

College Guild
PO Box 6448, Brunswick ME 04011

ENVIRONMENTAL ISSUES

UNIT 1 OF 5

Introduction and History

Welcome to the College Guild course, Environmental Issues. We will be discussing living and non-living things that occur naturally on Earth, their interactions, and how humans are transforming the natural environment

Guidelines for all College Guild courses:

1. **Answer all the questions that are in bold print.** After we review your completed Unit, we will send you feedback from your reader along with your original work and the next Unit. You don't need to return the questions -it saves us both postage.
2. There is no specific deadline to complete any Unit, but we would get concerned if we hadn't heard back from you after 2 months.
3. Remember how often the mail service loses things. **If you don't hear back from us after a month, please write to make sure we received your Unit.**
4. Let us know if you need a dictionary, free to students who complete the first unit.

Since this is a course about environmental issues, perhaps we should start by deciding what we mean by the "environment". Here is one definition:

The air, water, minerals, organisms, and all other external factors surrounding and affecting a given organism at any time.

Given this definition, we might be tempted to ask, "Is there anything that *isn't* part of the environment?" So, let's narrow it down a bit:

The **natural environment** encompasses all living and non-living things occurring naturally on Earth. It encompasses the interaction of all living species, as well as climate, weather, and natural resources. In contrast to the natural environment is the **built environment**. In such areas where humans have fundamentally transformed landscapes such as urban (city) settings and agricultural land conversion, the natural environment is greatly modified and diminished.

That's still pretty broad, but it's a big subject and we don't want to leave anything important out, so let's go with it.

1. **What do you think of when you hear the word "environment"?**
2. **Are human beings part of the environment or are we separate in some way? Explain your answer.**
3. **What responsibility, if any, do we have for protecting the environment?**

Our primary concern here is with the impact of human activities – the built environment – on the natural environment, as well as with efforts to combat the negative effects on these activities. The first of these impacts occurred over 11,000 years ago when people began the transition from feeding themselves by hunting wild animals and gathering wild plants to planting crops and raising domesticated animals. At first, the impact of this change wasn't very great – clearing small plots of land of their natural vegetation for use in growing a few crops from seed. Over the millennia, however, agriculture has fundamentally changed vast portions of the Earth's surface with both good and bad results. We will deal with this in greater depth in Unit 4 of this course.

The second major impact of human activities happened much more recently and much more quickly than the first. This was the Industrial Revolution from around 1760 to the mid-19th Century. Again, the results were both positive, in the form of higher standards of living for many, and negative – air and water pollution, among other things. Another way in which this revolution differed from the first one is that this time, there were organized efforts to combat the negative effects. As a result of these efforts, laws were passed in Great Britain and elsewhere to minimize the air pollution caused by burning coal.

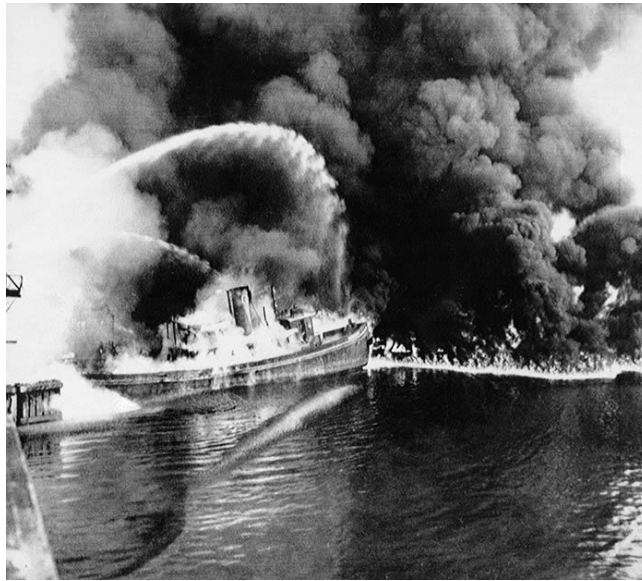
The mid-19th Century also saw the rise of the Conservation movement, first in India, which at the time was a British colony, and then in other countries. The driving force here was the perception that urbanization and increased use of land for agriculture were destroying wildlife habitat, with harmful effects on future generations. In the United States, one of this movement's most prominent supporters was President Theodore Roosevelt, who set aside millions of acres of Federal land for national parks and monuments, national forests, and wildlife refuges. Some conservationists, including Roosevelt, felt that the land should be protected in order to enable sustainable development in areas such as logging and mining. Another conservationist was John Muir, who took a harder line than Roosevelt, arguing that large pieces of land should be kept permanently off limits from resource extraction. Muir was one of the founders of the Sierra Club, which continues to advocate for strong environmental protection policies today.

- 4. Do you agree more with Theodore Roosevelt that relatively unspoiled land should be open to human economic activities such as logging and mining, but under close regulation, or with John Muir, who argued for preserving large amounts of land as primitive wilderness, allowing no human intervention beyond hiking or fishing? Write a letter to the man you *disagree* with explaining your position.**



Roosevelt (on the left) and Muir at Yosemite National Park in California, 1903

The next upsurge in environmental consciousness in the United States occurred in the late 1960's. One source of this renewed interest was the bestselling book, *Silent Spring*, written in 1962 by marine biologist Rachel Carson. Carson was highly critical of the chemical industry for promoting excessive use of pesticides, such as DDT, for agricultural purposes. She showed how wildlife, especially birds, were being harmed by these practices. The American eagle, in fact, was close to extinction. As a result of her book, use of DDT in agriculture was banned in the U.S. and the eagle has since begun to recover as a species. Another event stimulating public interest in environmental protection occurred in 1969, when the Cuyahoga River in Cleveland, Ohio caught on fire. This was not the first time the river, badly polluted by years of serving as a dumping ground for industrial waste, had caught on fire, nor was it the most serious, but it caught the public's attention nationwide.



