixed. From a U.S. perspective, the primary concerns are the demographic distribution—aging—of the population, and the environmental and natural resource implications of population size. This issue is extremely complex with many conflicting variables.

Why does population matter?

While the total number of inhabitants in the United States may not seem particularly important, it is actually intimately related to a whole range of critical national concerns: sufficient housing in urban areas, clean water and air, tax revenues available for social programs like education and Social Security, agricultural land for crops and animals, sustainability of fish life, pesticide use, energy availability and cost, forest survival and biodiversity, and others.

In addition, the issues of population are not only about the total numbers of people, but also about the age distribution of those people. Children and the elderly are usually economically dependent upon those in the middle—the workers—to help support their basic needs, either directly or through payment of taxes to the government. If the elderly and youth make up a larger proportion of the population, there is more pressure on the workers to generate and share their revenues. In the United States, the trend toward an aging population points to real causes for concern.

Decisions we make now about population will have profound impacts on the future of today's youth. Should the U.S. act to slow population growth? Should the U.S. act to increase the population of workers in this country? And how much should we worry about the global impact of rapid population growth in other parts of the world? This simulation provides an opportunity for you, the youth of today and workers of tomorrow, to decide.

Population growth in the U.S.

Unlike Japan and many other industrialized nations with similarly decreasing birth rates, the United States population is not decreasing. This may be surprising, since the current U.S. birth rate is lower than ever recorded and has been dropping each year. A release in May 2003 by the Centers for Disease Control and Prevention (CDC) reported the lowest U.S. birth rate ever recorded for 2002: 13.9 births per 1,000 persons.

However, America's population is expected to increase from 281 million in 2000 to 394–438 million in 2050—a 40 to 55 percent increase. Some of the growth will come from new births to people already living in the U.S., some will come from people living longer, but more will come from immigration and the children born to immigrants.

Over the past 10 years, about one million immigrants were admitted legally into the United States. Since 1965, priority is given to those with relatives in the U.S. and those whom employers want to hire. In addition, there are currently an estimated 8–12 million illegal immigrants living in the U.S.

The role of immigration in population growth is monumental: Had there been no immigration after 1990, experts believe the United States population in 2050 would be only 310 million—25–30 percent smaller than it is predicted to be with current immigration rates. According to demographer Leon Bouvier, half of the increase in the U.S. population since 1970 has come from immigration. According to recent studies of the Census Bureau, the amount of growth each year due directly to immigration is 45 percent. This doesn't account for the full amount of growth since not only does immigration add current citizens, it adds future citizens—the children of today's immigrants. This impact is increased because many immigrant groups coming to the U.S. have higher birth rates than the U.S. average.

Immigration is the focus of U.S. population policy because it is the only area where the government has much control. Birth rates and death rates are difficult to influence by policy, but the number and rate of immigration is in large part determined by governmental action.

Should the U.S. close its borders? What are the costs and the benefits of reducing or eliminating immigration?

The environmental impact of U.S. population growth

A growing population means increased demand for food, which in turn means more land must be used for growing crops and grazing livestock. The increase of food production leads to more pressure to increase the intensity of farm-land use, which leads to increased pollution and agricultural run-off, and more energy being used to import food from elsewhere. A growing population also increases the demand for clean water, straining our supply. We currently use far more water each day than is replaced through natural processes. Our use of energy is also growing, leading to greater pollution, increasing expenses, and threatening our domestic security, as we rely on other countries in the world to fulfill our needs for oil. And even if these resources are never depleted, we must continue to divide them up amongst an ever-increasing number of people, leaving less for each.

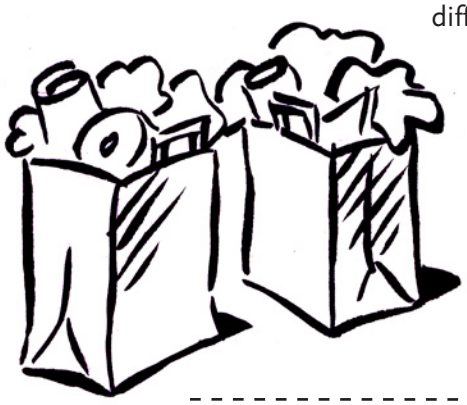
Another impact of an increasing population is the loss of open space. Forests are cut down to make room for neighborhoods, and roads are built so people can drive from these new neighborhoods into more metropolitan areas for work, shopping, and entertainment. As forest and wild lands decrease, so do the habitats of hundreds of species of animals. Meanwhile, the hours we spend driving from home to work increase, as does the traffic and the resulting air pollution.

