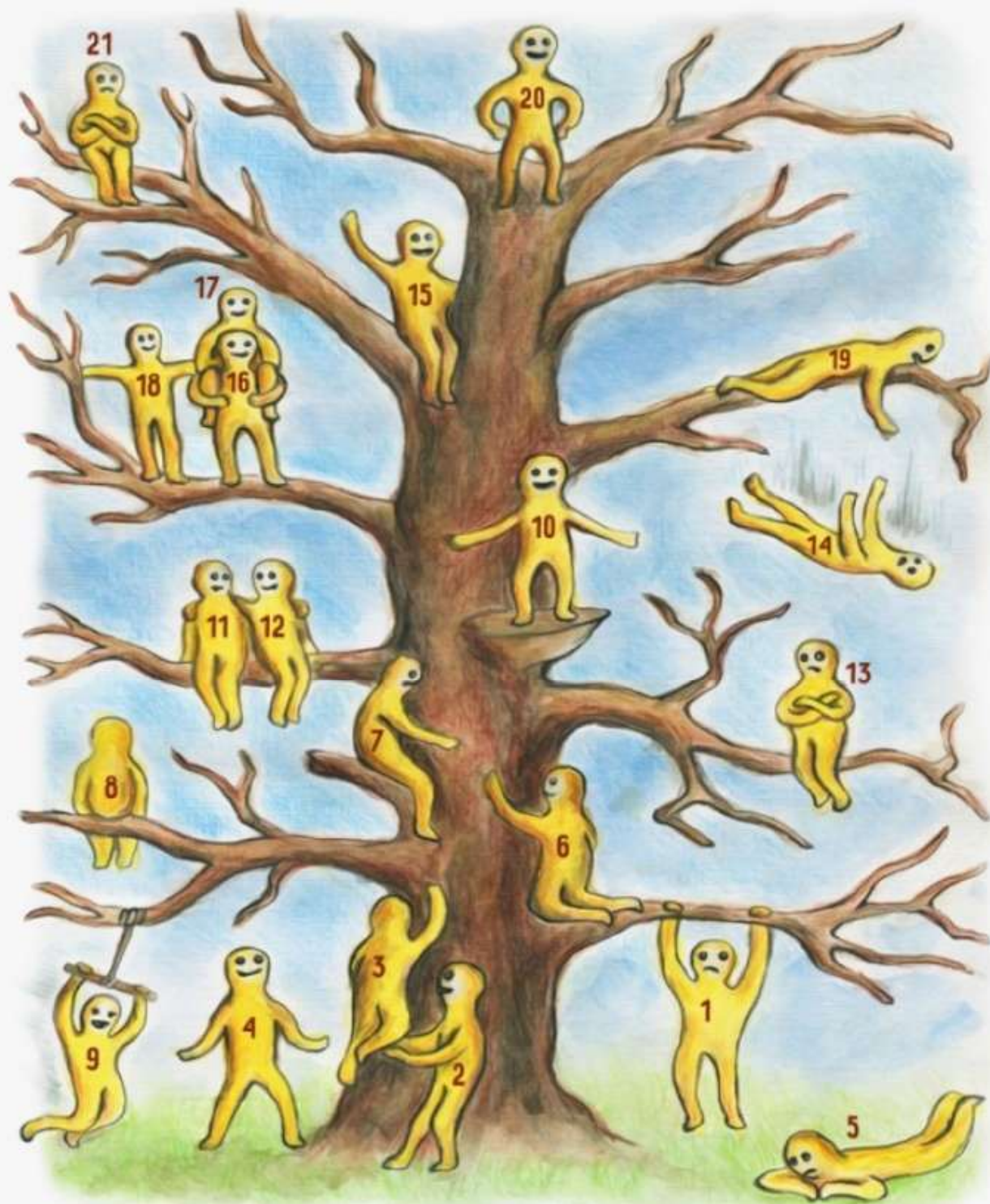
