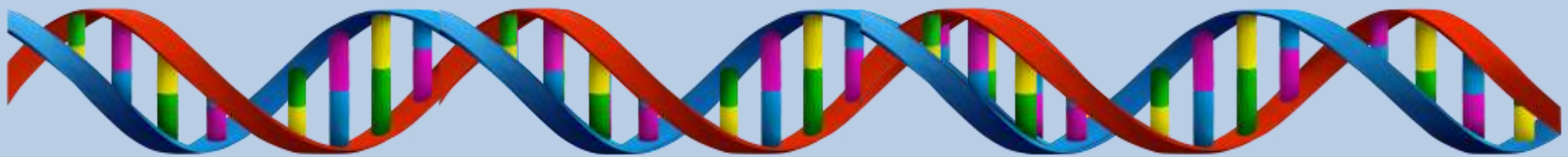


- 1. How have humans increased our carrying capacity?**
- 2. How does the average American ecological footprint compare to the global average footprint?**
- 3. How does your footprint compare to the class average?**
- 4. What are some things that you could do to reduce your footprint/impact?**





All Classes	First	Second	Third	Fourth
4.23	4.26	4.76	3.75	4



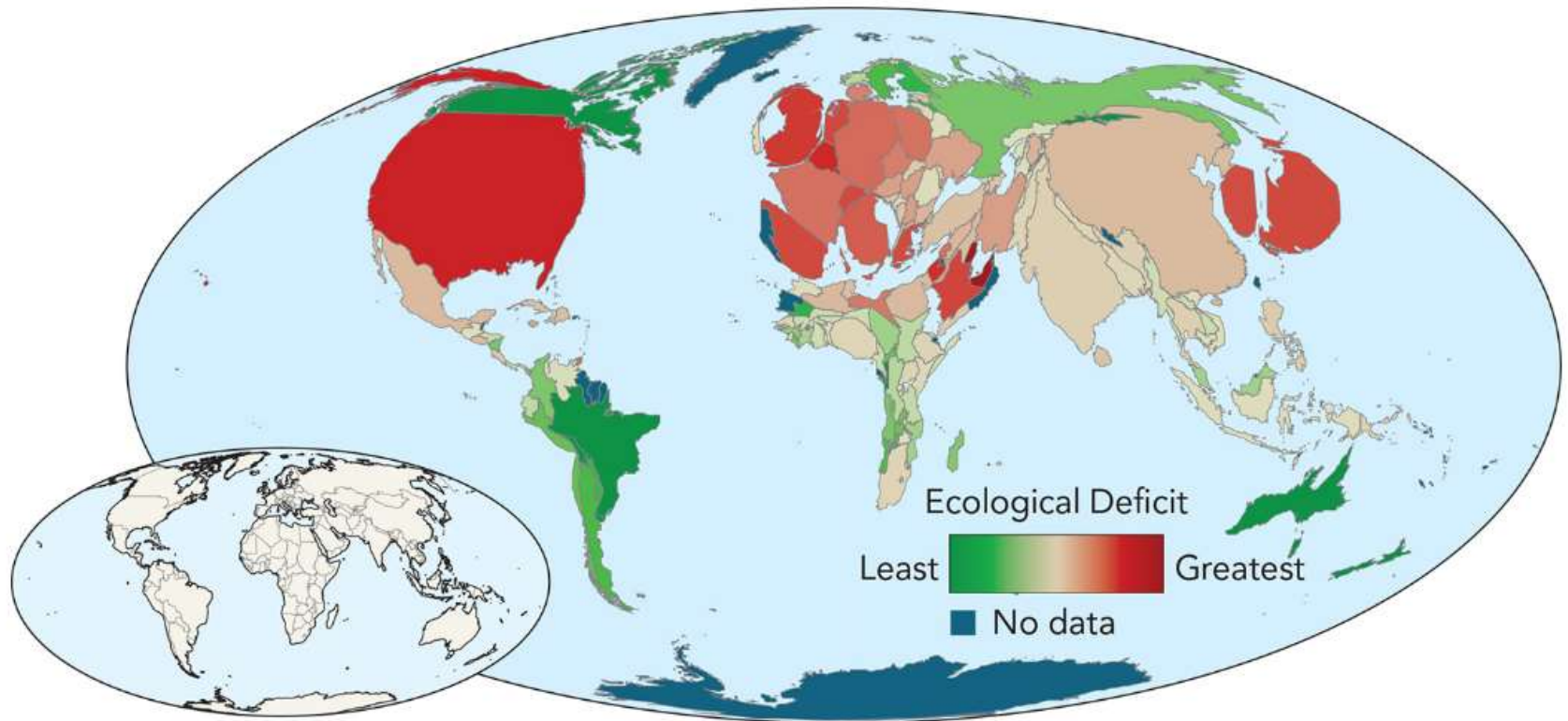
Logistics

- **Unit 3 Assessment**
 - **November 22nd**
 - **So far we have covered objectives 1-3**
 - **By the end of today we will have covered objectives 1-8**

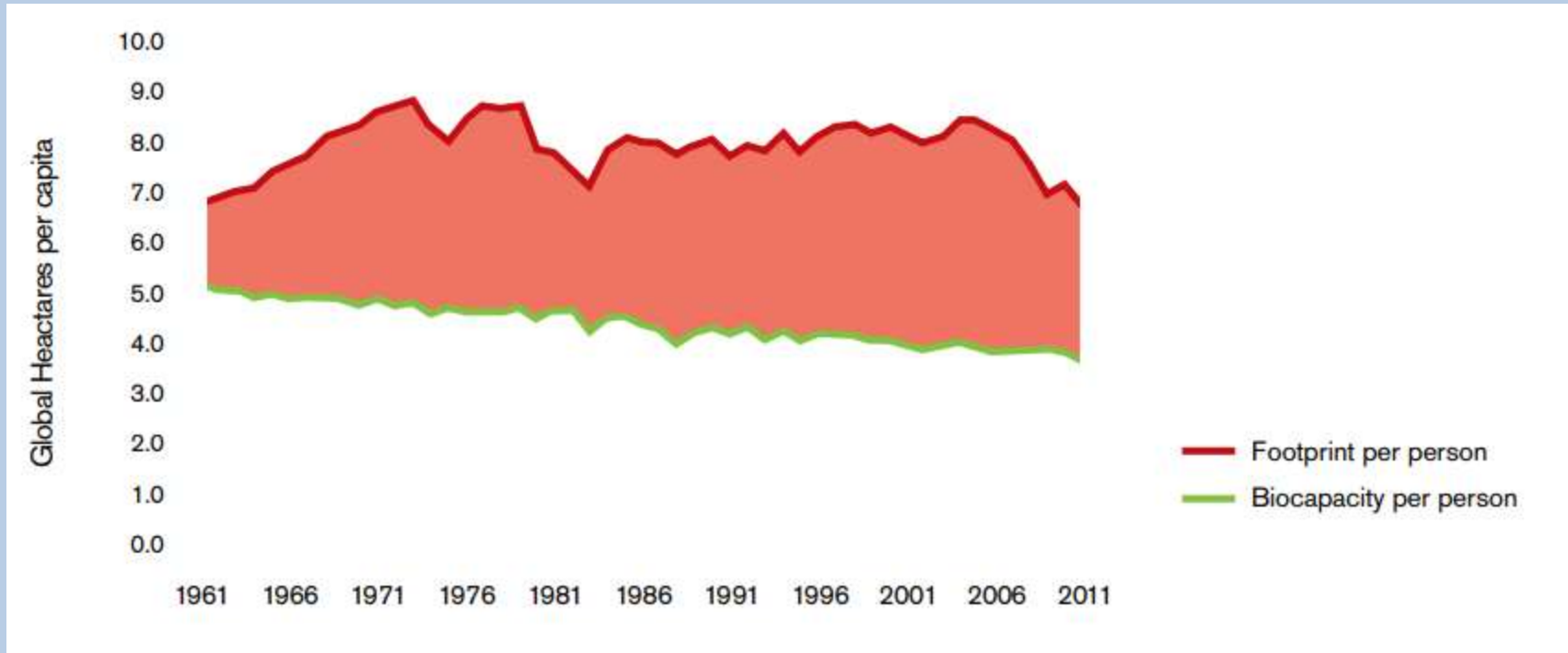
Ecological Footprints

Figure 7-2 National Footprints

The countries in red have ecological footprints that are disproportionately large.