What should we do to stem the environmental pressure of our growing population?

Balancing population growth with the global environment

Environmental sustainability also has a global perspective: the impact of people on the environment is said to vary depending on the circumstances in which those people live. Immigration does not increase the global population, it redistributes it. The net effect of increasing U.S. immigration could cause negative environmental consequences on the U.S., in terms of increased use of energy, water, and land, but it may prevent other environmental consequences from occurring that ultimately impact the U.S., such as the destruction of Amazonian rain forests.

While the United States can decide not to welcome immigrants into America, this may not prevent all the environmental problems described above. The world's growing population will continue to use resources, and in fact may cause greater damage to more ecologically sensitive areas, such as rain forests, jungles, and biodiversity hot spots. In addition, many advocates argue that decreasing legal immigration will lead to increased illegal immigration, which causes other significant economic and cultural difficulties for the U.S.



On the other hand, the environmental impacts of population growth in the U.S. are made more serious by our high consumption rates. According to a report by World Resources Institute, the average American uses the equivalent of 300 shopping bags filled with natural resources for food, shelter, energy, transportation, and other products and services every week. The average North American consumes five times as

much as an average Mexican, 10 times as much as an average Chinese, and 30 times as much as the average person in India. Shifting more of the world's population to the United States therefore increases the overall consumption of natural resources.

While the average American consumes far more resources than the average citizen in the developing world, the lack of technology and dire poverty in the developing world often contributes to severe environmental crises that impact the whole world. Environmental groups therefore have different perspectives on the costs and benefits of immigration rates.

Is the U.S. then better off absorbing immigrants from the developing world because we have access to more resources and to technologies that can balance environmental stresses?

The graying of America

Another piece of the immigration puzzle is the aging of America's population. The number of people age 62 and over is projected to increase from 40 million in 2002 to 69 million in 2030. Between 1990 and 2020, the population aged 65 to 74 is projected to grow 74 percent. In 2030, about 20 percent of the total population will be over 65, compared to about 13 percent now.

What are the costs to the rest of society of a much larger percent of older people?

Today's seniors receive monthly checks from the government as part of a program called Social Security. Social Security benefits are drawn from the taxes collected from today's workers. 96 percent of workers contribute to Social Security, from paying a flat tax that comes out of their wage income, which is then matched by their employer. Money left over after paying the benefits to today's seniors is added to the Social Security Trust Fund, which is invested to provide funds for future use or borrowed by the government to cover other important priorities, like money for schools, health research, and defense.

The amount of money paid by Social Security does not change with the ups and downs of the economy, nor does it vary based on the amount that comes in from taxpayers. Social Security is an entitlement program, which creates a legal right of benefits for every qualified person within the age group. Unlike the money given by the government for schools, which can be changed from year to year depending on the economy, the federal government owes specific amounts of money to every senior citizen, based on how long they paid into the system and how much they earned when they were working.

The entitlement nature of this program creates a challenge—today's workers expect that their benefits upon retirement will coincide with the amount they pay now in taxes. However, as the population ages, there will be more seniors collecting benefits and fewer workers supplying the income. One estimate predicts that instead of today's ratio of 3.4 workers for every senior, the ratio will drop to 2.1 workers for every senior. A 2002 report by the Social Security Board of Trustees predicted that, with no changes in the current law, the trust fund will run out of money by mid-century—and many other studies predict much sooner. At that point, the amount collected through taxes on current workers will not be enough to pay the benefits owed to seniors. When we add in the costs of medical care for the elderly, through the entitlement programs of Medicare and Medicaid, the situation looks even more dire. And any decrease in immigration would further reduce the numbers of workers compared to the numbers of elders.

What are the implications of the graying of America on U.S. immigration policy?

Opinions and data on the benefit of immigrants on caring for the elderly vary. According to advocates, immigrants contribute greatly to the U.S. economy overall and can help to fill in the gaps in our population age distribution. These advocates argue that most immigrants contribute far more in taxes than they will receive in benefits. One study done last year found that an average new immigrant can be expected to contribute $46,000 over his lifetime, not counting the economic benefits his children will contribute.

However, this study also found that, to really solve the Social Security problem, the U.S. would need to admit an additional five million immigrants per year. Others argue that immigrants on average are less productive, and older immigrants or those with many children may pay less into the system through taxes than they will receive from their own benefits and tax support for the education of their children.

Either way, it is clear that decisions made now about immigration policy will have dramatic effects on care for the elderly.