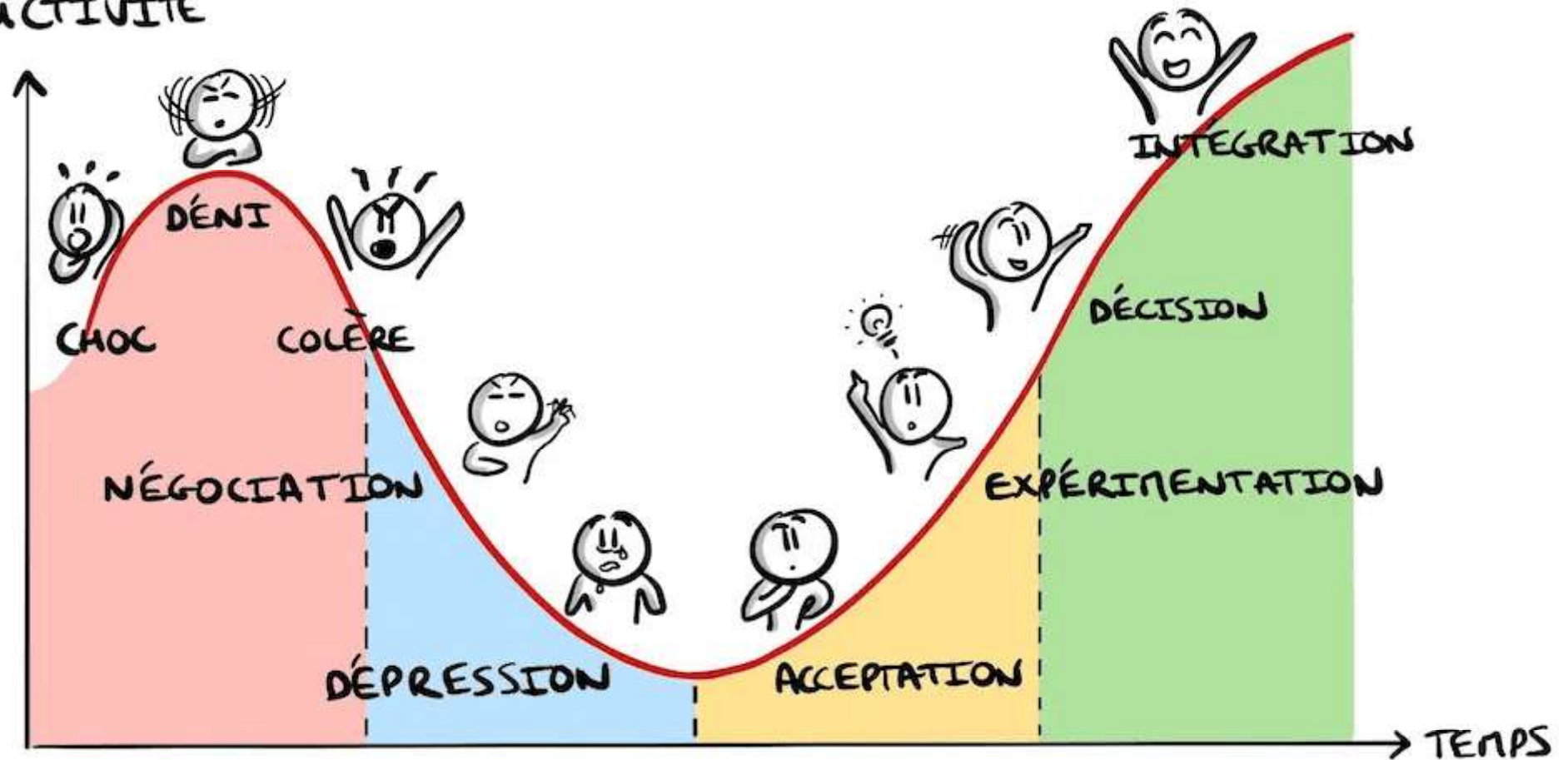




