



***Corso ONTAM,  
Hotel Terme di Frasassi, Genga (AN)  
11 settembre 2022***

**Conservazione della biodiversità: la rilevanza della  
componente genetica**

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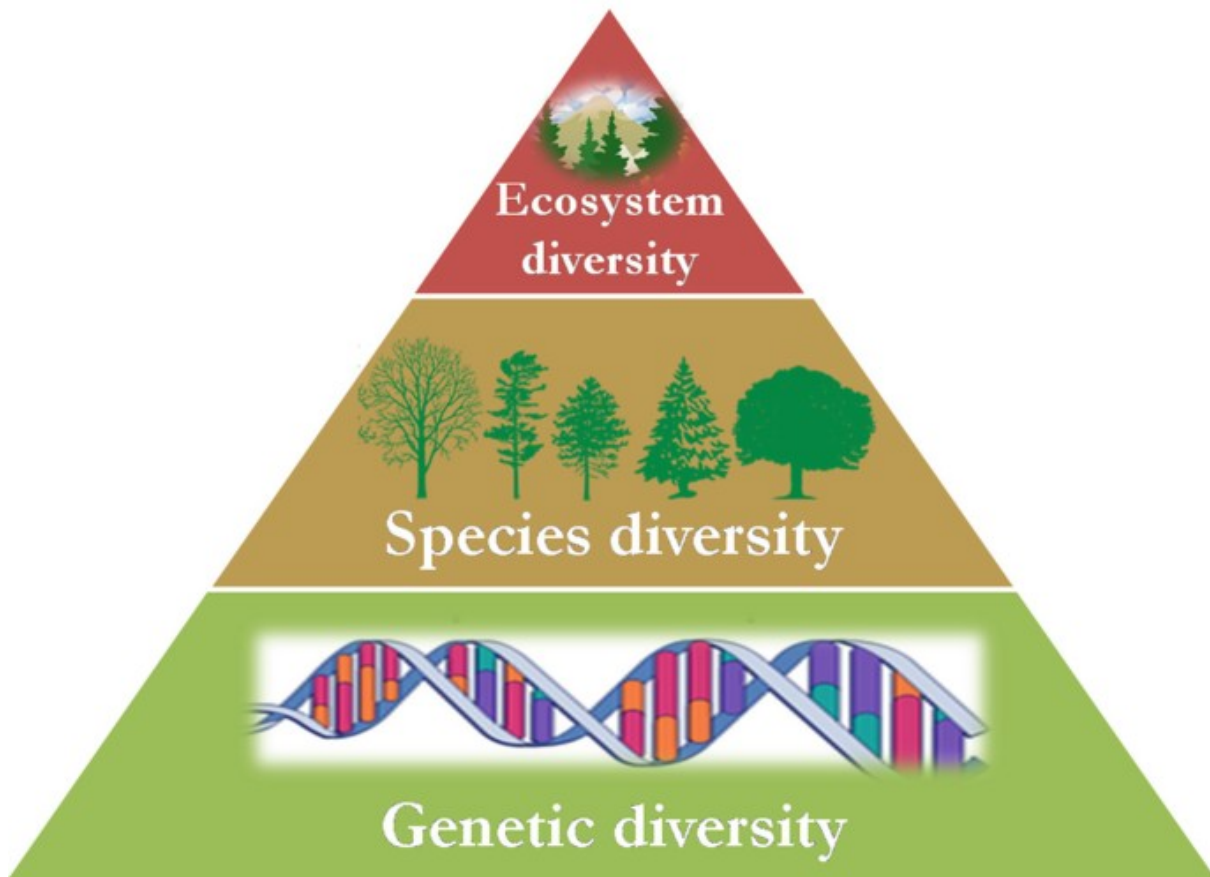
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## **Schema della presentazione:**