Your assignment

As government officials have sought to set new long-term policy on support of the elderly and environmental sustainability, the link between these topics and immigration has raised increasing interest. For that reason, the President and Congress have established a blue-ribbon commission of environmental and elderly-support groups to provide recommendations on immigration policies. The issues you need to consider are:

- Immigration and the elderly: Can changes in the U.S. immigration policy improve efforts to support the retirement needs of an aging population? If so, what should those changes look like?
- Immigration and the environment: Should U.S. immigration policy be changed to reduce the environmental impacts on America's natural resources? To protect the global environment? Both? If so, what would those changes consist of?

Procedure

You will take on the role of one of the following representatives. You will review confidential instructions for your role and then meet with the other representatives.

One World Resources Group (OWRG): The OWRG is a worldwide environmental group founded in the 1970s. OWRG believes that rapid population growth and its effects on the environment are fundamentally global problems, and that environmental issues cannot be solved by closing borders.

U.S. Environmental Trust (USET): USET's mission is to promote domestic environmental management and environmental stewardship. It has advocated for reducing population growth as a prime means to preserving America's natural resources.

Council of American Elderly (CAE): The Council of American Elderly is a non-partisan group that conducts research and engages in advocacy on behalf of senior citizens and retirees. It has forwarded research showing the beneficial effects of immigration on support for the elderly.

Aging Citizens for American Protectionism (ACAP): ACAP is a national organization dedicated to protecting and promoting the rights of elderly Americans. It has advocated for limiting immigration and maximizing social benefits going to senior citizens.

The group has decided to hold two meetings. During the first meeting you will explore the primary interests and beliefs of each group. Then you should attempt to highlight areas of agreement, areas of disagreement, and the relative priorities of each to the groups. During the second meeting, you should focus on developing a proposal that you can submit to the President and Congress regarding your suggested changes to U.S. immigration policy.

As a group, you may also make policy suggestions for dealing with other aspects of caring for the elderly (i.e., Social Security policy changes) or protecting the environment (i.e., energy policy changes), but these should be secondary to the main task of immigration policy. Participants are encouraged to use creativity to create suggestions that are acceptable to all groups. Only unanimous proposals will be included in the Commission's final report.

Aging Citizens for American Protectionism (ACAP)

You are the lead analyst and lobbyist for Aging Citizens for American Protectionism (ACAP). ACAP is an organization dedicated to protecting and promoting the rights of elderly Americans. In addition to actively lobbying Congress to support legislation that benefits America's elderly, ACAP contributes significant research in the areas of aging, health, and retirement in America.

Research points to an emerging problem of economic uncertainty in caring for America's aging and retired population. As immigrants flood into the U.S., the Social Security network and financial resources are spread thinner and thinner across growing numbers of "deserving" people. Retirement trends point to an even more complex issue —by 2030 the number of people over the age of 65 will increase from 40 million to 69 million and, at the same time, America's work force will shrink considerably. These are not sustainable numbers, and as America ages, Congress will be required to make difficult choices about its financial obligations and policies. It will be your job to keep the "elderly agenda" on the forefront of the Congressional agenda, and to make sure American retirees have a chance to enjoy the benefits they feel they have earned.

Because of ACAP's leadership and interest in the role of immigration in support for the elderly, you have been invited to join this Blue Ribbon Commission on Immigration-Related Costs and Benefits, set up by the President and Congress. Your organization has chosen you to be its representative, and together you have come up with the following main ideas to share on the first day of the meeting.

ACAP research has convinced you of the following:

- Social Security payments will see you safely through your retirement, but your children may have to compete against immigrants for limited Social Security dollars. Clearly, the immigrant pool is tapping into a Social Security system that will soon be insolvent given the current population growth in the U.S.
- Many immigrants enter the U.S. at an advanced age and impose financial burdens upon the medical and Social Security system that were not offset by earlier tax contributions.
- The strength of the U.S. economy is threatened by immigration. The U.S. already exports millions of service and manufacturing jobs overseas. New immigrants take many of the remaining jobs that might otherwise go to "long-standing" American citizens.

What follows is more detail about your thoughts on these subjects.

Immigration and the costs of supporting America's elderly

Clearly, changes must be made to U.S. immigration policy in order to protect and financially support the hardworking Americans now entering retirement. Immigration is the primary contributing factor to America's rapidly increasing population, and in many cases immigrant families include more than one elderly dependent as well as multiple dependent children. Moreover, research shows that elderly immigrants enter the United States expecting more of a handout than a hand-up. In fact, immigrants entering the U.S. at an advanced age impose burdens on the medical and Social Security systems that they do not offset with earlier tax contributions. What results is an economic imbalance and increased burden on the American taxpayer, and a loss of benefits for the American retiree.

