



# CALCULATING ECOLOGICAL FOOTPRINTS

SUSTAINABILITY & CONSERVATION IN THE AMAZON - RESOURCE GUIDES

## TEACHER NOTES OPENERS:

How much land is required to produce the resources that we rely on in our daily lives?

Is this a sustainable level of consumption of Earth's resources?

Students calculate their own "ecological footprint" and consider ways in which this impact is affected by choices with regard to food, water, and energy.

- Photos - Chris Jordan's "Intolerable Beauty: Portraits of American Mass Consumption"
  - [Plastic Bags](#)
  - [Cell Phones](#)
- Video - [How Recycling Works](#)



What is your ecological footprint?

Photo credit: Kelly Keena

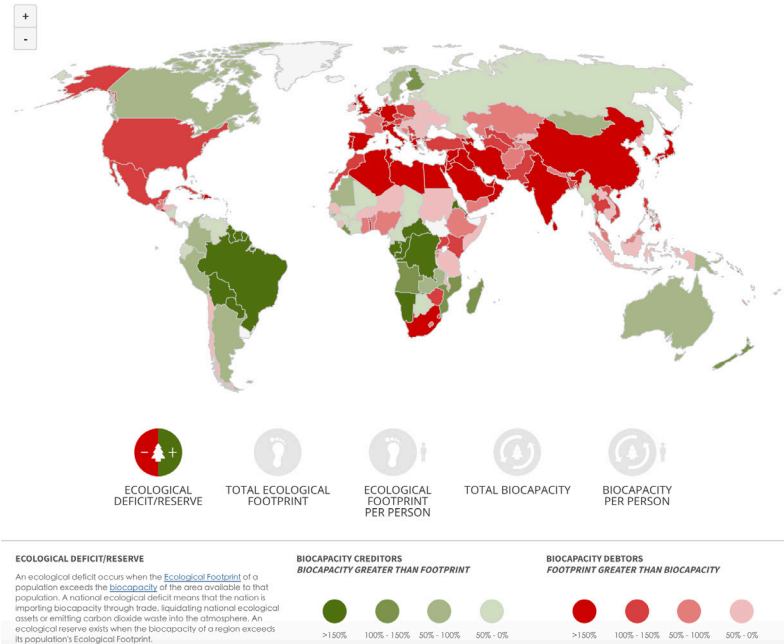
## TRAGEDY OF THE COMMONS – FISHING GAME:

- Play [online](#), or play [using goldfish crackers](#).
- Consider following up with [Elinor Ostrom's 8 Principles for Managing a Commons](#).

## CALCULATE ECOLOGICAL FOOTPRINTS:

An ecological footprint is the area of land required to sustain a population at a specified level of consumption and using current technology. It includes water and energy use, uses of land for agriculture, forests and other resources, and land needed for waste disposal.

## CALCULATING ECOLOGICAL FOOTPRINTS



### FOOTPRINT CALCULATOR:

- [Global Footprint Network](#)

### FOLLOW-UP: HOW CAN WE REDUCE OUR FOOTPRINTS? WHAT CHANGES WILL MAKE OUR LIFESTYLES MORE SUSTAINABLE?

- Student reading: ["So, What Can I Do?"](#) provides ideas about food, water, and energy, by Dr. Jonathan Foley.

### AN ALTERNATE APPROACH IS TO CALCULATE CARBON FOOTPRINTS:

- A carbon footprint represents the sum of carbon emissions attributable to your transportation, diet, housing, and other lifestyle options – focusing on carbon because of its key role in global climate change.
  - Climate Generation's review of [carbon calculator options](#).
  - International [Student Carbon Footprint Challenge](#).
  - NY Times' [carbon budget model](#). This climate simulator lets you explore **more than 8,100 climate scenarios**, based on a model developed by Climate Interactive and the M.I.T. Sloan School of Management.
  - NASA's [carbon offset game](#) for kids
  - A college-level lesson, with downloadable spreadsheet, for calculating the [carbon footprint of a typical American breakfast](#).



## CALCULATING ECOLOGICAL FOOTPRINTS

### A GLOBAL VIEW OF EMISSIONS AND IMPACTS:

- [\*\*\*The Carbon Map\*\*\*](#) – an interactive map that portrays by country various ways of looking at responsibility for carbon emissions and vulnerability to climate change.

### SUGGESTED STUDENT READINGS:

- [\*\*\*Pursuing a Decent Life for All on a Sustainable Planet\*\*\*](#)
- [\*\*\*How can human societies thrive within Earth's physical and biological limits?\*\*\*](#)
- [\*\*\*Responsible Consumption & Production: Why It Matters\*\*\*](#)

### ADDITIONAL TEACHING RESOURCE

- [\*\*\*Teaching with Ecological Footprints\*\*\*](#) from Vanderbilt University

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