Conservation Biology 406R/506R

1. Introductions
2. 3x5 cards
3. Syllabus
4. Topics
‘3x5’ card

Registered? 406R or 506R? In Lab?

Name (and what you prefer to be called)
- Distinguishing characteristic

Email address

Year in school

Major

Relevant courses taken, or research projects, etc.

Why are you taking this course?
What do you hope to get out of this course?

1. Overall course objectives

• Grasp **scientific material** (content & literacy)

• Provide **real-world relevancy** and applications

• Place in **context** of students’ lives

• Foster life-long **appreciation** and respect for:
  - field, findings, organisms, biodiversity, etc.
Humans on planet Earth

Meffe and Carroll 1997
Ecological Footprint

<table>
<thead>
<tr>
<th>Country</th>
<th>Per Capita Ecological Footprint (Hectares of land per person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>10.9</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5.9</td>
</tr>
<tr>
<td>India</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Ecological Footprint (Hectares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>3 billion hectares</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>94 million hectares</td>
</tr>
<tr>
<td>India</td>
<td>1 billion hectares</td>
</tr>
</tbody>
</table>

*Figure 1-5* Relative ecological footprints of the United States, the Netherlands, and India. An ecological footprint is the amount of land needed to produce the resources needed by an average person in a country. It would take the land area of about three planet earths if all the world’s 6.2 billion people consumed the same amount of resources as is consumed by the 288 million people in the United States. Miller, 2003

1 ha = 2.47 acres
Ecological Footprint

Def: Number of productive acres (fishing grounds, forests, agricultural fields) needed to maintain a given lifestyle

-Driving (roads, vehicles, fuel, etc.)
-Housing (land and resources for construction)
-Food (land, transport, inputs, trophic level)
-Other goods and services

US citizens use 24 acres/person on average
(Canadians 17, Italians 9, Pakistanis 2)

As of ~2002, planet has about 4.5 acres/person

Sustainability?

(1 acre = 0.405 hectare)
Ecological Footprint

HOMEWORK!

AVERAGE ECOLOGICAL FOOTPRINT IN USA IS 24 ACRES PER PERSON. WORLDWIDE, THERE EXIST 4.5 BIOLOGICALLY PRODUCTIVE ACRES PER PERSON.

http://www.earthday.net/footprint/index.asp

How many planets needed, at 4.5 acres/person, to live like the mean ECOL406R/506R student?

= mean/4.5 = ??