It's true that, without immigration, the demographic shift to an older population would be more striking. However, even if increased immigration increases the worker-to-retiree ratio, this does not account for the high public burden of services for their children. Their actual impact on the "dependency ratio"—the number of people in dependent age groups (under 15 and over 65) compared to the working-age population—would be small. In addition, the prospects are risky. Many immigrants do not graduate from high school or college and therefore are more likely to generate a net cost to the government higher than the tax benefits they provide. Because of the high poverty rates and low skill levels of many immigrants, the burden on the government is actually increased, depleting the Social Security Trust Fund in the long run.

Policy proposals

Your fear that current immigration levels are depleting the Social Security coffers and changing America's social landscape makes the upcoming forum a critical event for you to voice your organization's beliefs that the United States must:

1. adopt a new immigration policy aimed at limiting population growth to 250,000 new immigrants per year, of which only 50,000 can be over the age of 50;
2. devise a systematic evaluation process and subsequent policy to allow a greater percentage of immigrants who will substantially contribute to the economic growth of the United States; and
3. reduce incentives for people to come to the United States by agreeing to a limited Social Security package for immigrants and granting automatic U.S. citizenship only to offspring of immigrants, not to extended family.

Restructure immigration policy. Congress should consider reframing its immigration policies to help stabilize the growing population of elderly Americans. It might be beneficial, for example, to impose two sets of quotas upon immigrants, one that caps the yearly total of immigrants and another that limits immigrants of certain age brackets from entering the country. They might also consider developing conditions under which unproductive immigrants who have not contributed to the system cannot receive

benefits. After decades of hard work, the retiring "Boomer" generation deserves the rewards entitled to them and should not see their resources stripped by immigrants who have not contributed to the financial, intellectual, or physical capital of this country.

Socioeconomic contribution evaluation. Most immigrants are poor; indeed, that is why they come to the United States. Through present immigration policy, over one million mostly poor people are admitted into society every year, a society that is already challenged to deal with the poverty of its current citizens. The United States should therefore pursue a policy to grant preferential citizenship to immigrants who are most likely to contribute to the financial growth of the country, by evaluating educational background and applied skills. There is a greater likelihood that these immigrants will productively contribute to the country's labor base.

Limited Social Security package. The burden placed on the Social Security system by immigrants threatens its sustainability. What many American's worked long and hard for—the assurance that their retirement will be sustained by their investment—is being depleted by immigrants who enter the U.S. at an advanced age and tap into the Social Security network without having first contributed through taxes. Limiting the extend to which these immigrants can be eligible for Social Security will help ensure the program is sustained and available for those who deserve it most.

Finally, Americans today are losing hold of their American heritage. As the population ages but the birthrate flattens, the "new" American family will more likely hail from India than Indiana, or Mexico rather than New Mexico. As a result, stories and oral histories of life in the U.S. will be replaced by those of these families native homelands, as many immigrants' loyalties lie not where they live, but where they are from. You know that the changing nature of American families causes substantial discomfort for many of your members. You support policies that help maintain the character of America.

ACAP does not want to tarnish its professional reputation. Despite promoting a protectionist agenda, it does not want to lose credibility by being labeled culturally insensitive or, at worst, a racist organization. You are therefore open to considering "compassionate" immigration strategies that do not negatively impact your interests.

Council of American Elderly (CAE)

You are the lead policy analyst for the Council of American Elderly (CAE) and a retiree yourself. The Council for American Elderly is a non-partisan research group that studies many issues on aging, including heath, retirement, and public policy. CAE is "comprehensive" in its structure in that its focus on aging is broad and multifaceted. CAE was born out of necessity in the mid-1980s, when significant leaps in scientific research had been made with respect to the health of people over the age of 60.

CAE became a think tank of sorts to respond to the wealth of new information about aging and heath, retirement in the U.S. and abroad, and the complicated financial structure of heath care and Social Security. CAE's researchers have published numerous studies that highlight the many benefits of current U.S. immigration policies, not the least of which are economic.

Although CAE will forever be a non-partisan group, you are concerned for its credibility as America's retirees begin to grow more vocal about their access to the Social Security network they helped build. Because of CAE's leadership and interest in the role of immigration on long-term care of the elderly, you have been invited to contribute your thoughts and recommendations on this Blue Ribbon Commission on Immigration-Related Costs and Benefits, set up by the President and Congress. Nevertheless, you are aware that strong opposition exists to many of CAE's findings. Your contribution to the Presidential Commission will be crucial in promoting policy that you believe to be politically sustainable and economically feasible in both the short and long term.