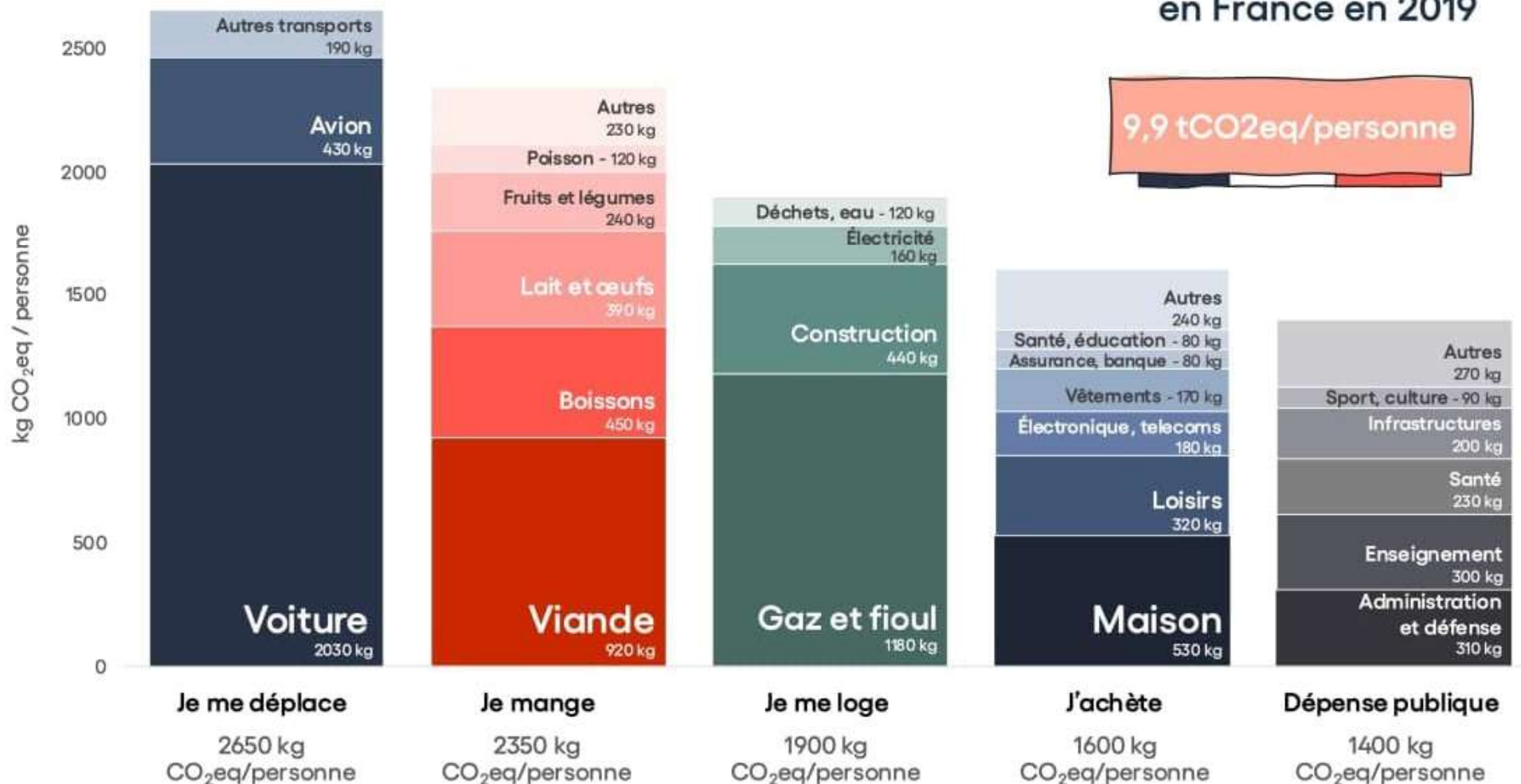
# ÉTAPES DU CHANGEMENT (KÜBLER ROSS)