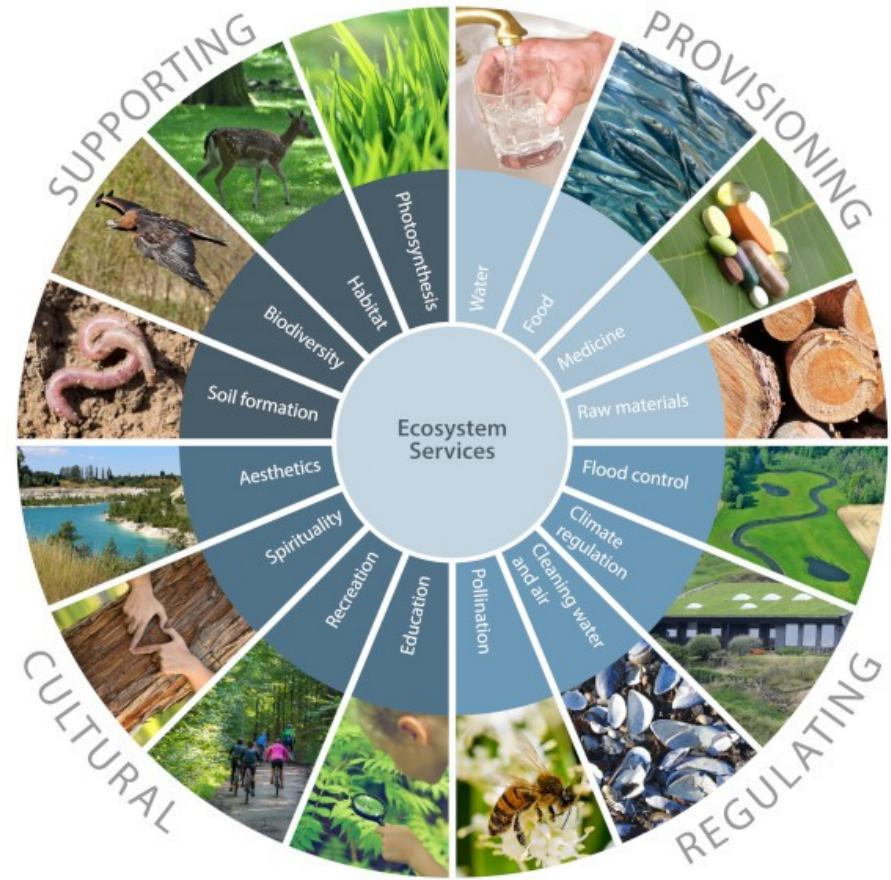
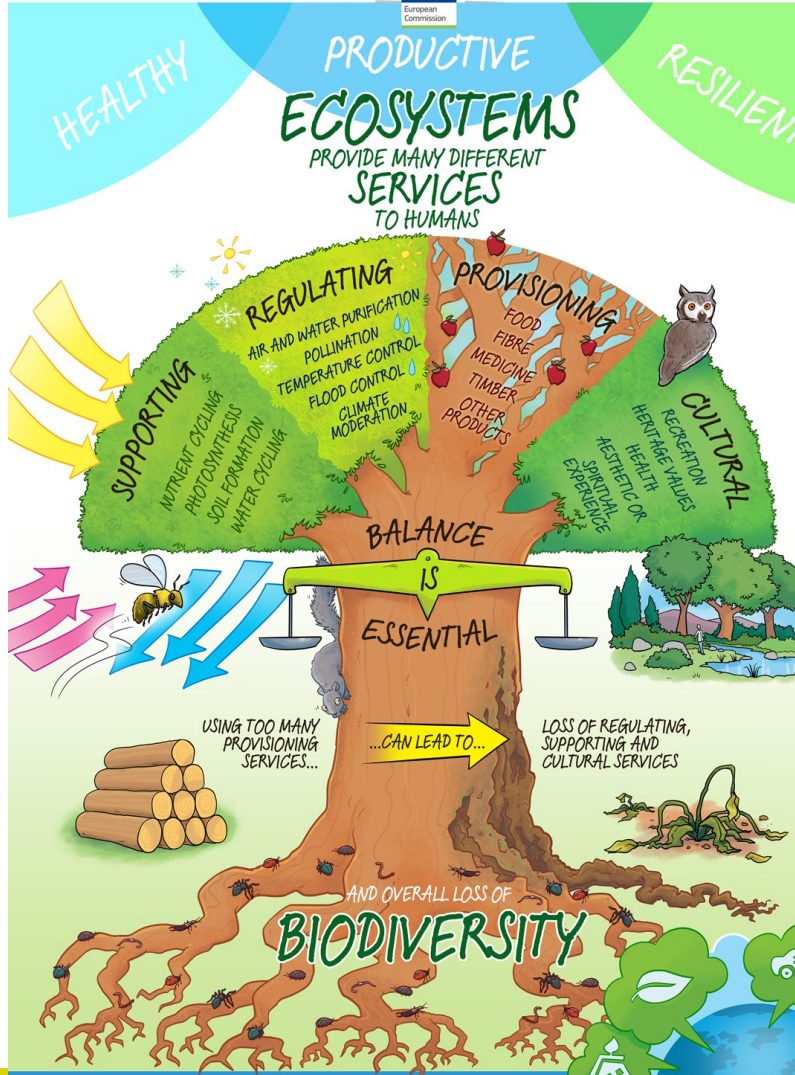
1. Introduzione
2. Come posso misurare la diversità genetica in modo efficace e speditivo
3. Il lavoro dei ricercatori per convincere i decisori internazionali
4. Recenti applicazioni dei metodi basati sul DNA in ambito di biologia della conservazione



