

Chapter 25

Lecture Outline

Environmental

World views, Ethics, and Sustainability

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- ### Outline
- Making a Difference
 - What Can Individuals Do?
 - ❖ Green Consumerism
 - How Can We Work Together?
 - ❖ Mainline and Radical Environmental Groups
 - Campus Greening
 - Sustainability is a Global Challenge
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Making a Difference

- Stewardship is everyone's business.
- Many groups are working to solve environmental problems:
 - ❖ Minorities
 - ❖ Religious groups
 - ❖ Farmers
 - ❖ Loggers
 - ❖ Business leaders

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Environmental Science

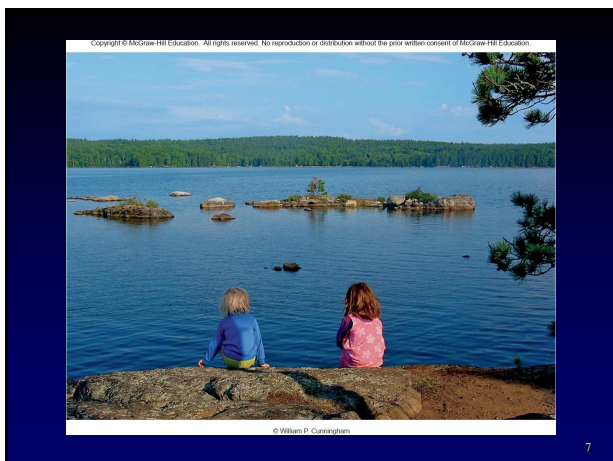
- Environmental Science involves:
 - ❖ Communications
 - ❖ Policy
 - ❖ Education
 - ❖ Economics
 - AND
 - ❖ Science

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Environmental Education

- In 1990, Congress passed the **National Environmental Education Act** establishing two goals:
 - ❖ Improve understanding among the general public of the natural and built environment and the relationships between humans and their environment
 - ❖ Encourage postsecondary students to pursue careers related to the environment

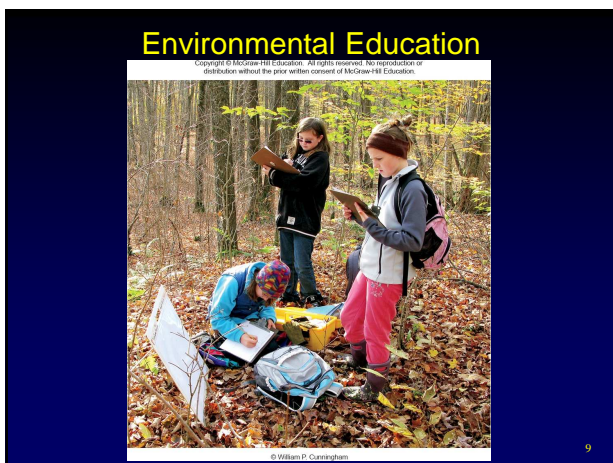
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Environmental Literacy

- **William Reilly**, former EPA administrator, called for **environmental literacy**, in which every citizen is fluent in the principles of ecology and has a working knowledge of the environment.
 - ❖ Foster a stewardship ethic.
 - ❖ Prepare ourselves for life in the 21st century.
 - ❖ A lifelong process.
 - ❖ Get out and enjoy the natural world.

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Citizen Science

- Ordinary people join with established scientists to answer real scientific questions
 - ❖ Community-based research was pioneered in the Netherlands when they combined researchers with students and neighborhood groups to work on research projects
 - ❖ The Audubon Society sponsors a annual Christmas Bird Count.
 - ❖ Earthwatch and American River Watch are also examples of enlisting the public in scientific research projects.