MORAL  
&  
PRODUCTIVITÉ



## Empreinte carbone moyenne en France en 2019

9,9 tCO<sub>2</sub>eq/personne



Gaz inclus : CO<sub>2</sub> (hors UTCATF France), CH<sub>4</sub>, N<sub>2</sub>O, HFC, SF<sub>6</sub>, PFC, H<sub>2</sub>O (trainées de condensation).

Source : MyCO<sub>2</sub> par Carbone 4 d'après le ministère de la Transition écologique, le Haut Conseil pour le Climat, le CITEPA, Agribalyse V3 et INCA 3.

**2 tonnes of CO<sub>2</sub>e**  
per person per year  
equals either to



**16 hours flying  
long-haul**  
(1 transatlantic return)



**9,000 km**  
driving alone in a car  
(carpool!)



**At least 400,000 km**  
by train  
(9x around the world!)



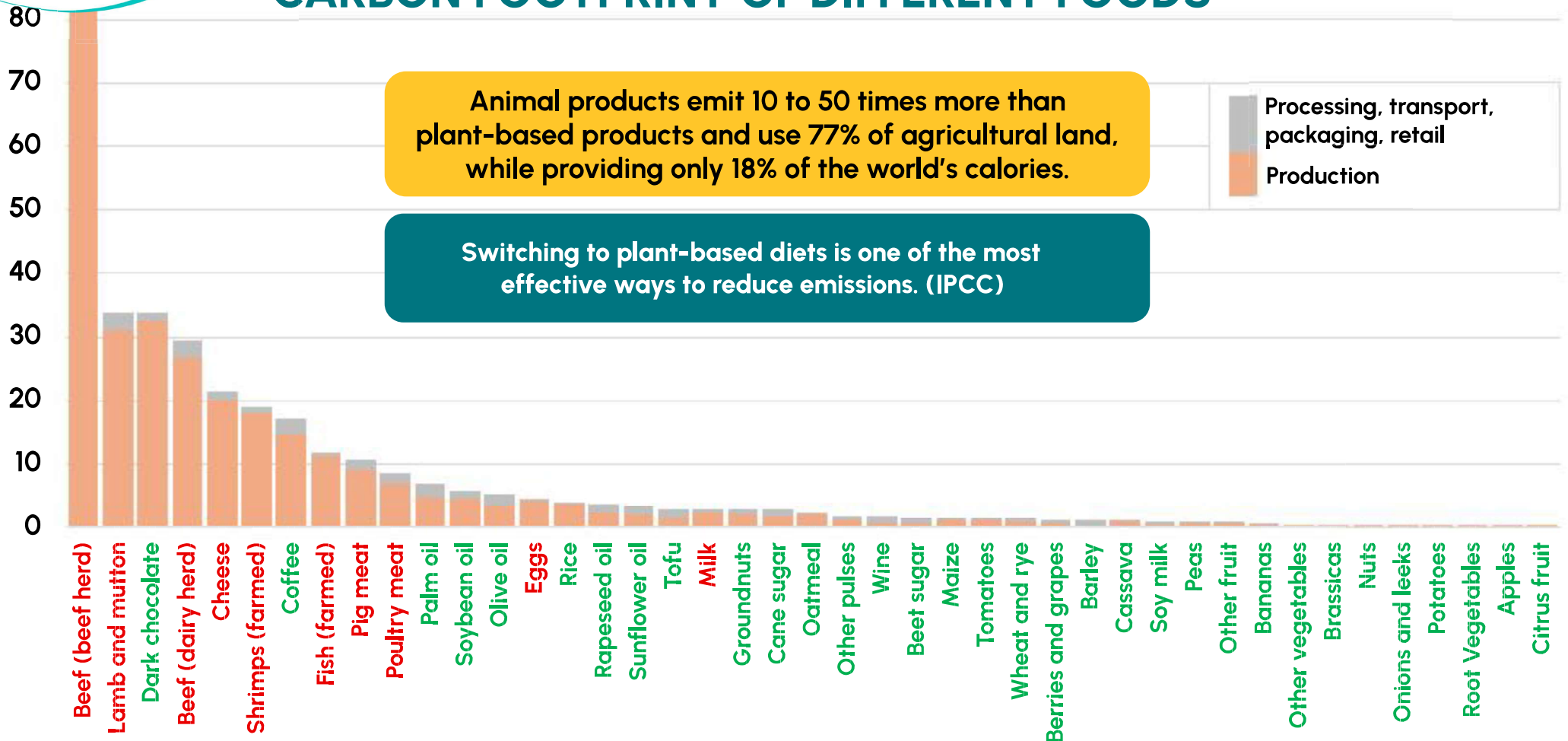
**Unlimited km**  
on a bike  
Your calves are  
the only limit!