## Convention on Biological Diversity



Rio de Janeiro 1992





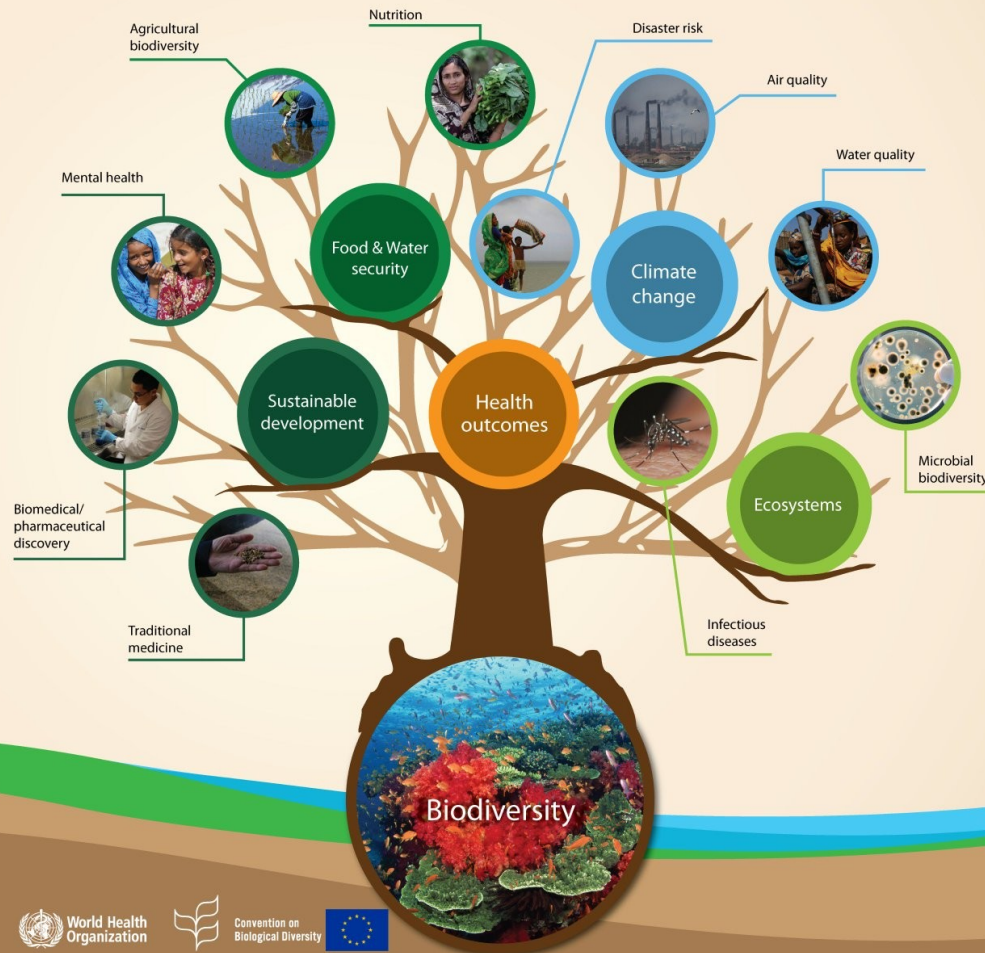
# Biodiversity and human health

**Health** "is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

**Biological diversity** (biodiversity) is "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."

**Biodiversity underpins ecosystem** functioning and the provision of goods and services that are essential to human health and well being.