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Environmental Careers

- Trained people in environmental professions, at every level from support staff to managers to educators are essential, and those roles will only increase in importance.
- World Wildlife Fund estimates 750,000 new jobs in renewable energy in next 10 yrs
- Other fields_
 - ❖ Environmental law
 - ❖ Environmental engineering
 - ❖ Environmental education

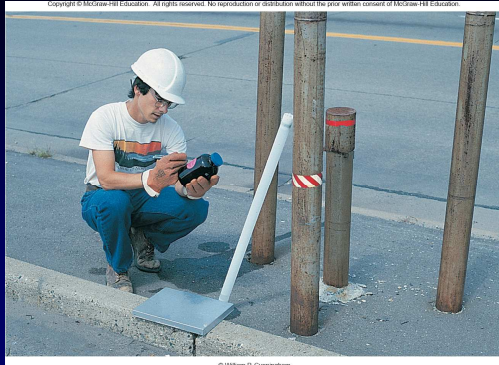
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Green Business

- Can resource conservation and environmental awareness be an advantage in business?
 - ❖ Most large companies have an environmental department.
 - ❖ Companies are beginning to design with pollution control and waste disposal in mind.
 - ❖ Huge market for pollution control technology

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Environmental Technician Taking Samples



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We Can Reduce Our Environmental Impacts

- Even small steps can have significant environmental effects:
 - ✦ Switching from a diet high in red meat to a vegetarian one can save as much energy as trading in a normal car for a hybrid.
 - It takes only about 2 calories of fossil fuel to grow most produce.
 - The ratio is as high as 80 to 1 for cattle grown in confined feeding operations.

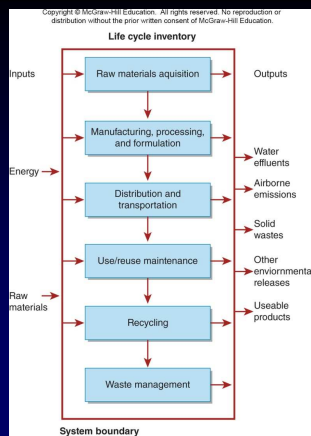
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“Green Washing” Can Confuse Consumers

- Many terms used in advertising are vague and have little meaning:
 - ❖ Nontoxic, biodegradable, recyclable, natural, organic, environmentally friendly
- Several national programs scientifically analyze the environmental impacts of products.
 - ❖ Blue Angel label in Germany
 - ❖ Green Seal program in the U.S.
 - ❖ The most comprehensive product analysis is called the **life cycle analysis**, as it follows a product through its manufacture, use, and disposal.

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Life Cycle Analysis of Products



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Limits of Green Consumerism

- Often, consumers are faced with complicated choices.
 - ❖ Paper or plastic grocery bags?
 - Both have good and bad points, and represent trade-offs in energy use, pollution production, ability to recycle, etc.
 - If you have both paper and plastic recycling, plastic is probably better because it is easier to recycle and produces less pollution.
 - ❖ A better choice is to take your own reusable cloth bag.

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Limits of Green Consumerism (cont.)

- Focus on doing your best to recycle, buy green products, and be involved.
- Green consumerism generally can do little about larger issues of global equality, chronic poverty, and oppression in the Third World.
 - ❖ There is a danger that an exclusive focus on our own small steps, such as recycling, may divert attention from greater environmental issues.

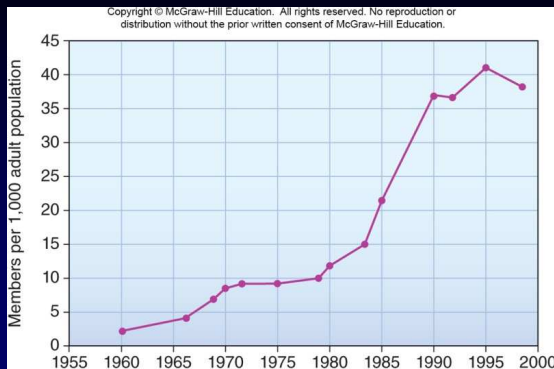
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How Can We Work Together?