The Cuyahoga River in flames, 1969

The federal government responded to this new public awareness in various ways, including the establishment of the Environmental Protection Agency (EPA) and passage of several laws by Congress, such as the Clean Air Act, Clean Water Act, Endangered Species Act, Toxic Substances Control Act, and Pesticide Act among others. The scale of the problem, however, became more apparent in the mid 1970's when the residents of the Love Canal neighborhood in Niagara Falls, New York reported higher than average levels of serious health problems including miscarriages, birth defects, nervous disorders and cancer. The culprit was toxic waste improperly stored over several years by a nearby chemical company.



A young resident of the Love Canal neighborhood, circa 1977

The Administrator of the Environmental Protection Agency at the time estimated that there were several hundred such sites around the country where similar problems could occur. As a result, legislation was passed requiring the EPA to locate these sites and take appropriate steps to clean them. These places are known as Superfund sites. As of February 2014, 1,322 locations have been identified as Superfund sites, with another 53 under consideration.

5. One argument frequently made by those who oppose strong environmental regulations is that they make it more expensive for companies to do business, resulting in higher costs to the consumer and/or laying off employees. What are the strengths and weaknesses of this argument?

The environmental movement in the early years of the 21st Century encompasses the issues and concerns of these earlier movements, but with a broader and more integrated perspective. There is growing recognition that environmental problems in one part of the world may be caused, at least in part, by human activities in one or more other parts of the world. There is also greater understanding of the relationship between environmental problems and other issues such as poverty, international business practices, and consumerism. Finally, there is a new concern - climate change - which was only viewed by a few scientists as a theoretical possibility during the 1970's, but which is now recognized as a serious threat requiring immediate action to combat it.

6. As you can see from this very brief overview, public interest in and concern for the environment comes and goes - high in the early 1900's, the 1970's, and to an increasing extent today, but low in the intervening years. Why do you think interest in this area rises and falls?

7. What would it take to keep the public involved in these issues?

It has been suggested that urbanization – the migration of people from the countryside to the city – has resulted in less interest in and concern for the natural world. In 1790, only about five percent of Americans lived in urban areas, but by 1870 this figure was 25 percent. By 1920, city dwellers had become a majority, and today approximately 80 percent of Americans live in either a city or a suburb. As a result, few people have daily contact with wild plants or animals, and children grow up believing that food originates in the grocery store. A new term, “nature deficit disorder”, has been coined to describe this phenomenon. Although this concept is not officially recognized as a psychological condition, it has been proposed as a possible source for such things as childhood obesity and behavioral problems, as well as general ignorance of the need for environmental protection.

8. How much exposure to the natural world did you have growing up?

9. How would children today benefit from more exposure to nature?

10. If not, what are three things that might be done about this and by whom?

The lifestyles of indigenous people may provide useful insights into this problem. The following definition comes from Wikipedia, the online encyclopedia:

A defining characteristic for an indigenous group is that it has preserved traditional ways of living, such as present or historical reliance upon subsistence-based production (based on pastoral, horticultural and/or hunting and gathering techniques), and a predominantly non-urbanized society. Not all indigenous groups share these characteristics. Indigenous societies may be either settled in a given locale/region or exhibit a nomadic lifestyle across a large territory, but are generally historically associated with a specific territory on which they depend. Indigenous societies are found in every inhabited climate zone and continent of the world.

While it would be wildly unrealistic to suggest that we all return to an indigenous way of life, there are elements of these cultures that are worth considering. Each of these cultures is unique in many ways, but in general they share some common beliefs. They believe that:

- Everything is related and interrelated, and these relationships constitute reality as an integral whole, including ourselves, the natural world, and the divine;
- The “common good” includes and extends to future generations;
- If we truly understand and feel these first two truths, it will deeply affect our choices and determine our behavior;
- We have lost what it means to be “human” in relationship with the natural world and must reconnect with the land to rekindle those relationships;
- Because everything is related, there is reciprocal responsibility to all aspects of creation; and
- Everything in creation has intrinsic value in and of itself, regardless of whatever instrumental value, i.e. its usefulness to others, it may or may not have.

11. Pick one of these beliefs and put it into your own words. Do you agree?

12. Do you think modern societies would benefit if these beliefs were more widely held? Explain your answer.

13. Do you agree that everything in creation has intrinsic value in and of itself, regardless of its usefulness to others? Explain.

14. What is the value to humans of a blade of grass, a worm, and a fungus?

15. Here is a list of various species: worm, bee, camel, blade of grass, butterfly, cat, algae, snake, apple tree, fish, green bean, bear. Pick any three and write a children’s story about how they interact.

Unit 2 of this course will discuss climate change, also called global warming, perhaps the most serious challenge facing the world today. Unit 3 describes the multiple threats to the health of the oceans, which comprise about 70 percent of the planet’s surface. Land use and biodiversity are covered in Unit 4 while Unit 5 concerns fresh water and energy issues.

Remember: First names only & please let us know if your address changes

The list of beliefs shared by many indigenous cultures is taken from “Indigenous Wisdom and Pope Francis’ Encyclical Letter” by Chris Daniels, in For Our Common Home: Process Relational Responses to Laudato Si’ edited by John B. Cobb, Jr. and Ignacio Castuera, Process Century Press, Anoka, Minnesota, 2015.