

Ecological Footprint



Objective

The goal of this activity is to examine economic and consumption patterns for the rich and poor. You will explore issues of lifestyle, consumption and affluence as they intersect with sustainability.

Ecological and social issues have historically been considered distinct, consigned to separate government agencies; however, these problems are interconnected and mutually reinforcing. We cannot protect our environment without addressing the underlying issues that are causing ecological degradation. Furthermore, poverty and environmental impact are deeply rooted in

today's economic systems. Thus, we need to consider ecology, economics and sociology to create a human society that is both socially and ecologically sustainable and resilient.

Before coming to class

Read [United Nations' Human Development Report - Chapter 2, The advance of people, 2010](#) to think about consumption patterns on a broad scale and changing worldwide standards of living. This and similar articles provide background for a productive discussion on ways to move toward a more sustainable and equitable society. Then familiarize yourself with the concepts of the ecological footprint by reading [The Sustainable Scale website](#).

(extra: [Rich Planet, Poor Planet - Chapter 1, 2001 p. 3-20](#) from WorldWatch Institute)

We will examine the impact of our own living habits by calculating your ecological footprint using the [Ecological Footprint Calculator](#). To be ecologically sustainable, each person on the planet should consume no more than 15.7 hectares of land for their total ecological footprint.

We will then use the class footprint to talk about ways to decrease our consumption patterns and to think about solutions to decrease the gap between rich and poor.

To access the [Ecological Footprint Calculator](#) use the following login information:

E-mail: resilience.earth@gmail.com

Password: xxxxxx

Calculate your individual ecological footprint using the online [Ecological Footprint Calculator](#). Selecting metric as your measurement system gives your results in global hectares; however, if you're not used to thinking in the metric system you may need to convert many of the units in the questions. Conversely you can select U.S. units and convert your answer to fit the table below (1 hectare = 100 meters by 100 meters). Worldwide there exist 15.7 hectares per person. If people consume more than the equivalent of 15.7 hectares/person we would need a bigger planet to support the population.

Copy Table 1 and use the calculations from each of the three scenarios (Questions 1-3) to complete it:

Footprint for:	Scenario 1 Your Normal Consumption (hectares)	Scenario 2 Your Decreased	Scenario 3 Hypothetical Consumption of Someone in the
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		Consumption (hectares)	Developing World (hectares)
Carbon			
Food			
Housing			
Goods/Services			
Total Footprint			
Number of Planets Used			

Table 1 Results of Ecological Footprint Scenarios



Question 1

Fill your numbers into the table for Scenario 1. Do you find your consumption level surprising? How do you feel about it?

Now redo your ecological footprint and determine what things you could easily change in your consumption patterns to reduce your ecological footprint. Clicking the 'Reduce your footprint' button will take you to a page with suggestions on ways to do this which may help you imagine Scenario 2. Once you have made some changes to your consumption patterns, write down your footprint for the amount of hectares that you consume for this scenario.



Question 2

Fill your numbers into the table for Scenario 2. What did you change to decrease your footprint? Do you think that making these changes is realistic for you? Why or why not?

Lastly, calculate the ecological footprint of a hypothetical person of your age and gender living in a developing country. Write down the ecological footprint for the amount of hectares that this hypothetical person consumes for:



Question 3

Fill your numbers into the table for Scenario 3. What country did you choose? How different is this person's consumption patterns to yours? Why do you think that the same behaviors in the developing country result in a lower ecological footprint?



Question 4

Use the "Country Trends" calculator on [Footprint Network Website](#) to explore and compare the ecological footprint and biocapacity of different nations around the world. Choose a developed and developing nation for analysis and explain the differences you see. How does the developed nation information compare with your responses to Questions 2 & 3? What is biocapacity?

Assignment due next week

Submit only your completed Table and responses to Questions 1-4 above.

Group Discussion Questions

The whole class or in small groups discuss some of the following questions:

Question 1

How do your consumption patterns translate to pressures on the environment? Draw a conceptual systems thinking diagram to illustrate how your consumption patterns are connected to ecological, social and economic factors.

Question 2

What do you consider to be the most pressing issue related to economic, social, and ecological sustainability? What steps could be implemented to improve in this area?

Question 3

How is population growth and poverty connected to ecological degradation and biodiversity loss?

Question 4

What are some methods that could be employed to empower poor people and reduce poverty?

Question 5

What is your stance on economic globalization? What are the pros and cons of globalization and market liberalization for people and the environment?

Question 6

What social conditions are necessary for changes toward sustainability to be made in the economic and environmental spheres? Give some examples of industries where progress towards sustainability has been made.

Question 7

What strategies can be implemented to bridge the social and economic gap between the largely developed North and developing Southern nations to create a more sustainable economy and healthy future for humanity and the planet?

Sources

Rees, William E, and Mathis Wackernagel. *Our Ecological Footprint: Reducing Human Impact on the Earth*. Philadelphia: New Society Publishers, 1996.

Venetoulis, J., D. Chazan, and C. Gaudet. 2004. *The Ecological Footprint of Nations*. Redefining Progress, Oakland, CA.