Plane: 152 gCO<sub>2</sub>e/km/person in long-haul flight taking into account non-CO<sub>2</sub> effects (ADEME). That's 13,158 km and 16h27 of flight at 800 km/h  
Gasoline car: 222 gCO<sub>2</sub>e/km/car over the entire life cycle on average worldwide (IPCC AR6 WG3 figure 10.4). We double the distance by carpooling with 2, triple by carpooling with 3, etc.  
Train filled to only 20% and running on wind electricity: 5 gCO<sub>2</sub>e/km/person (IPCC AR6 WG3 figure 10.6)  
Bicycle: even if we take non-zero emissions, it is less emitting than the train and therefore it is more km than it is possible to do in a year



## CARBON FOOTPRINT OF DIFFERENT FOODS

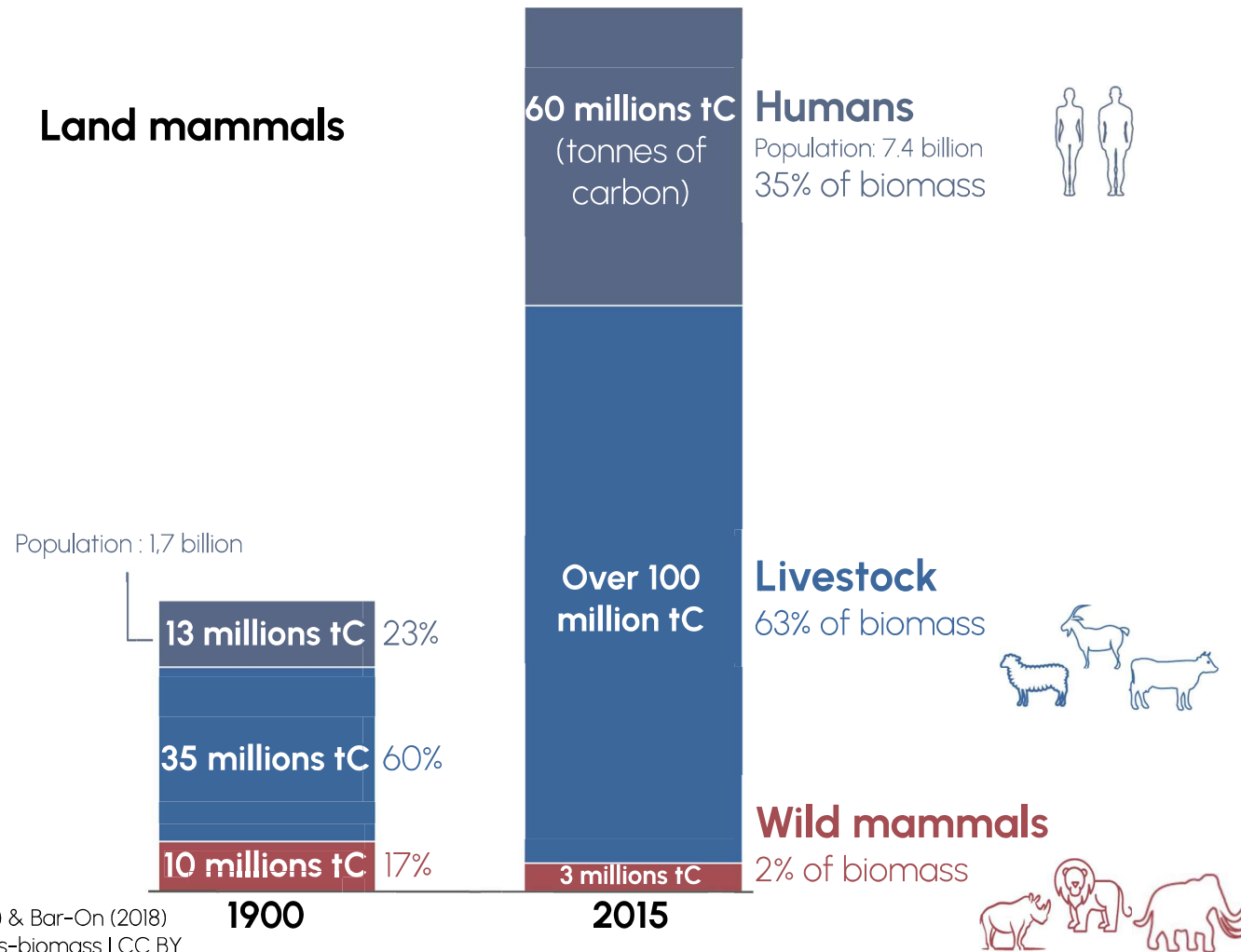


Adapted from Joseph Poore and Thomas Nemecek (2018) and [OurWorldinData.org/environmental-impacts-of-food](https://www.ourworldindata.org/environmental-impacts-of-food) | CC BY

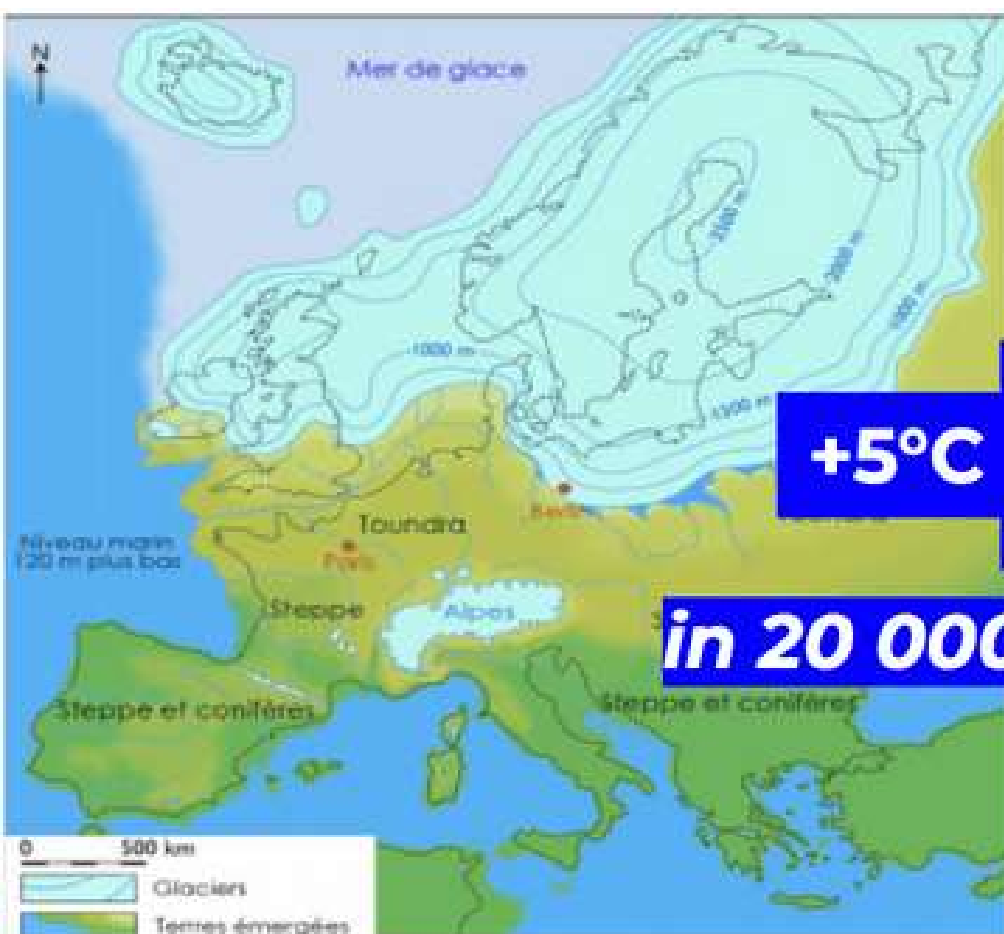


## DECLINE OF WILD BIOMASS

### Land mammals



Adapted from Barnosky (2008), Smil (2011) & Bar-On (2018)  
and OurWorldinData/wild-mammals-birds-biomass | CC BY