The links between **biodiversity and health** are manifested at various spatial and temporal scales. Biodiversity and human health, and the respective policies and activities, are interlinked in various ways.



**Direct drivers** of biodiversity loss include land-use change, habitat loss, over-exploitation, pollution, invasive species and climate change. Many of these drivers affect human health directly and through their impacts on biodiversity.

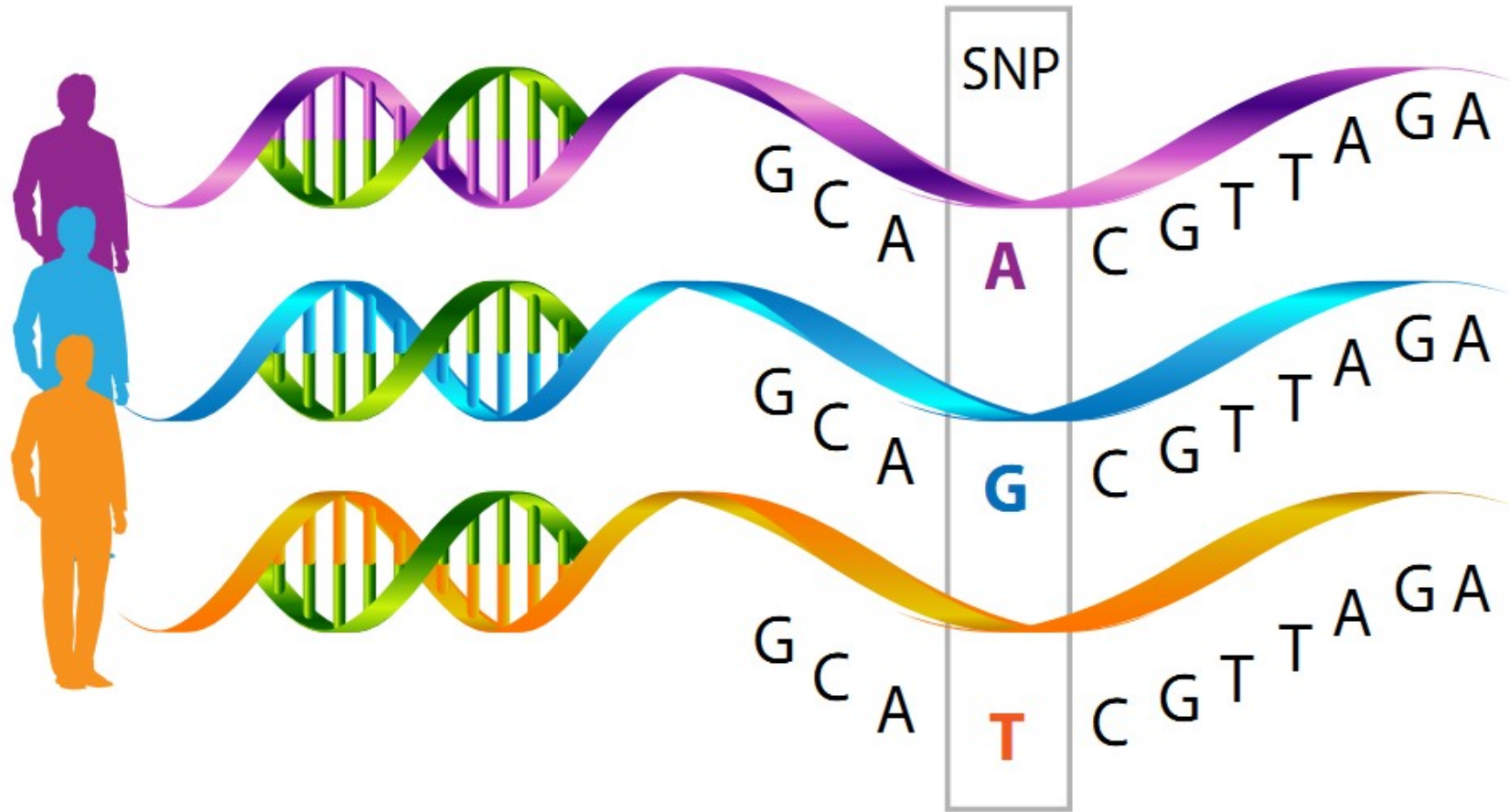
**Women and men** have different roles in the conservation and use of biodiversity and varying health impacts.