Immigration and the costs of supporting America's elderly

CAE research has left you with the following conclusions about immigration and retirement:

- It is likely that the economic impact of immigration is, on balance, advantageous to the United States. Under conventional economic theory, immigration increases the supply of labor, which reduces the wages of U.S. workers in job categories that immigrants fill. This downward effect on wages will, by implication, benefit owners of capital and consumers of goods and services produced with immigrant labor, and it also increases the wages of U.S. workers who do not compete with immigrant workers.
- The surge of American retirees in the next decade will substantially tax the Social Security network. To ensure the network's continued solvency, adequate labor and a secure job market must be maintained. In many respects, immigration contributes to this economic security.

CAE research suggests that immigrants are key contributors to America's economic foundation and economic growth, and, perhaps more importantly, an integral component of America's social fabric. While the economic burden imposed by the surge of retirees and elderly in the U.S. is likely to increase significantly, CAE research suggests that elderly immigrants are a small—almost immeasurable—component of the larger network of American elderly. Moreover, CAE studies so far suggest that steady immigration is in fact a vital component of covering the costs imposed by America's elderly, as more consumers, more workers, and a larger economy ease the financial burden imposed by the elderly. By increasing the number of workers, immigrants help to improve the worker-to-retiree ratio.

Without immigration, the demographic challenges faced by the United States would be far more dire. They would in fact look more like Japan and Europe, where birthrates are also low but immigration smaller. Not only does immigration lead to more workers, it has also contributed to keeping the birthrate from falling to even lower levels, ensuring an ongoing work force.

In addition, your studies have shown that immigrants are net contributors to Social Security and Medicare. Your research has shown that immigrants will contribute $500 billion more to these systems than they will receive in the period between 1998 and 2022. In addition, according to the National Immigration Forum, estimates show that immigrant households paid an estimated $133 billion in direct taxes in 1997, and each typically pays $80,000 more than they will ever receive in benefits.

Policy proposals

American policy on immigration, at least in the context of the costs for caring for the elderly, seems on target. You would, however, like the commission to guarantee that:

1. the development of a proposal for a true assessment of income inequality and job displacement and subsequent design of a more comprehensive federal program to help more immigrants successfully integrate productively into the labor force; and
2. the design and implementation of a pilot project for "selective immigration," which ranks candidates by geographical distribution (country of origin), educational background (highest degree attained), skill set, and family size.

Tightening immigration policy or capping immigration at numbers below their current levels would seem to have little positive effect with respect to the economics of aging in America. You are intrigued but still unconvinced by the concepts of changing the criteria by which the U.S. chooses immigrants, and you may be open to exploring methods that encourage more self-selective immigration.

In addition, the U.S. should take steps to maximize the economic prosperity of its immigrant population by providing better education and more opportunities for the immigrants who arrive. There are many experiences of successful intervention programs to improve and increase the economic assimilation process for new immigrants through special school and community programs, but little research and replication has focused on this.

One World Resources Group (OWRG)

You are the president and founding member of the One World Resources Group (OWRG), a grassroots environmental organization born in New England in 1972 at the dawn of the modern environmental movement. OWRG's founding principles were strong and steadfast, recognizing pressing environmental issues to be principally of global rather than local significance. Its mission is to educate and lend research and resources to some of the world's most dire environmental problems, including climate change, water and air pollution, and sprawl.

Today, your organization boasts a robust national membership, regional offices dot the country, and affiliate offices exist around the world. While OWRG does not enjoy the same membership numbers as some of the most recognizable global environmental organizations, donations are nevertheless healthy and some of the world's leading experts in environmental economics, public health, population studies, and environmental science sit on the board of trustees, contribute research, and publish studies under the OWRG banner.

Until recently, OWRG's focus on international participation in matters concerning environmental management has appeared sound and well accepted. In the past five years, however, the United States has pushed an increasingly "protectionist" agenda that suggests its attention to environmental issues may in fact stop at the country's borders. In addition, the downswing in the economy has turned many citizens' attentions inward. These trends have led to greater tension between your group and the American government, and you have also seen your membership numbers begin to drop. As the president of OWRG, you have many concerns, not the least of which is the vitality of your organization. However, your stance on global activism is tied to a firm conviction that the best interests of the United States on the environment cannot be met by ignoring global environmental concerns. As a result, you are faced with some important decisions—about the future of your organization, OWRG's stance on immigration and population, and global versus local environmental protection.

