

Name: _____

Date: _____

Class: _____

IB ESS

8.4 Human Carrying Capacity

Significant ideas:

Human carrying capacity is difficult to quantify.

The ecological footprint is a model that makes it possible to determine whether human populations are living with carrying capacity.

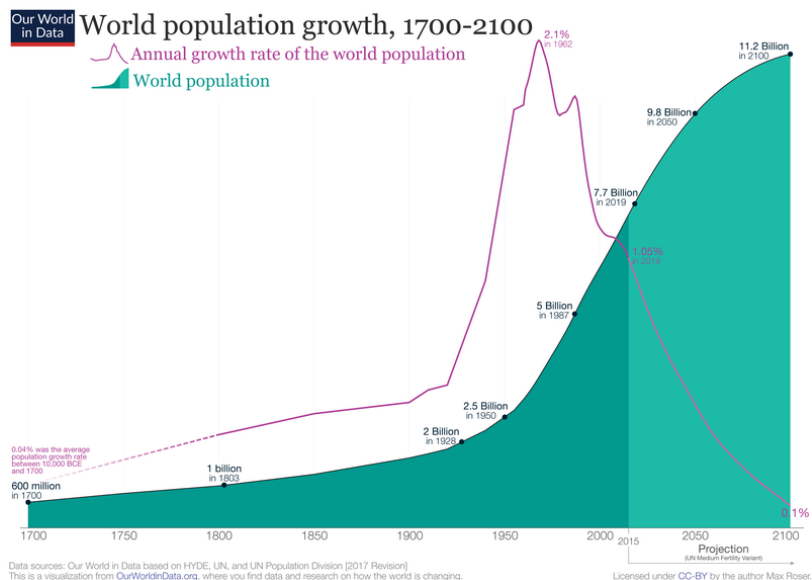


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Carrying Capacity

1. Define **carrying capacity**.

2. Explain how the following things make it difficult to quantify human carrying capacity.

We use a wide range of resources

We can substitute resources if they run out

We all have very different lifestyles

We import and export our resources

We are constantly developing new technology



3. It may be possible to increase our carrying capacity. Read the opinion below:

"The Earth has enormous carrying capacity for humans, but we've got to be the generation of change if we want to utilize that capacity. It's time for legislation on energy use; electric cars on every drive-way and solar panels on every roof should be set in law."

a) Which environmental value system do you think is being expressed here? Justify your answer.

b) Choose a different value system from the one you mentioned in answer "a)". How might a person with that value system approach the issue of limited carrying capacity?

Ecological Footprints

1. Describe what is meant by the term "ecological footprint".

2.

a) According to footprintnetwork.org, the global ecological footprint is about 1.5 Earths. Explain what this means.

b) An alternative way of presenting ecological footprints is as "global hectares per person". Explain the meaning of this unit of measurement.



3. The map below shows the ecological footprint in g ha per person ("global hectares per person) of a number of nations in 2013.



(Data source: <http://data.footprintnetwork.org/compareCountries.html>)

a) Describe any trends you observe in the data.

b) Explain any trends you observe in the data using your own knowledge.

Hint: think about any economic, cultural and social factors that might influence the EF of a nation.

Lined writing area for student responses.