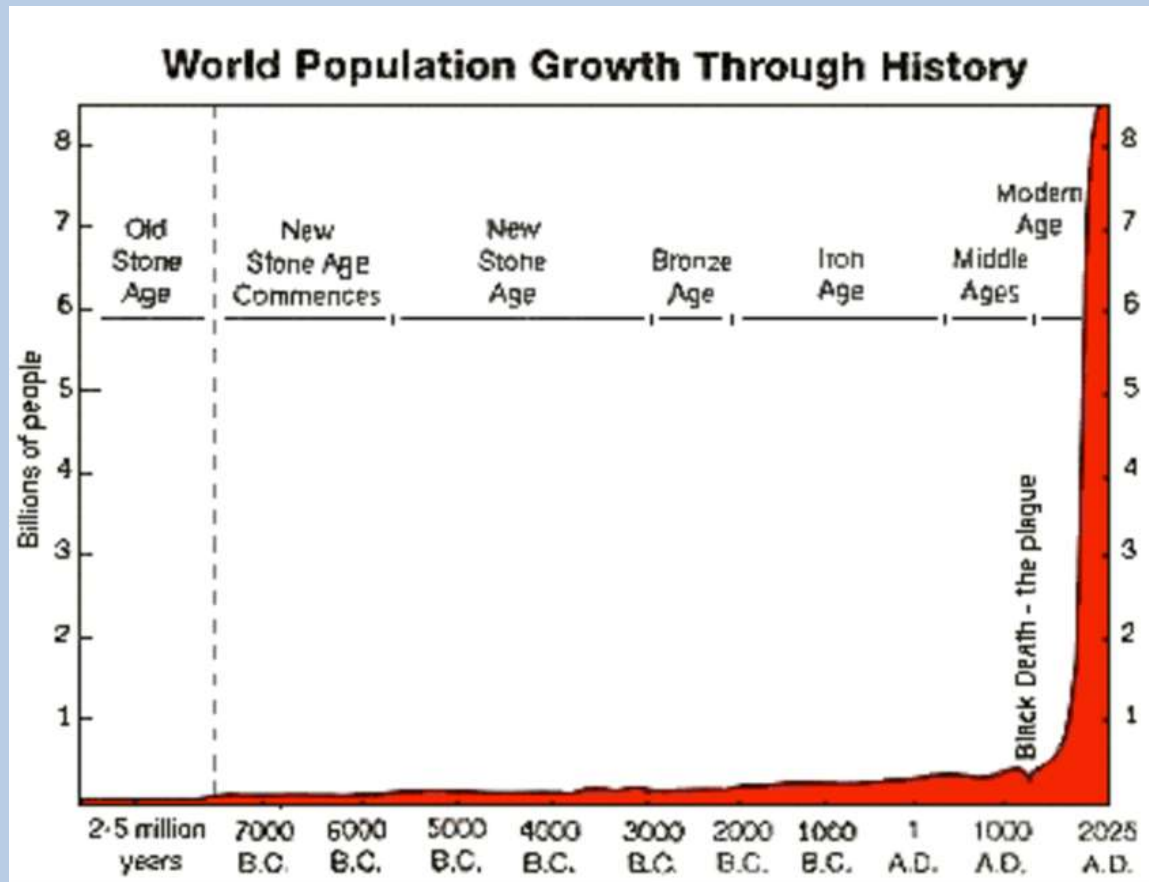


Ecological Footprints



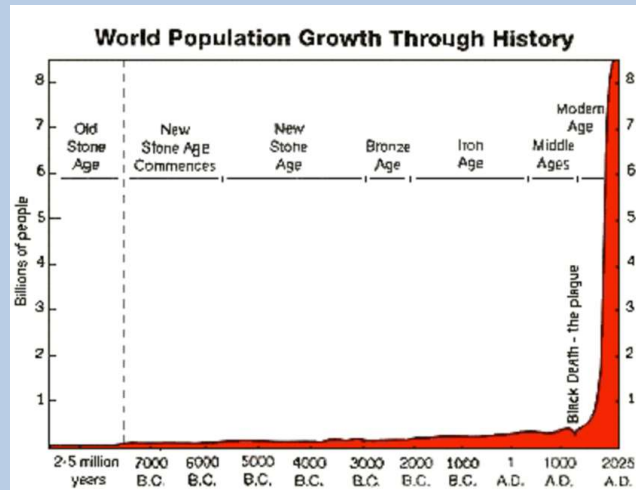
World Population

- Is human population growth *sustainable*?