Because of OWRG's leadership and interest in the role of immigration on the environment, you have been invited to be on this Blue Ribbon Commission on Immigration-Related Costs & Benefits, set up by the President and Congress. Your organization has chosen you to be its representative, and together you have come up with the following main ideas to share during the meeting.

Immigration and the Environment

While many believe that the U.S. must take a stronger stance on its own environmental protection and natural resource management by securing its borders (or curbing immigration), OWRG research suggests differently. Specifically, you strongly believe that erecting fences around the U.S. does nothing to solve environmental problems. Rapid population growth and its effects on the environment are global problems. Moreover, American protectionism actually does more harm to the global environment—it forces impact and destruction on places that are more ecologically sensitive. For these reasons, you believe OWRG's mission to address and attack global environmental issues should not change and U.S. immigration should not be reduced.

Immigration is also a symptom of environmental instability—many families migrate because environmental safety and natural resources are not available in their homelands, or because multinational businesses misuse, pollute, and destroy their natural resources. To refuse to allow immigration isn't going to help solve environmental problems—rather, if someone claims to care about the environment, they should be working to limit the environmental impact of U.S. companies.

Despite the national trend of "securing the borders," you believe that it would be unethical to protect U.S. environmental resources and achieve U.S. population stabilization at the expense of workers and their families from other nations who would not be allowed to move here to better their lives. In addition, your organization is concerned about the controversial aspects of taking a stand on reducing rapid population growth. However, it's true that reducing rapid population growth on a global scale is an important environmental concern, and you might consider shifting some research and advocacy energy to this topic in the near future as a means to protect the global environment. To date, OWRG's trustees have been hesitant to openly acknowledge that reducing rapid population growth is a goal for the organization—in hopes that other groups could tackle the issue and take the political "heat" for the connotation it carries.

Policy proposals

You are confident that your counterparts will bring strong arguments to the meeting regarding immigration control and protection of America's natural resources. Your conviction that these solutions are not in the best interest of global environmental protection lead you to propose that:

- the U.S. holds a series of roundtable meetings to discuss issues of rapid population growth and environmental protection with those countries that contribute the most to global population growth and the major private and public sector organizations that contribute research and funding to environmental management projects;
- the U.S. commits to a "slow-growth" plan for immigrants that provides pro-rated incentives for educational attainment, job placement, and family size; and
- the U.S. commits to increasing and sustaining the programmatic budget for the United States Agency for International Development's environmental programs in developing countries by $50 million per year for 10 years. This additional funding will be used to address natural resource management, climate change, population, and public health projects in Latin America, Asia, and Africa.

Immigration is never an easy topic. However, more restrictive U.S. immigration policy might be both counterproductive and politically damaging, without having any positive net impact on global environmental protection. Perhaps the U.S. should consider an immigration incentive program that "rewards" immigrants based upon educational attainment levels, language capabilities, professional background, and overall family size. However, you wouldn't support any policy that led to discriminatory effects based on national origin, race, or culture—these incentives should not block certain groups who don't already meet the conditions for acceptance into the country.

Through investment in economic development programs in developing countries, more environmental rules for U.S. companies operating abroad, and a legalization process for undocumented workers, the U.S. is more likely to achieve a goal of better global environmental management without tarnishing its reputation as a country open to and welcoming of immigrants. Environmental protection and economic development go together. A richer country can afford to invest in more environmentally friendly manufacturing goods and services.

You are also open to exploring other ideas that would maximize the ability of new immigrants to integrate smoothly and productively into society.

U.S. Environmental Trust (USET)

You are the president and founding member of the U.S. Environmental Trust (USET), a Texas-based environmental organization founded in the late 1980s. USET's mission is to promote domestic environmental management and environmental stewardship. USET grew out of a collective concern for the nation's fishable waterways, many of which experienced excessive pollution from industrial sources during the 1970s and 1980s.

Until recently, your organization has enjoyed a small but active membership from individuals across the country. USET never intended to grow in size to compete with more recognizable environmental groups. In the past it benefited from active partnerships with such organizations and has shared research and collaborated on projects on occasion. In the last five years, however, USET's membership has declined steadily—outside of the close network of original members, it seems that younger generations are choosing to donate money or join environmental organizations that also have a strong political agenda or are more recognizable in the public realm.

As a group USET has never carried a strong political agenda. Its goals as a small organization have always been to "act smart and act locally," in the name of the environment. However, many of the organization's members are politically active and many are financially influential.

Because of USET's leadership and interest in the role of immigration on the environment, you have been invited to be on a Blue Ribbon Commission on Immigration-Related Costs & Benefits, set up by the President and Congress. As the president of USET you have many concerns, not the least of which is the vitality of your organization. Your organization has chosen you to be its representative, and together you have come up with the following main ideas to share during the meeting.

