

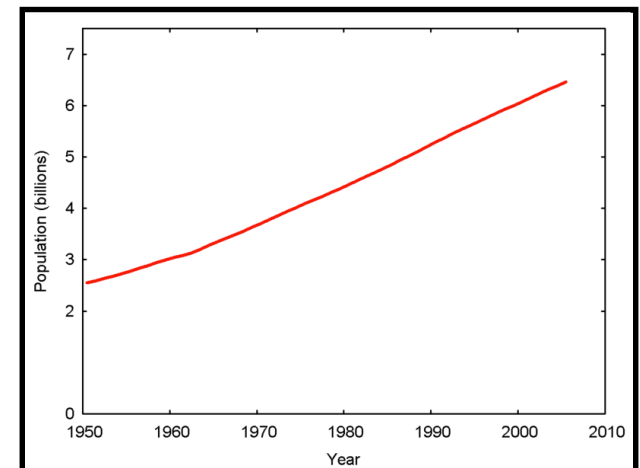
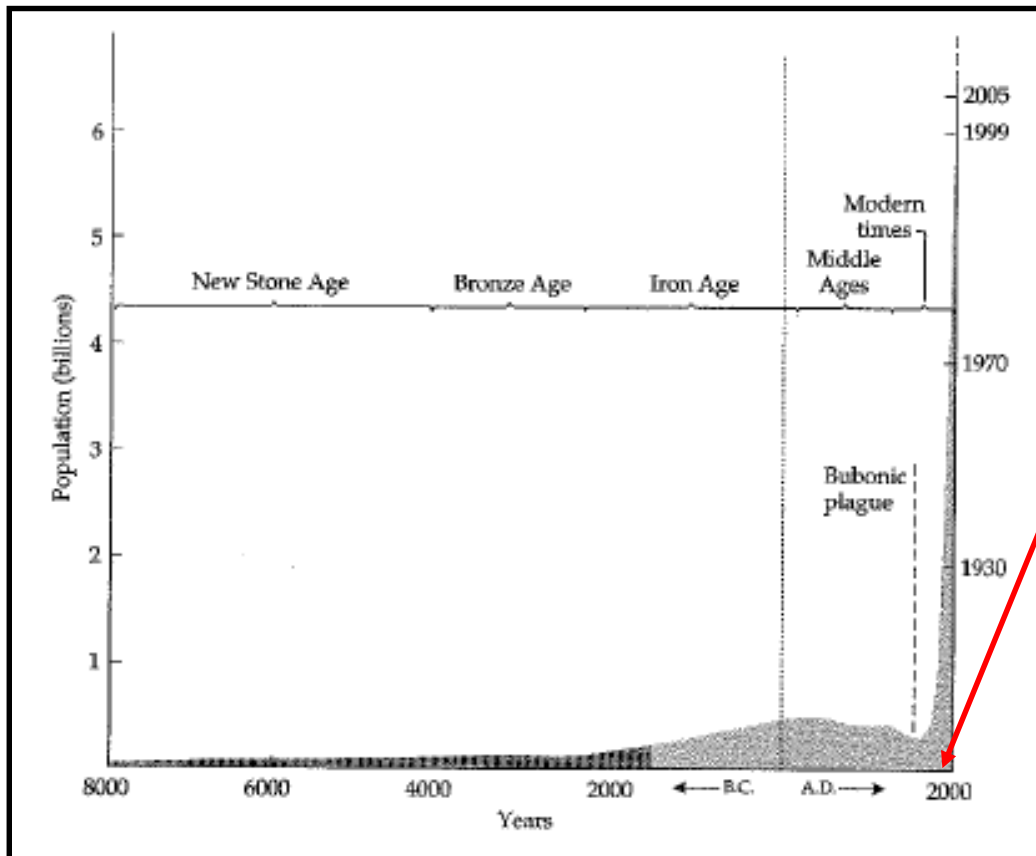
# Main Points