- Collective action can magnify the power of individuals. For this reason, many people join environmental or social action groups.
- National Environmental Groups Include:
 - ❖ National Wildlife Federation
 - ❖ World Wildlife Fund
 - ❖ The Audubon Society
 - ❖ The Sierra Club
 - ❖ Ducks Unlimited
 - ❖ Natural Resources Defense Council
 - ❖ The Wilderness Society

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Growth of Environmental Organizations



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Environmental Groups

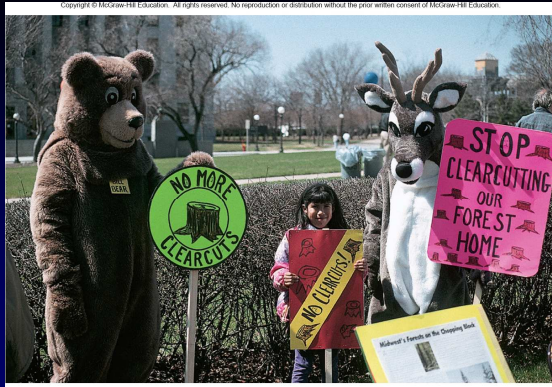
- Mass membership, large professional staffs, and long history provide large, national groups a degree of respectability and influence not found in newer, smaller groups
 - ❖ Mainline environmental organizations are often criticized by radical environmentalists for their tendency to compromise and cooperate with the establishment.
 - ❖ These groups have local chapters, a good way for you to become involved.

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Environmental Groups (cont.)

- Some groups have limited contact with members and focus instead on land acquisition, litigation, and lobbying.
 - ❖ Environmental Defense Fund
 - ❖ Nature Conservancy
 - ❖ National Resources Defense Council
 - ❖ Wilderness Society

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Non-governmental Organizations (NGOs)

- Rapid rise in international NGOs
 - ❖ Rio Summit in 1992 had 30,000 representatives of environmental groups attending.
 - ❖ Carry out public education and consciousness-raising using protest marches and civil disobedience
 - ❖ Conservation International does debt-for-nature swaps

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Campus Greening

- Student Environmental Action Coalition (SEAC) is largest group with some 5000 chapters.
 - ❖ Is there a chapter on your campus?
- Another important student organizing group is the network of Public Interest Research Groups.
- You can learn to organize, use social media to get your message out.

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Schools Can Be Environmental Leaders

- Schools can do campus audits to study water and energy use, waste disposal, recycling, paper consumption, etc.
- New buildings should meet U.S. Green Building Council standards. It does not cost any more to build in an environmentally friendly way.
 - ❖ At Carnegie Mellon in Pittsburgh, a kiosk in the dorm shows daily energy use and there are green dorms with natural lighting, clean air, and few allergens.

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Colleges Showing Environmental Leadership

- Dartmouth, Harvard, Stanford, and Williams rank at the top for green policies.
- Berea College in Kentucky got special commendation.
 - ❖ Berea's ecovillage has a student designed house that produces its own electricity and treats waste water in a living system.
 - ❖ College has a full time sustainability coordinator

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Your Campus Can Reduce Energy Usage

- Your campus can reduce energy use by
 - ❖ purchasing fuel efficient vehicles.
 - ❖ using green building standards.
 - ❖ purchasing energy from renewable sources.
 - ❖ buying locally produced foods.

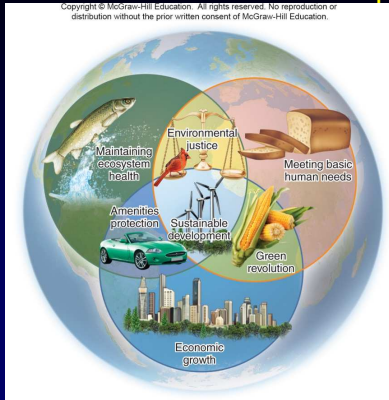
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Sustainability is a Global Challenge

- Sustainable Development uses renewable resources in harmony with ecological systems
 - ❖ Developing countries need access to more-efficient, less-polluting technologies
 - Technology transfer and financial aid
 - Poverty is at the core of many problems.
 - ❖ The \$350 billion/yr needed to address sustainability issues is small compared to the \$1 trillion/yr spent on wars and military.
 - ❖ Need to find compromise between no-growth and unlimited growth.

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A Model For Sustainable Development



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