USET research and data from the recent U.S. Census have convinced you of the following:

- Immigration is taking a toll on the country's already limited natural resources. Not only will your children not be able to enjoy the same abundance of open spaces, fresh water and clear skies that you did growing up, they will likely also have to compete or pay heavily for drinking water, fuel, and even clean air.
- Social Security payments will see you safely through your retirement, but you children may have to compete against immigrants for limited Social Security dollars. Clearly the immigrant pool is tapping into a Social Security network that will soon be insolvent given the current population growth in the U.S.
- The strength of the U.S. economy is threatened by immigration. Foreign-born students are increasingly coming to the U.S. to earn specialized advanced degrees. They are making it more difficult for U.S. citizens to earn spots in comparable academic programs and for citizens to find well-paying, secure jobs.

Following is some greater detail about your beliefs on these issues.

Immigration and the environment

Recent studies lead you to believe that regulating immigration more strictly is an essential step to protecting America's natural resources. Population growth in the United States is already a huge problem with respect to the environment, although you have noticed that many environmental organizations do not address the issue as one of the principal drivers in environmental protection. You are beginning to believe that America's stream of immigrants are taking advantage of resources that, frankly, its current residents are more entitled to. There is clearly a limit to natural resources such as water and open land that should first be allocated amongst the nation's current residents.

The U.S. population has been growing by leaps and bounds every year, and shows no sign of slowing down, and a rapidly growing U.S. population is a serious threat to the environment. You might want to share with the commission the following statistic: If we had limited immigration to the level of emigration in 1970, the U.S. population would have stabilized at 255 million in 2020, and gradually decreased to an environmentally sustainable level. Instead, we have increased immigration to over five times its replacement levels!

It's a simple fact: Our country would be better off with fewer people consuming its natural resources—water, energy, land. Because of its increasing importance and impact on annual population growth, immigration plays a significant role in our goal of stabilizing the U.S. population. USET's research has indicated that a cap on annual immigration levels at half of today's one million would significantly reduce the expected population of 2050 and therefore greatly improve the projected strain on resources.

However, you certainly wouldn't want to sound like you are blaming all of America's environmental problems on immigrants! Immigration goals must be set within a larger framework of a U.S. population policy that aims at slowing U.S. and world population growth as well as promoting a balance between U.S. population and the environment through increased energy efficiency, conservation of natural resources, and sustainable environmental practices.

Policy proposals

Your conviction that America's natural resources are threatened by unchecked immigration policy and your desire to grow USET to an organization makes the Presidential Commission a pivotal forum to:

1. get the commission to agree to a 5-year cap on immigration to 100,000 people per year,
2. reduce incentives for people to come to the U.S. by agreeing to a limited Social Security coverage package for non-U.S. citizens and by giving automatic U.S. citizenship only to offspring of immigrants—not other family members, and
3. reduce incentives for immigrants to have large families; benefits and incentives could be allocated on a "sliding scale" as families grow in size.

Immigration caps. Hard immigration caps might be the most effective policy decision the Administration can take. The economic and ecological realities of U.S. population growth should make this an easy political decision. Policy of this nature can also be "layered" to include restrictions on amnesty, illegal immigration, and citizenship for illegal immigrants' children. Perhaps the U.S. should consider economic development programs in the countries that "send" the largest percentage of immigrants to the U.S. It is likely that more people would choose to remain in their own countries if the economic and environmental conditions improved significantly.

U.S. environmental degradation can be prevented if immigration were curbed. Statistically, the United States' rapid growth can be almost entirely attributed to immigration—the current average fertility rate is only 2.05 children per family, which amounts to a near zero-growth rate. Immigration, far more than the average American's consumption pattern, is the root cause of the country's environmental problems. Between 1970 and 1990, U.S. energy use rose nearly 36 percent because of the larger, immigration-driven U.S. population.

Limited Social Security coverage package. Social Security was designed to provide retirement income for American citizens who worked in the United States. Paying benefits to non-citizens will deprive millions of Americans who pay into Social Security their entire lives. They now face the possibility of a bankrupt system when they retire. Limiting the extent to which immigrants are eligible for Social Security at least ensures a greater likelihood of maintaining network solvency. Restricting the Social Security package offered to immigrants would likely discourage many immigrants from choosing to relocate to the United States.