- 1) What is conservation biology?
- 2) Kellert's 9 basic values

**Pre-reading: Tuesday 5 September. Novinger and Rahel.  
Thursday 7 September. Drietz.**

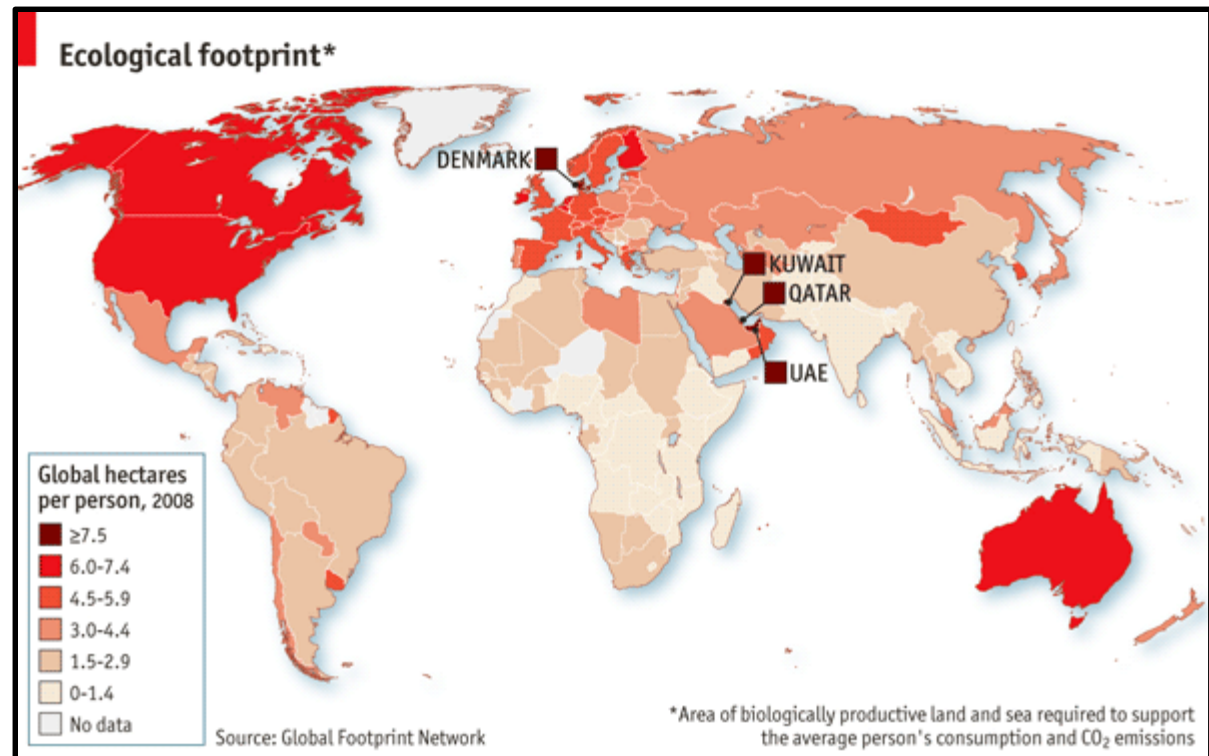
**Terms: conservation biology, stochastic**

**Conservation biology = the scientific field dedicated to understanding the causes and consequences of the biodiversity crisis.**



# Human population growth and resource consumption

- humankind consumes ~30% of NPP globally.
- industrialized nations account for 70-80% of this 30%.
- consumption of NPP and fossil fuels powers the global economy.



# Human population growth and resource consumption

**Table 1.** Causes of endangerment for species classified as threatened or endangered by the U.S. Fish and Wildlife Service.

