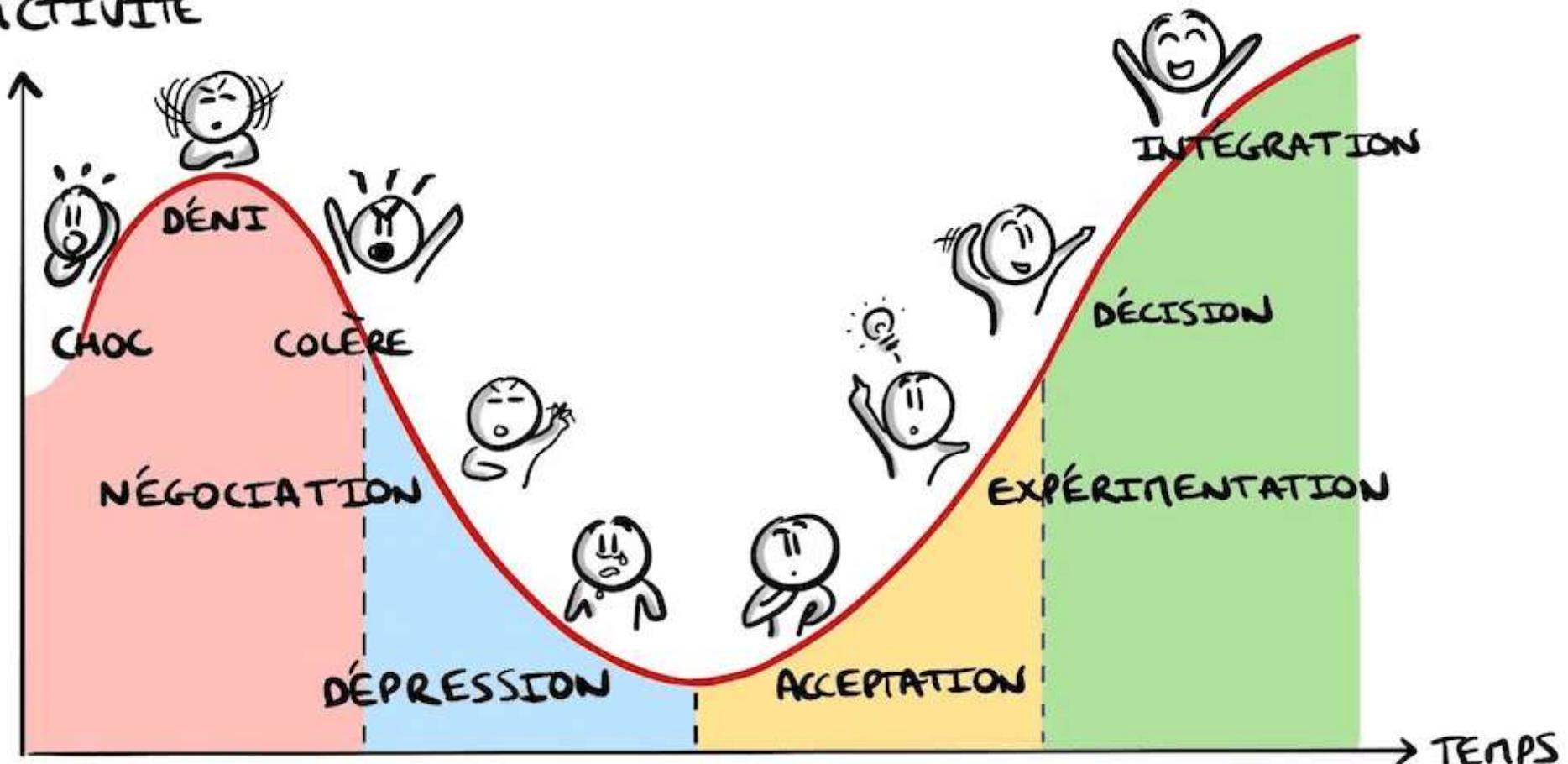


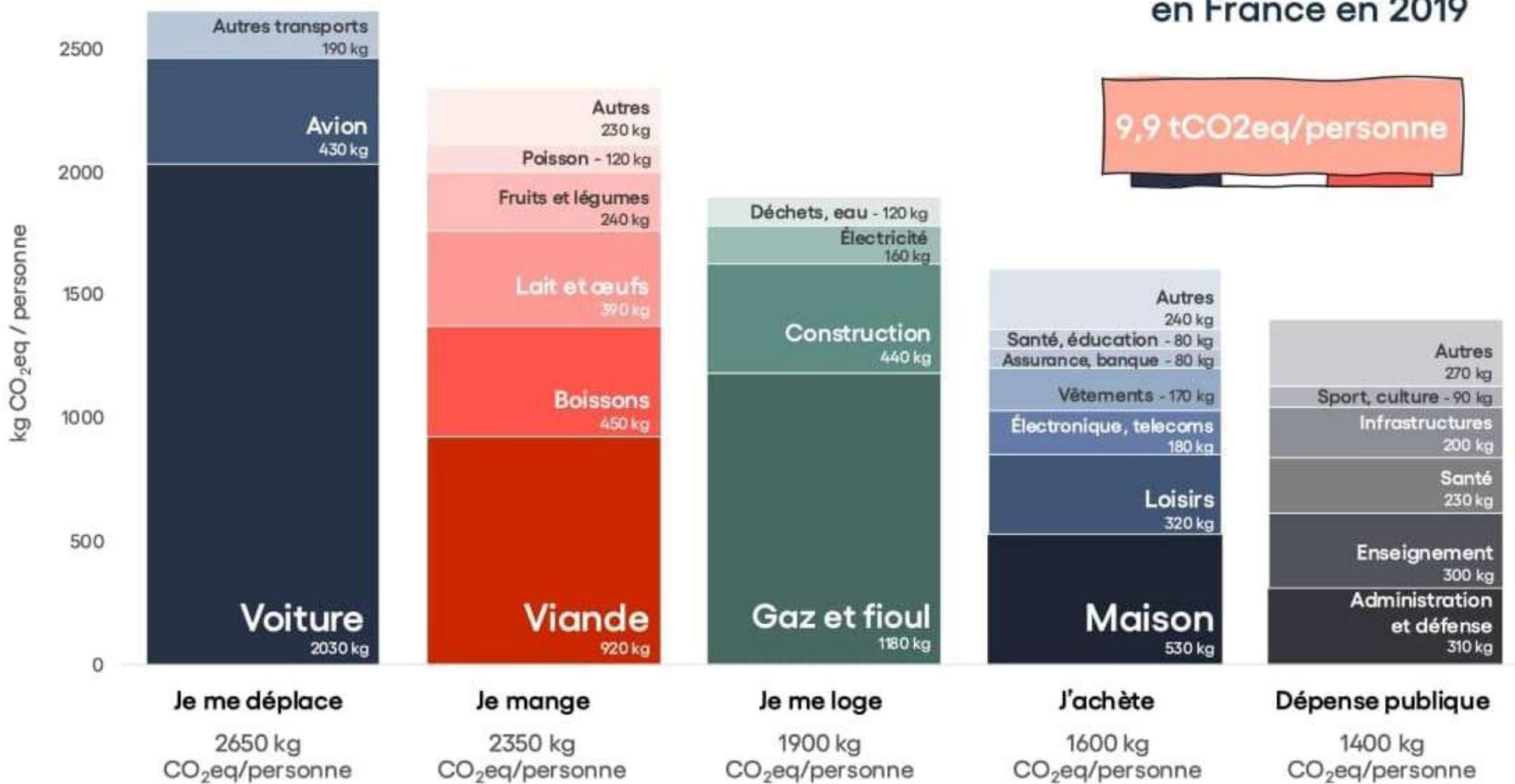


# ÉTAPES DU CHANGEMENT (KÜBLER ROSS)

MORAL  
&  
PRODUCTIVITÉ



## Empreinte carbone moyenne en France en 2019



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.



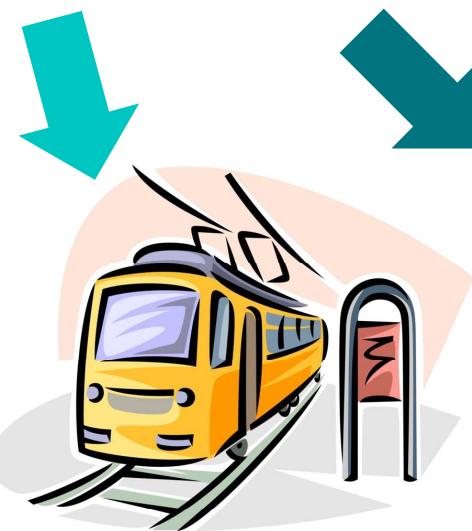
**2 tonnes of CO<sub>2</sub>e**  
per person per year  
equals either to