**Human population** health is determined, to a large extent, by social, economic and environmental factors.

**The social and natural** sciences are important contributors to biodiversity and health research and policy. Integrative approaches such as the Ecosystem Approach, Ecohealth and One Health unite different fields and require the development of mutual understanding and cooperation across disciplines.

**Componente genetica della biodiversità:** la variabilità genetica esistente all'interno di una stessa specie che spesso- ma non sempre- si riflette nella diversità del fenotipo, aspetto esteriore

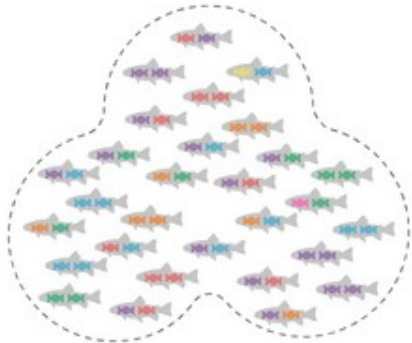






## HIGH GENETIC DIVERSITY

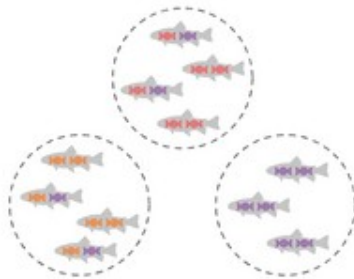
Large populations retain high genetic diversity