Granting U.S. citizenship to families. The United States is the only industrialized country that provides for non-nuclear family immigration entitlement. If these categories were eliminated, the annual total immigration level could then be reduced by about 525,000. Reducing the categories of qualifying family members for citizenship disrupts "chain" immigration, whereby a foreign-born U.S. citizen sponsors his or her siblings, plus their siblings' spouses, and then the new immigrants' spouses may later, upon becoming U.S. citizens, sponsor their family members ad infinitum. "Chain" immigration could be reduced further by removing the provision that confers family immigration status on the adult married children of foreign-born U.S. citizens. As a result, the U.S. would be able to keep its growing population in check and maintain a tighter grip on natural resource management and protection.

Resources

Overview

E-Magazine
http://www.emagazine.com/january-february_2004/0104feat1.html
"The Numbers Game: Myths, Truths, and Half-Truths about Human Population Growth and the Environment," by Jim Motavalli

Population of the United States, 1950–2050
http://www.ac.wwu.edu/~stephan/Animation/pyramid.html

U.S. and world population clocks
http://www.census.gov/main/www/popclock.html

Population Reference Bureau
http://www.prb.org/
Background information on population, migration, aging, and environment

Additional global population growth Web sites
http://www.csa.com/hottopics/ern/01mar/websites.html

Perspectives

Support U.S. Population Stabilization
http://www.susps.org/overview/immigration.html
U.S. immigration, population growth, and the environment

Population Connection
http://www.populationconnection.org/

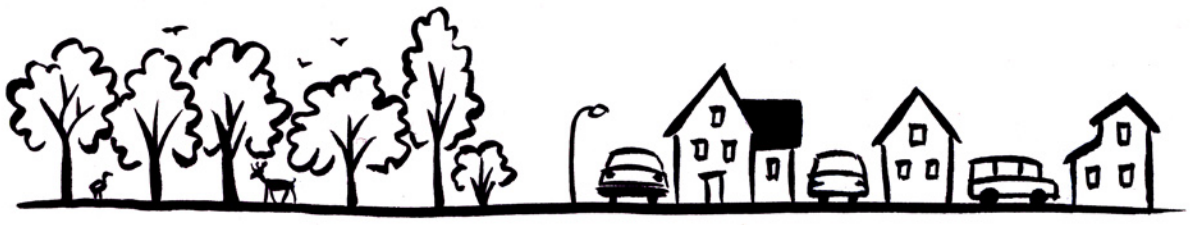
Population/Environment Balance
http://www.balance.org/index.html

Center for Immigration Studies
http://www.cis.org/articles/2001/sactestimony701.html
The impact of immigration on U.S. population growth

Negative Population Growth, U.S.
http://www.npg.org/popfacts.htm

National Audubon Society
http://www.audubonpopulation.org/newpop2/pages/facts/poproost.htm
Information on population and environment

Population Resource Center
http://www.prcdc.org/programs/frey/frey.html
"America's Demography in the New Century: Aging Baby Boomers and New Immigrants as Major Players"



Debriefing Questions

Reviewing experiences and outcomes

What did your team hope to achieve in this negotiation? What did it achieve?
How well did you and your group meet your interests, uphold your values, and affirm your identities?
Are you satisfied with the results? What would you do differently next time?
How did the whole group do at finding a resolution to meet the interests, uphold the values, and affirm the identities of all the participants?
What could the group as a whole do differently next time?

Analyzing the issues

At the beginning, what did your group see as the causes of the conflict?
In what ways did other groups see the causes of the conflict differently?
Did your understanding of the causes of the conflict change by the end of the role play? How? Why?
Is it helpful for all stakeholders in a conflict to share a common understanding of its causes? Why or why not? How can this be done?

Resolving the conflict

At the beginning, what did your group think was the best way to manage the conflict?
In what ways did other groups in the conflict have different ideas about how to do this?
Did your ideas about the best way to manage the conflict change by the end of the role play? How? Why?

Negotiation processes

What did you do to try to convince the other groups of your solution to the conflict? Did you persuade them? Why or why not?
What did other groups do to try to convince you of a different solution to the conflict? Did they persuade you? Why or why not?

Connections to content

In real life, how do you think this conflict would be resolved? Who would benefit and who wouldn't? Would it be fair? What might happen next?
Stepping out of your role, what do you think would have been the best resolution to the conflict? Why? How might you persuade the groups to accept this resolution?

Individual and community applications

What did you learn about your own negotiation style and strategies that you use every day? How will you use this knowledge in your own life?
How could the lessons we've learned be applied to a situation or an issue in your school or the larger community?
Think of a conflict between groups that you have been involved in (or are involved in now). Do you think that these negotiation skills could have been useful to you and your group? Why or why not?