World Population

- Is human population growth *sustainable*?



- *Sustainable: using natural resources without depleting them or causing environmental harm*

Human Impact

- **Because the human population has grown so large we have an increasing impact on Earth**

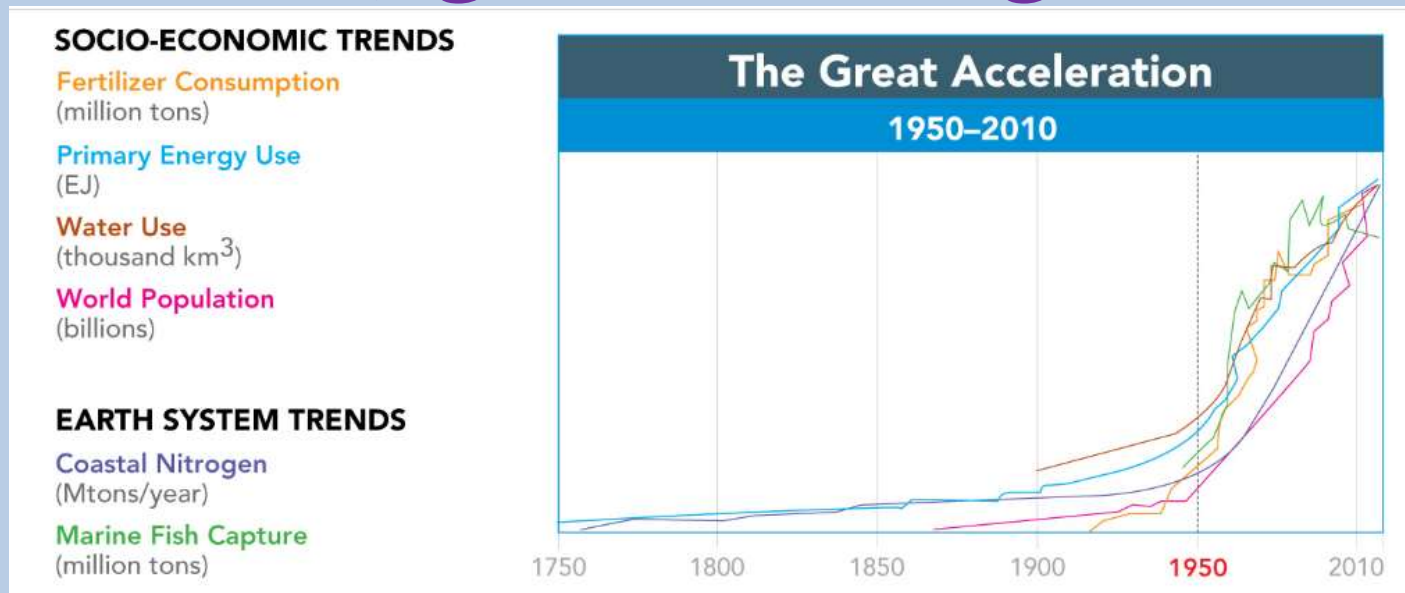


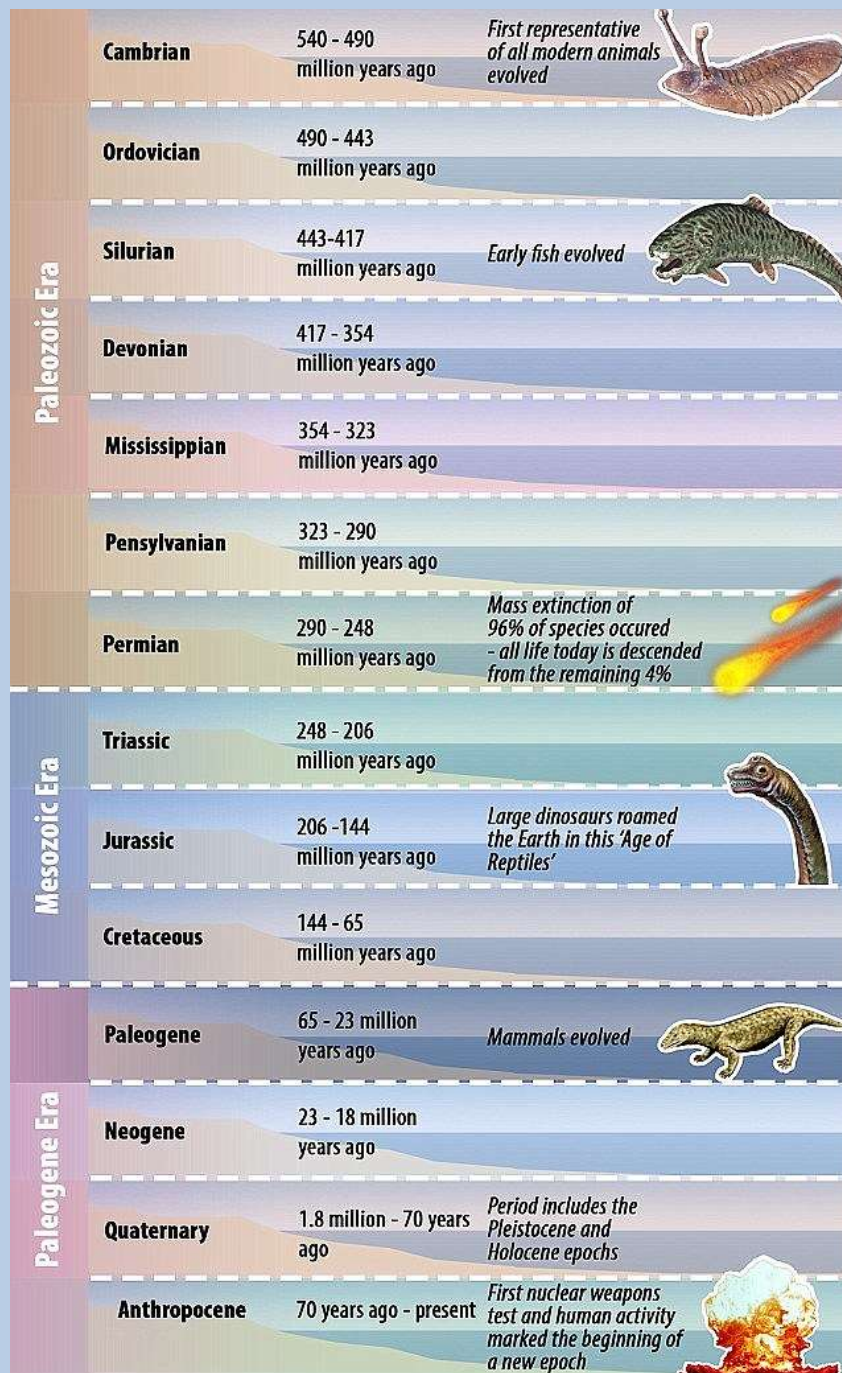
Human Impact

- Humans are having such a large impact on Earth that the modern era is considered the *Anthropocene: the period of Earth during which human activity has become the major cause of global change*

Human Impact

- *Anthropocene: the period of Earth during which human activity has become the major cause of global change*





ERA	PERIOD	EPOCH	BEGAN (Years ago)
Cenozoic	Quaternary	ANTHROPOCENE	??
		Holocene	11,700
		Pleistocene	2.5 M
	Tertiary	Pliocene	5.3 M
		Miocene	23 M
		Oligocene	34 M
		Eocene	56 M
Mesozoic	Cretaceous		146 M
	Jurassic		200 M
	Triassic		251 M
Paleozoic			542 M
Proterozoic			4.5 B

Human Impact

- There are **MANY** ways that humans impact the Earth



Human Impact

- **To understand just a few of these possible impacts (and to give you inspiration on what to focus on for your project) we will be doing a quick activity**

Human Impact

- **Each table group will be assigned a human impact to briefly research, you have 10 minutes to fill in your row of the table, then you will present this information to class**

Human Impact

- **1: Acid rain**
- **2: Ocean acidification**
- **3: Biological magnification**
- **4: Deforestation**
- **5: Monoculture**
- **6: Habitat fragmentation**
- **7: Overharvesting**
- **8: Invasive species**

