

Introduction to the Environmental Science



Env107

Lecture 1: Intro. to Environmental Science

- Course Overview
 - Intro to me
 - Course Goals
 - Course Policies
 - How to succeed in this class
- The Basics of Environmental Science
- Outcomes Assessment

Course Goals

- Gain knowledge of major environmental issues
- Understand how science is used to address problems
- Think critically about issues and potential solutions
- Become informed voters, neighbors, consumers

Course Policies & Syllabus

Course Materials

- Textbook:
 - Environmental Science: Earth as a living planet (8th ed.) by Daniel B. Botkin & Edward A. Keller, John Wiley & Sons
- Required Supplies:
 - notebook

How to do well in this course

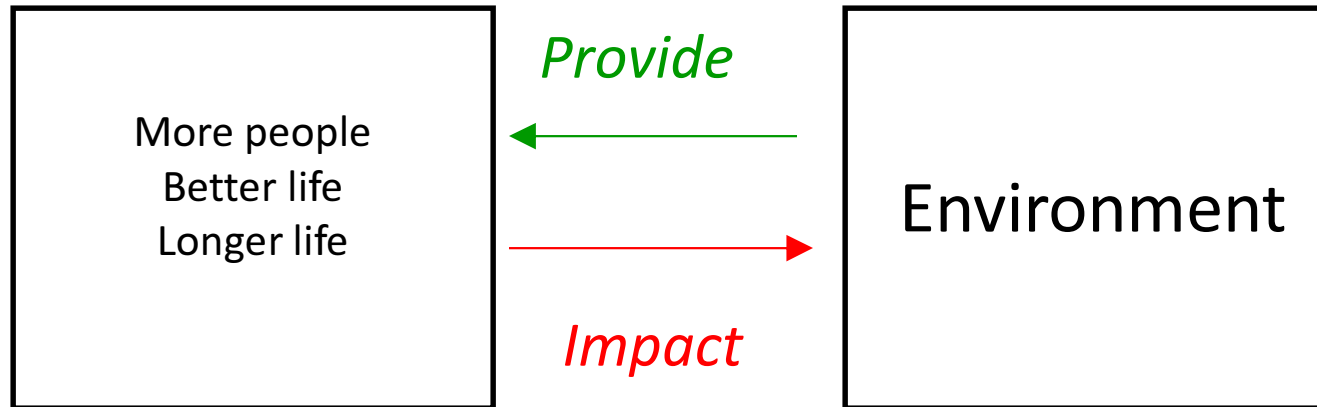
- **Come to every lecture**
 - Exam questions may highlight class discussions
- Pay attention and take detailed notes
 - Translate ideas, don't just copy them
- Ask questions
 - If you're confused, you're probably not the only one
 - Take notes on questions asked
- Seek assistance when needed
 - Office hours

Course Goals

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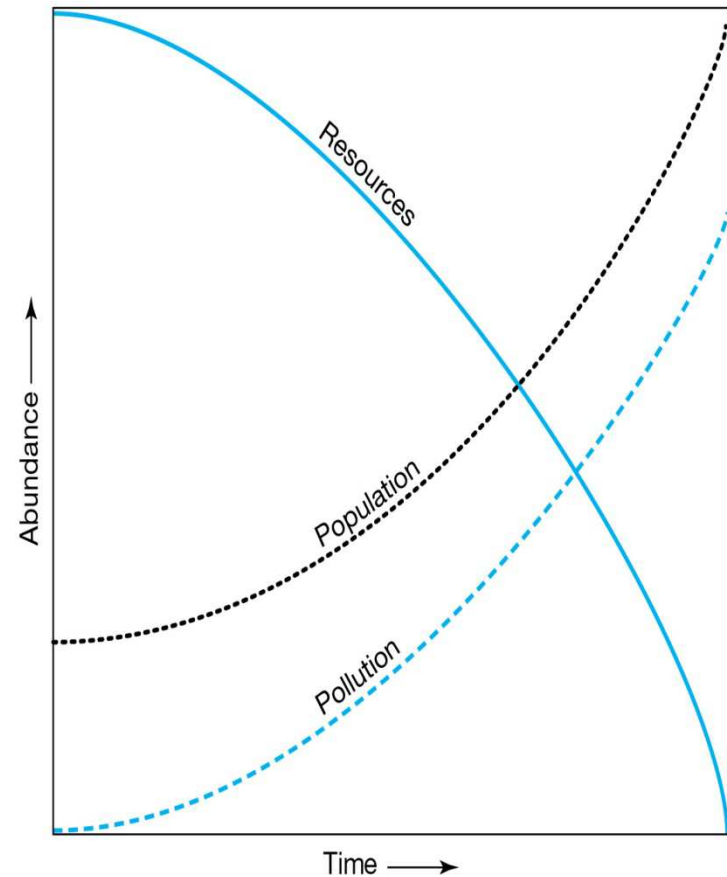
Why Care About the Environment?