- Higher adaptiv capacity
- Potential for long term survival
- High resilience

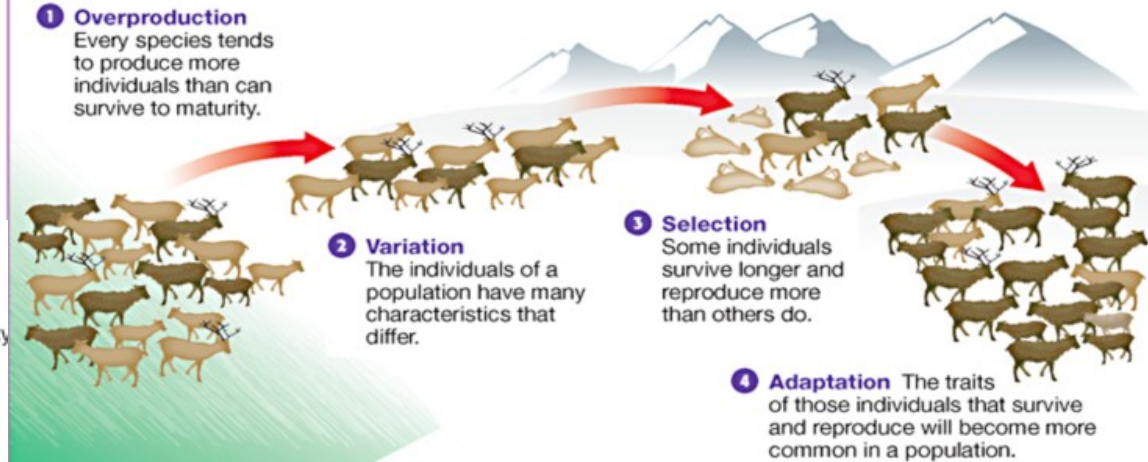
## LOW GENETIC DIVERSITY

Small, isolated populations lose genetic diversity

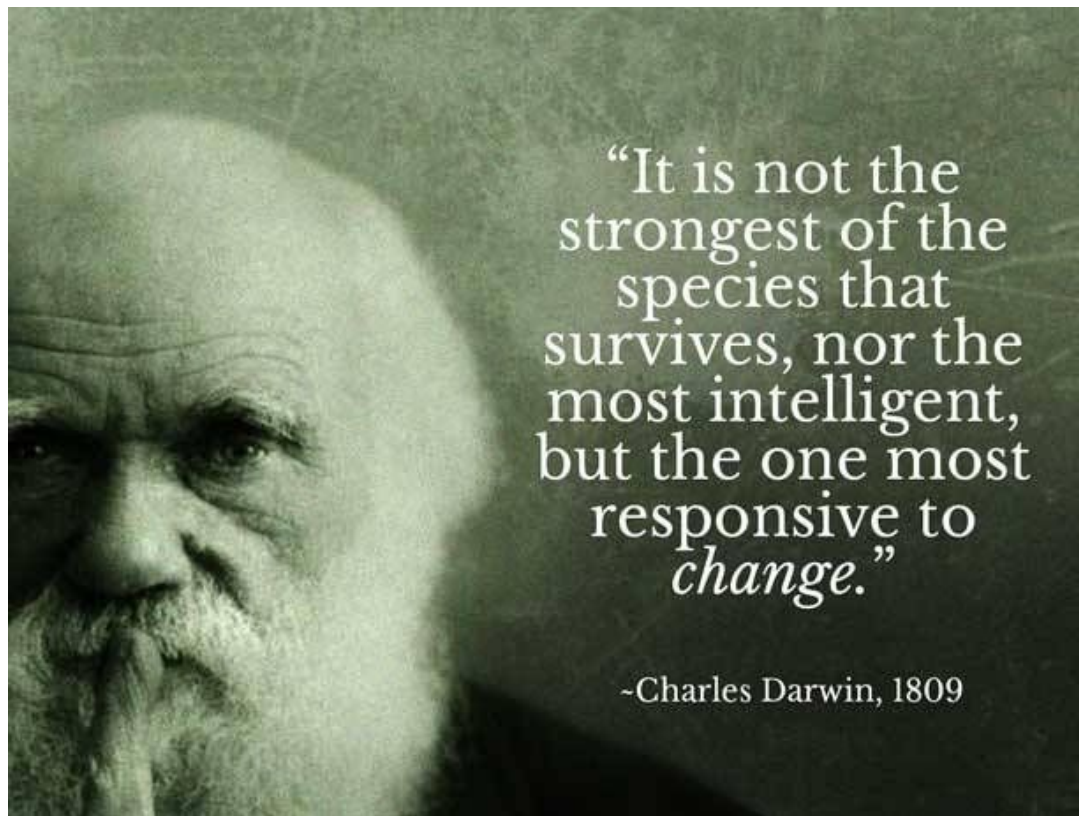


- Lower adaptiv capacity
- Weak potential for long term survival
- Low resilience

## The Theory of Evolution by Natural Selection







Per ‘vincere’ la lotteria della selezione naturale, per ogni specie è importante possedere il più alto numero possibile di numeri diversi