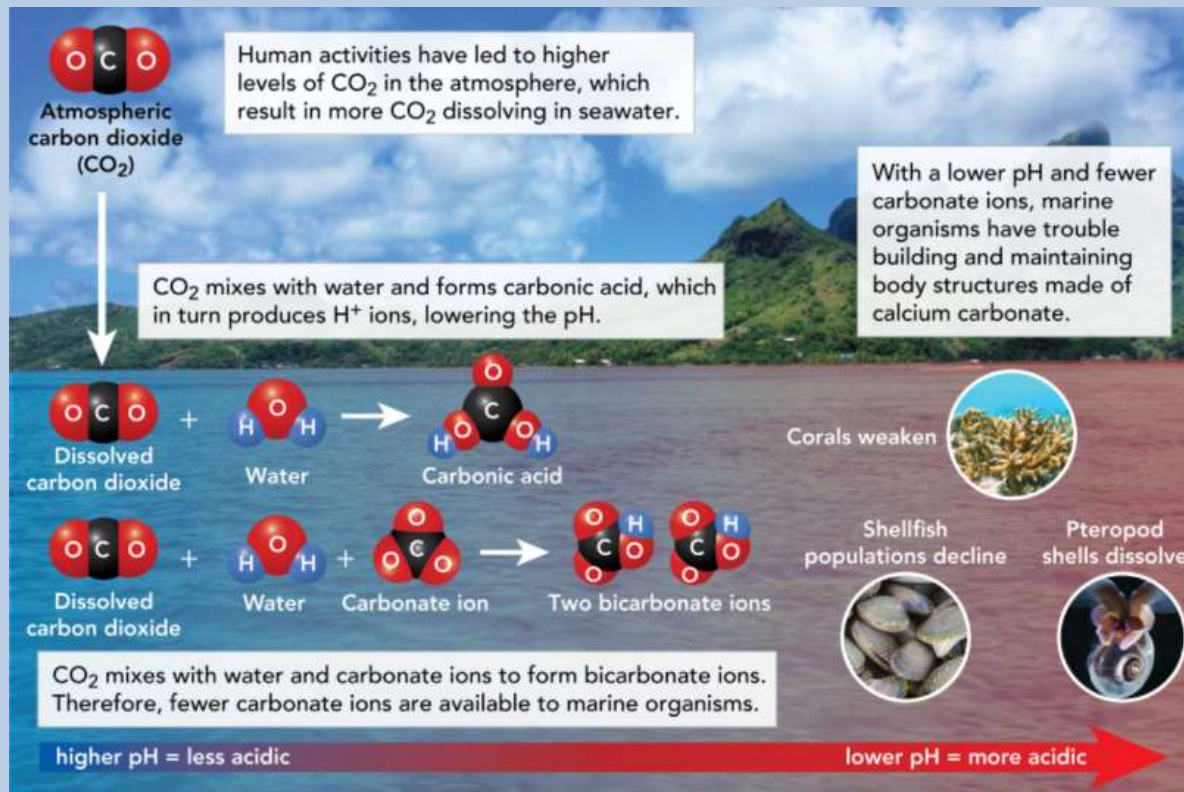
Human Impact

- **1: Acid rain: air pollution combines with water and falls as rain that is acidic and especially damaging to forests and lakes**