Environment: All external conditions and factors, living and nonliving, that affect an organism or other specific system.



Why Study the Environment?

- Rapid human and economic growth
- Consumption of resources
- Resulting depletion: pollution and destruction



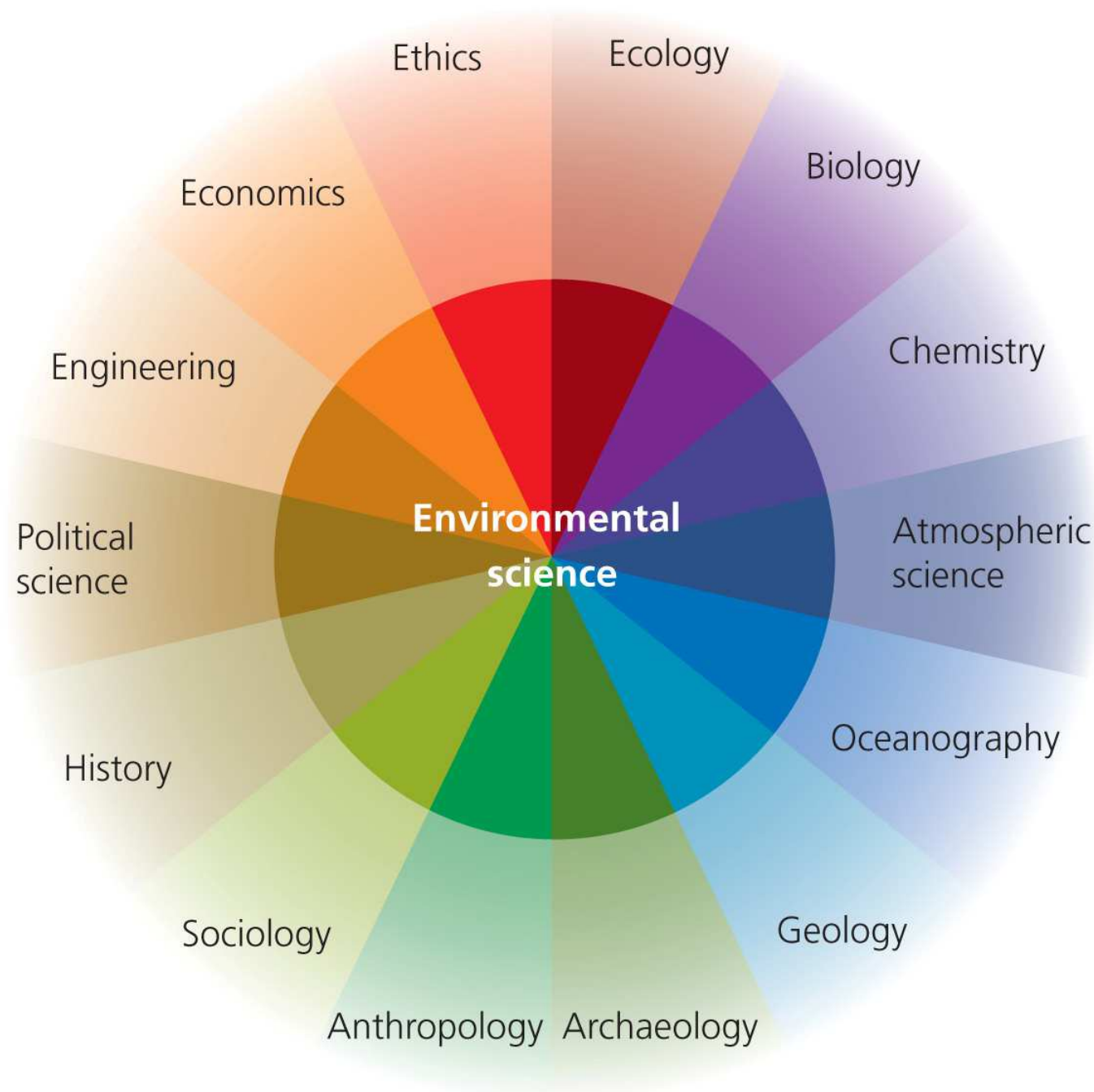
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Environmental Science