Cause	Number of species endangered by cause and rank of frequency*	Number of species endangered and rank of frequency†
Interactions with nonnative species	305 - 1	115 - 8
* Urbanization	275 - 2	247 - 1
* Agriculture	224 - 3	205 - 2
* Outdoor recreation and tourism development	186 - 4	148 - 4
* Domestic livestock and ranching activities	182 - 5	136 - 6
* Reservoirs and other running water diversions	161 - 6	160 - 3
Modified fire regimes and silviculture	144 - 7	83 - 10
Pollution of water, air, or soil	144 - 8	143 - 5
* Mineral, gas, oil, and geothermal extraction or exploration	140 - 9	134 - 7
Industrial, institutional, and military activities	131 - 10	81 - 12
* Harvest, intentional and incidental	120 - 11	101 - 9
* Logging	109 - 12	79 - 13
* Road presence, construction, and maintenance	94 - 13	83 - 11
Loss of genetic variability, inbreeding depression, or hybridization	92 - 14	33 - 16
Aquifer depletion, wetland draining or filling	77 - 15	73 - 15
Native species interactions, plant succession	77 - 16	74 - 14
Disease	19 - 17	7 - 18
Vandalism (destruction without harvest)	12 - 18	11 - 17

\*Including Hawaiian and Puerto Rican species.

†Not including Hawaiian and Puerto Rican species.

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**How does conservation biology differ from other sciences in general (or does it)?**

- 1) Focus on evolutionary time scales**
- 2) Value-laden: subjective; sometimes advocacy occurs (but try to minimize this!)**
- 3) Inexact: individualistic/local and stochastic**

**stochastic = random,  
particularly regarding  
restricted or a small number  
of events.**





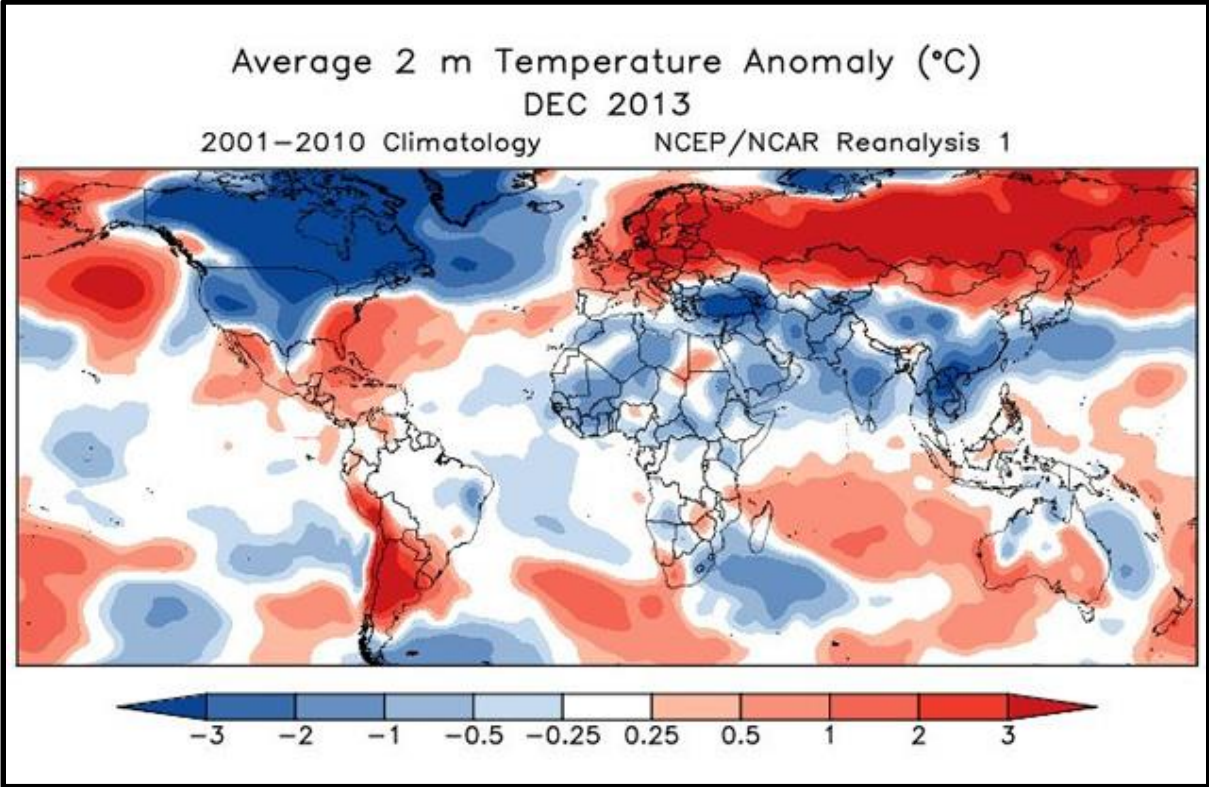
**P. Manning, Super Bowl XLVIII vs Seattle**