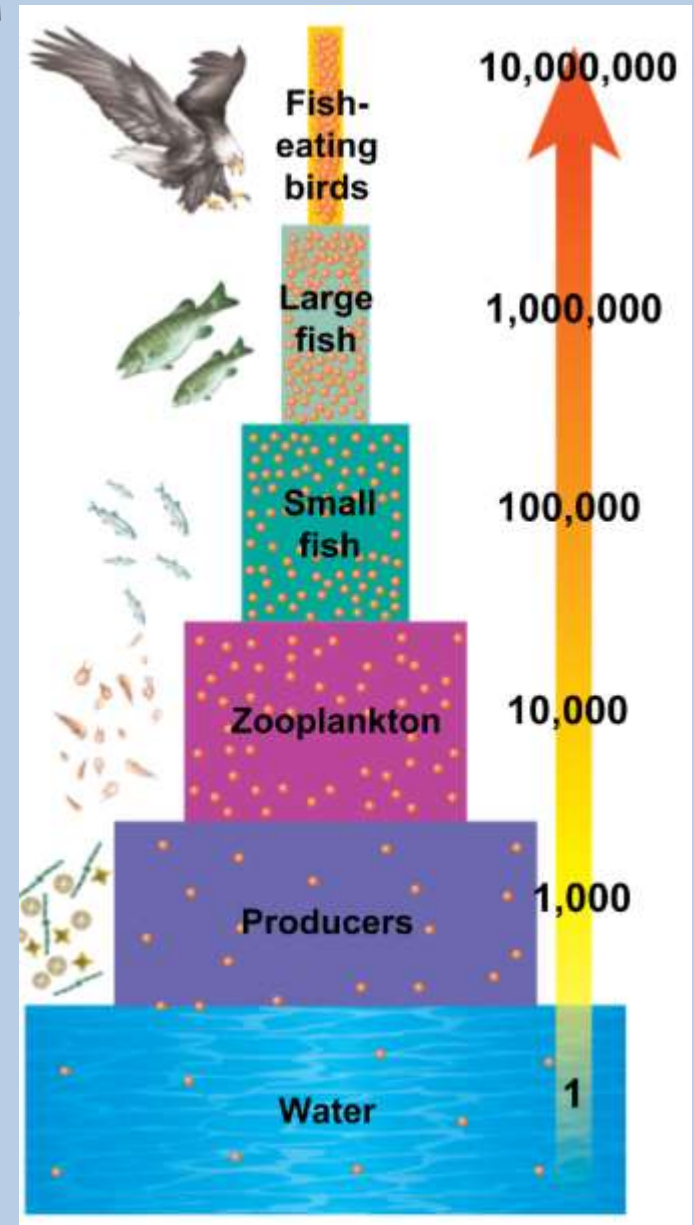
Human Impact

- 2: Ocean acidification: continued decreasing pH due to carbon dioxide absorption from the atmosphere



Human Impact

- **3: Biological magnification: in a food chain the concentration of a pollutant increases as the number of organisms at each trophic level decreases**



Human Impact

- **4: Deforestation: loss of forests that can have negative effects on soil, water, carbon storage, and animals**



Human Impact

- **5: Monoculture: planting large areas with a single, high production crop every year**



Human Impact

- **6: Habitat fragmentation: causes biodiversity loss and makes ecosystems more vulnerable to other disturbances**



Human Impact

- **7: Overharvesting: using a natural resource in an unsustainable way**



Human Impact

- 8: Invasive species: species can be introduced to new places by humans and disrupt the ecosystem

WARNING

These waters contain New Zealand Mudsnaails.
Help protect trout streams by preventing their spread.

BEFORE YOU LEAVE THIS WATERWAY:

- ALWAYS**
 - INSPECT** equipment and
 - REMOVE** attached plants and animals (required)
 - DRAIN** all water from equipment (required)
- BETTER**
 - SCRUB** equipment with a stiff brush, including crevices, and
 - RINSE** equipment with tap water
- BEST**
 - SOAK** in 2% Virkon Aquatic solution (2.7 ounces per gallon) for 20 minutes and
 - RINSE** clean at least 100 feet away from surface waters.

Prevent the spread of invasive species, It's the Law!

For more information scan this code using your mobile device

<http://dnr.wi.gov>

Logos: Wisconsin Department of Natural Resources, Trout, Stop Aquatic, Southwest Badger.

Human Impact

- Why are cows are a huge problem?
- https://www.youtube.com/watch?v=26qzmw_xG58
- <https://www.youtube.com/watch?v=oH79CGm4u7s>

Human Project

- **As you work on your project keep in mind that you are *studying the culture, resources, politics, economy, and conflicts of your country in order to identify the biggest environmental impact of the country***

Human Project

- You have two options for your presentation:
 1. Poster
 2. Slideshow
- It is due on November 26/27th
- You will be presenting in small groups
- Use the rubric

Human Project

1. **Get the Ecological Footprint checked off**
 - **Tape it on page 30**
2. **Tape Human Impacts on page 31**
3. **Begin the human impact project**
 - **YOU SHOULD AT LEAST START RESEARCHING TASK 4 BEFORE LEAVING**