- Scientific study of Earth's life supporting systems and the relationships between Humans and the environment
- Interdisciplinary science

Environment: everything that affects a living organism

Ecology: biological science that studies the relation between living organisms and their environment

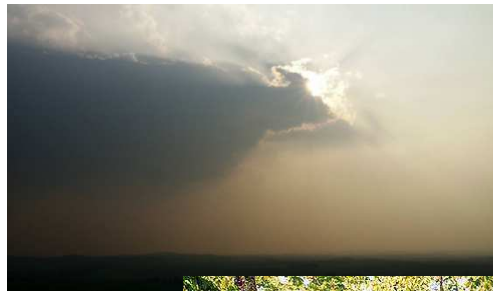


What is an environmentally sustainable society?

“An environmentally sustainable society meets the **basic resource needs** of its people indefinitely **without degrading or depleting the natural capital** that supplies these resources.”

Basic Resource Needs?

- Food
- Clean water
- Clean air
- Shelter



Without degrading or depleting

- **Food**



- **pesticides, soil degradation**

- **Water**



- **Sewage treatment, toxic runoff**

- **Air**



- **ozone, greenhouse gases (global warming)**

- **Shelter**

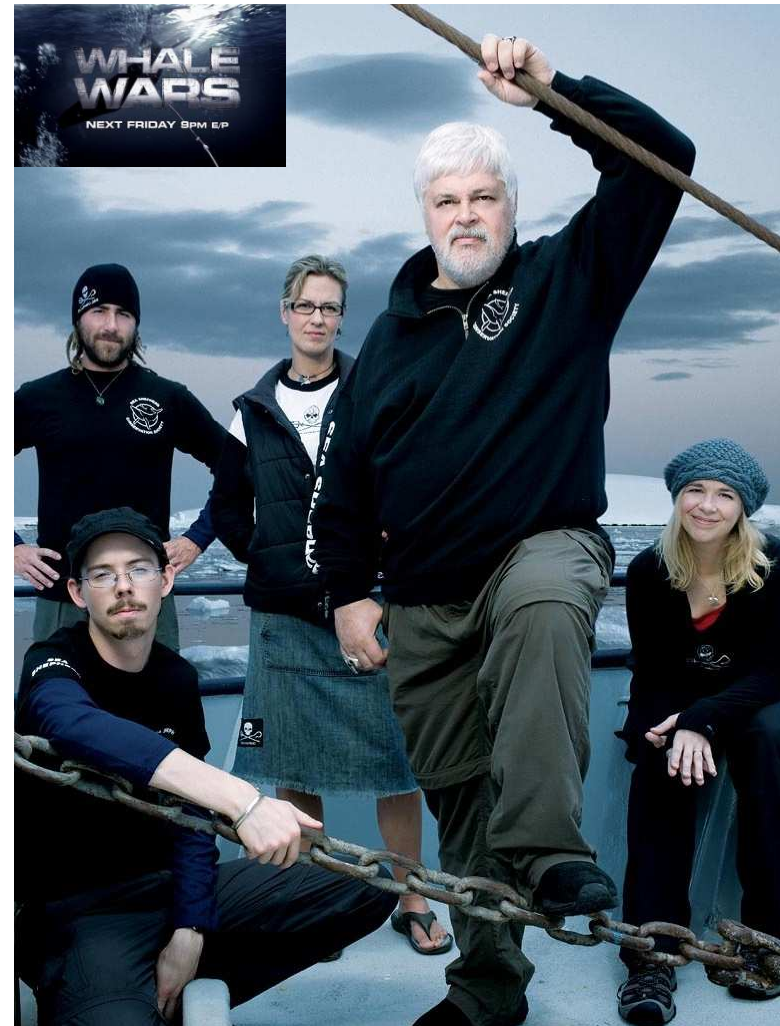


- **deforestation, flooding, erosion**

Environmental Science vs. Environmental Activist



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Science as Process

- Science is a process of discovery
 - Scientific ideas change
 - Sometimes a science undergoes a fundamental revolution of ideas

Science as Process

- Scientific Method:

Actually a *set of methods* which are the systematic methods by which scientists investigate natural phenomena

Scientific method