# Perchè è fondamentale preservare quanta più biodiversità possibile: la teoria dei rivetti di Ehrilch





Aereo = ecosistema

Rivetti: specie

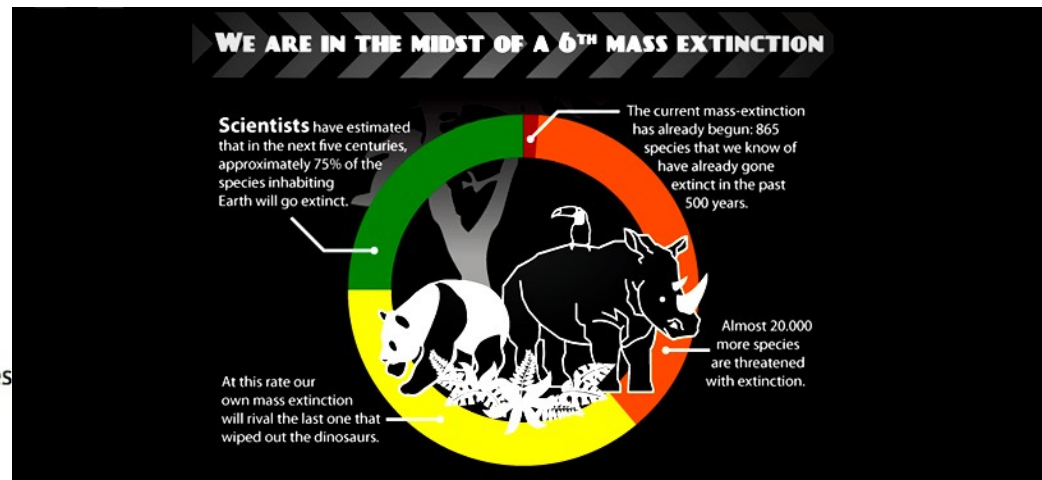
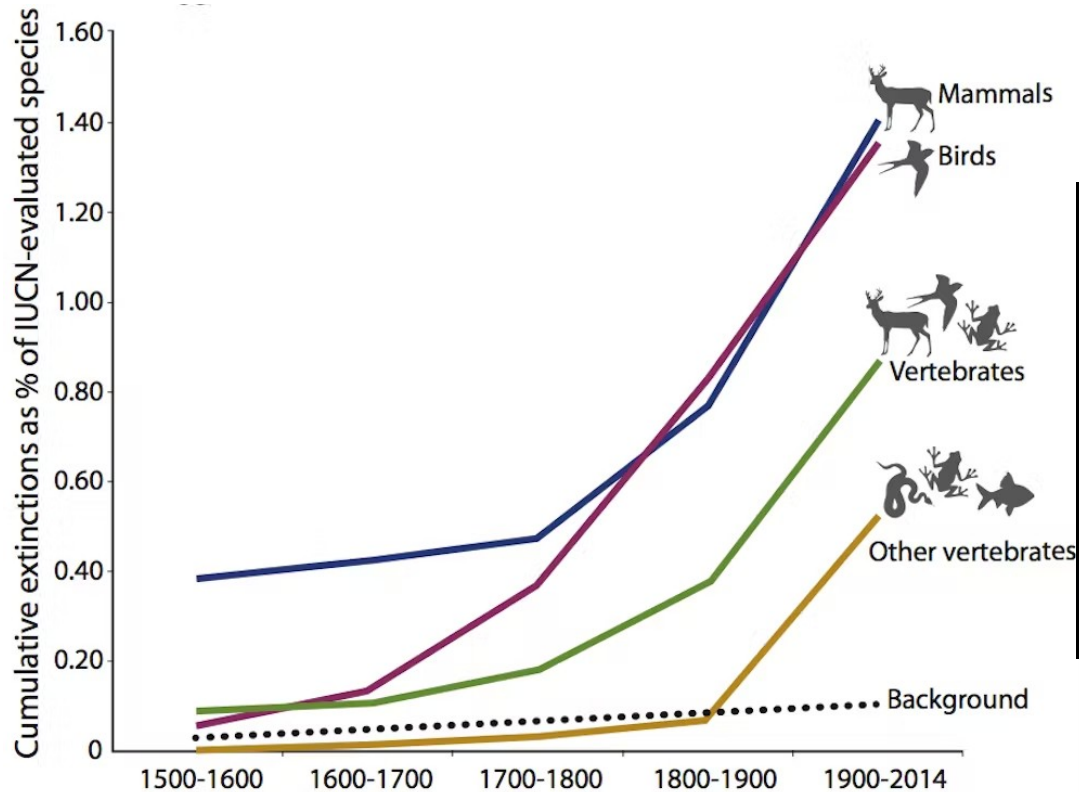


Aereo = specie

Rivetti: varianti genetiche









# jus' thinkin' 'bout stuff

Esc

ert

Up until now, five mass extinctions have occurred in the Earth's history.

november 26, 2021

But they all occurred before humans came on the scene.

©2021, steve rigell

Now, thanks to humans, the sixth mass extinction is getting under way...

steverigell.com

it's time for humans to show the earth how mass extinctions 'should' be done.