**Europe, 20 000 years ago**  
 1 to 2 km of icecap over the north of Europe

**+5°C**  
**in 20 000 years**



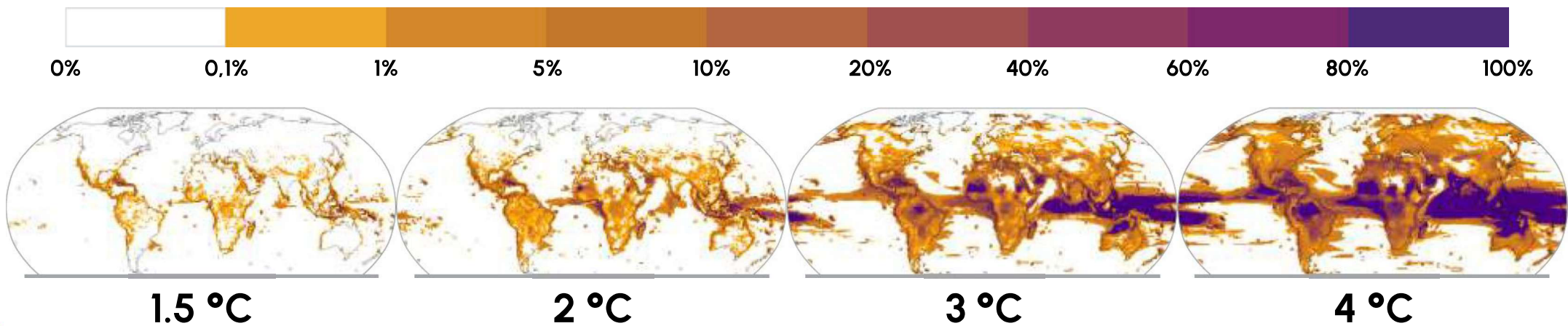
**Europe, today**

**+5°C**  
**in 200 years**  
**?!**

Source : Carbone 4



## RISK OF SPECIES LOSS DUE TO WARMING

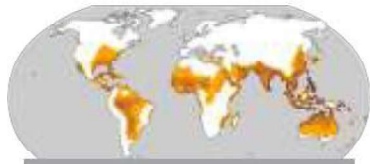


- Global warming is a deadly threat to biodiversity
- The impacts of global warming are getting worse faster with every rise in temperature
- Every tenth of a degree counts!

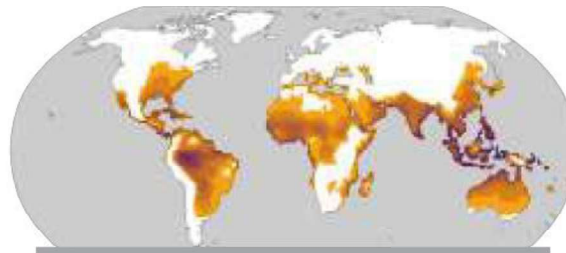
## GLOBAL WARMING AS A RISK TO HUMAN HEALTH



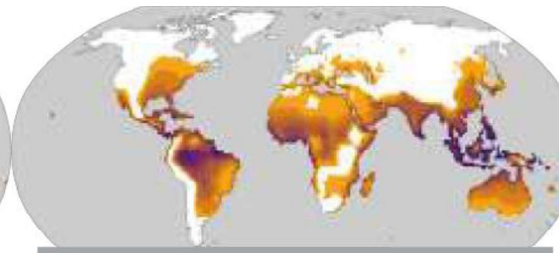
Number of days per  
year when  
temperature and  
humidity are likely  
to be fatal