<b>TD</b>	<b>INT</b>	<b>Long</b>	<b>QB Rating</b>
<b>1</b>	<b>2</b>	<b>23</b>	<b>73.5</b>



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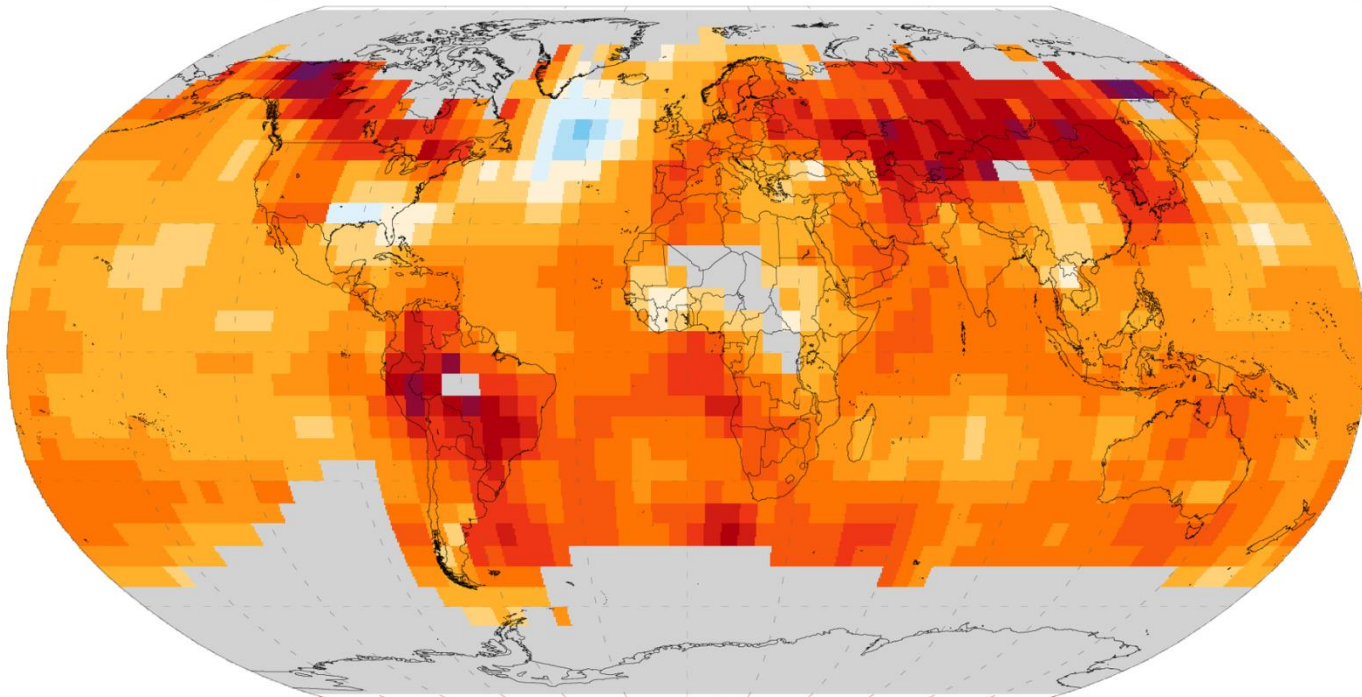
**P. Manning, 2013 Season Averages**

TD	INT	Long	QB Rating
$3.67 \pm 1.5$	$0.67 \pm 0.9$	$54.7 \pm 10.0$	$121.2 \pm 23$



**1901-2011 Temperature Trend**

**°C/century**



**GLOBAL WARMING IS A HOAX**

**BECAUSE IT IS COLD. TODAY.  
WHERE I LIVE.**