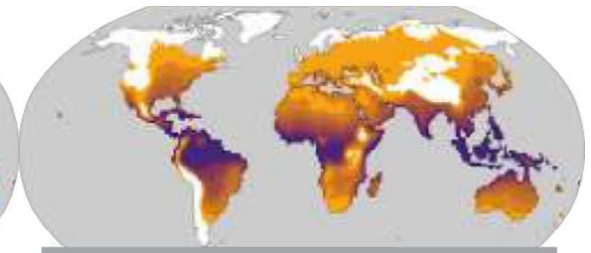
1991 - 2005



2 °C



2.8 °C

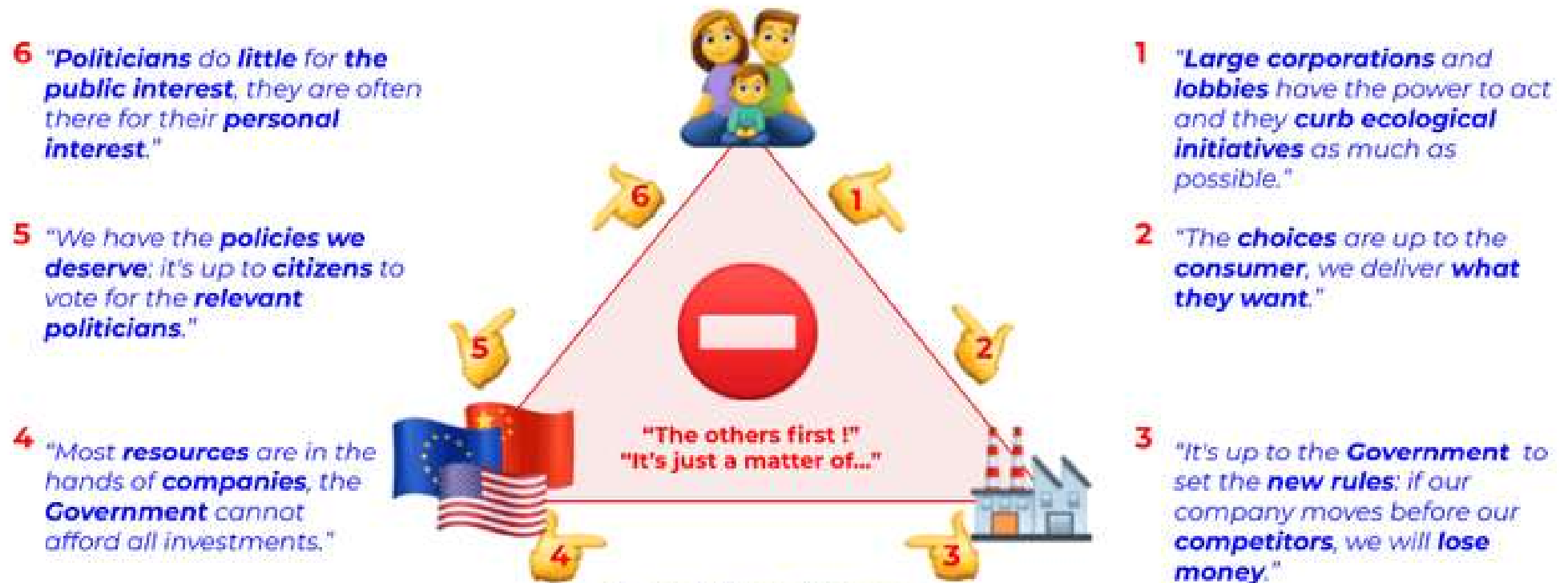


4.8 °C

**Every tenth of a degree counts!**

# CLIMATE : OVERCOMING THE TRIANGLE OF INACTION

## ASSIGNING RESPONSIBILITY TO OTHERS DOES NOT TRIGGER ACTIONS



Source : Pierre Peyretou

# Leviers de réduction de l'empreinte carbone moyenne

## Engagement personnel « réaliste » des individus\*