**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!)



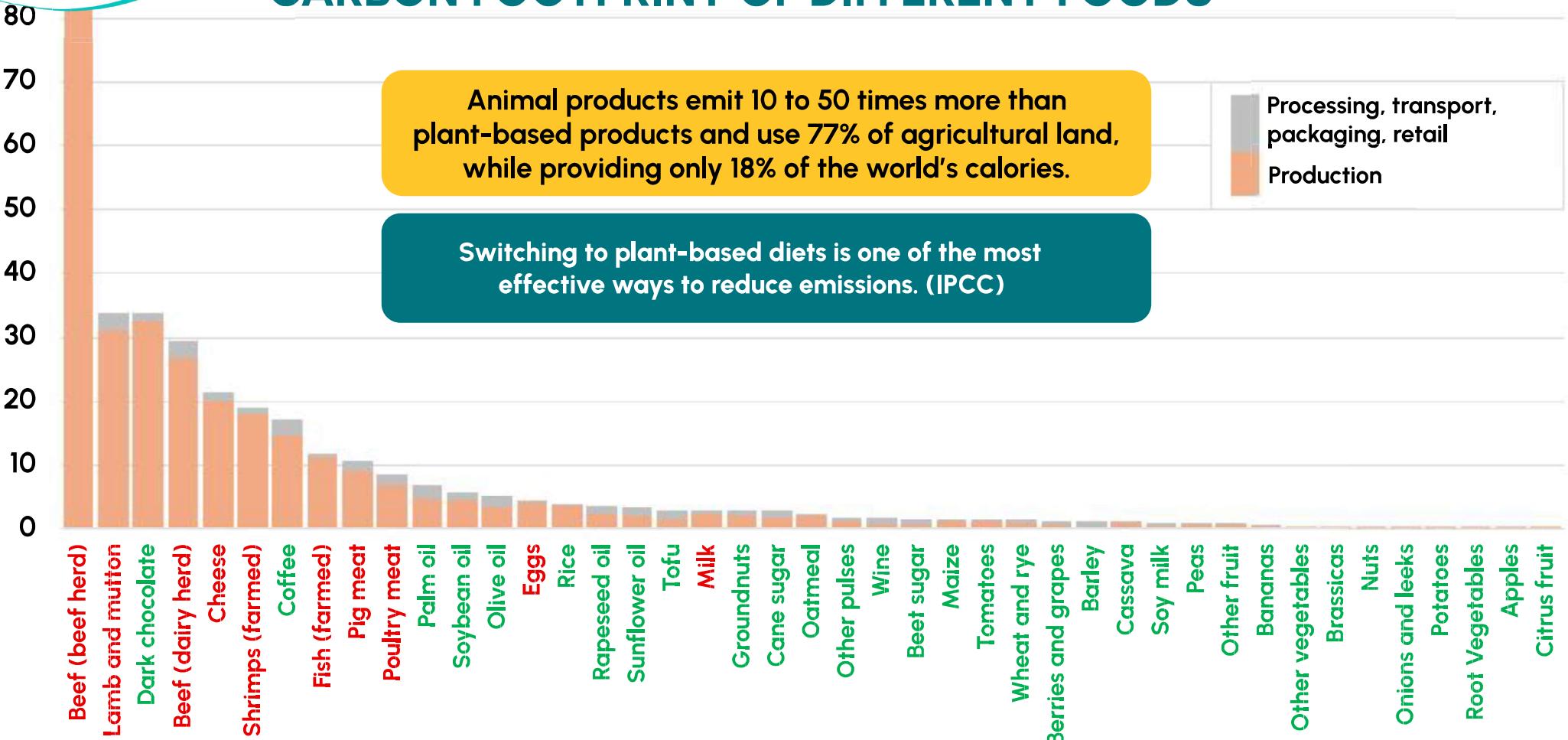
**Unlimited km**  
on a bike  
Your calves are  
the only limit!



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



Animal products emit 10 to 50 times more than plant-based products and use 77% of agricultural land, while providing only 18% of the world's calories.

Switching to plant-based diets is one of the most effective ways to reduce emissions. (IPCC)

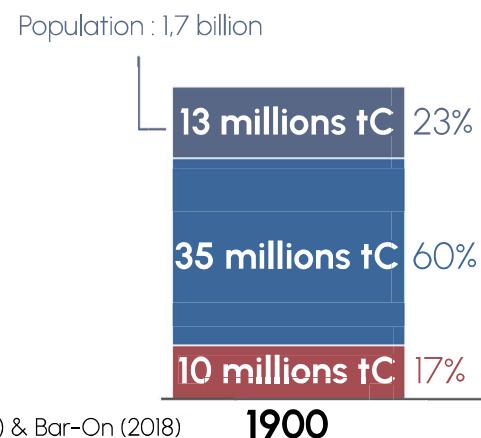
Processing, transport,  
packaging, retail  
Production

Adapted from Joseph Poore and Thomas Nemecek (2018) and OurWorldinData.org/environmental-impacts-of-food | CC BY



## DECLINE OF WILD BIOMASS

### Land mammals



60 millions tC  
(tonnes of carbon)

Over 100 million tC

3 millions tC

### Humans

Population: 7.4 billion  
35% of biomass



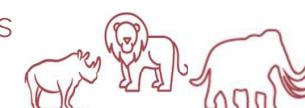
### Livestock

63% of biomass

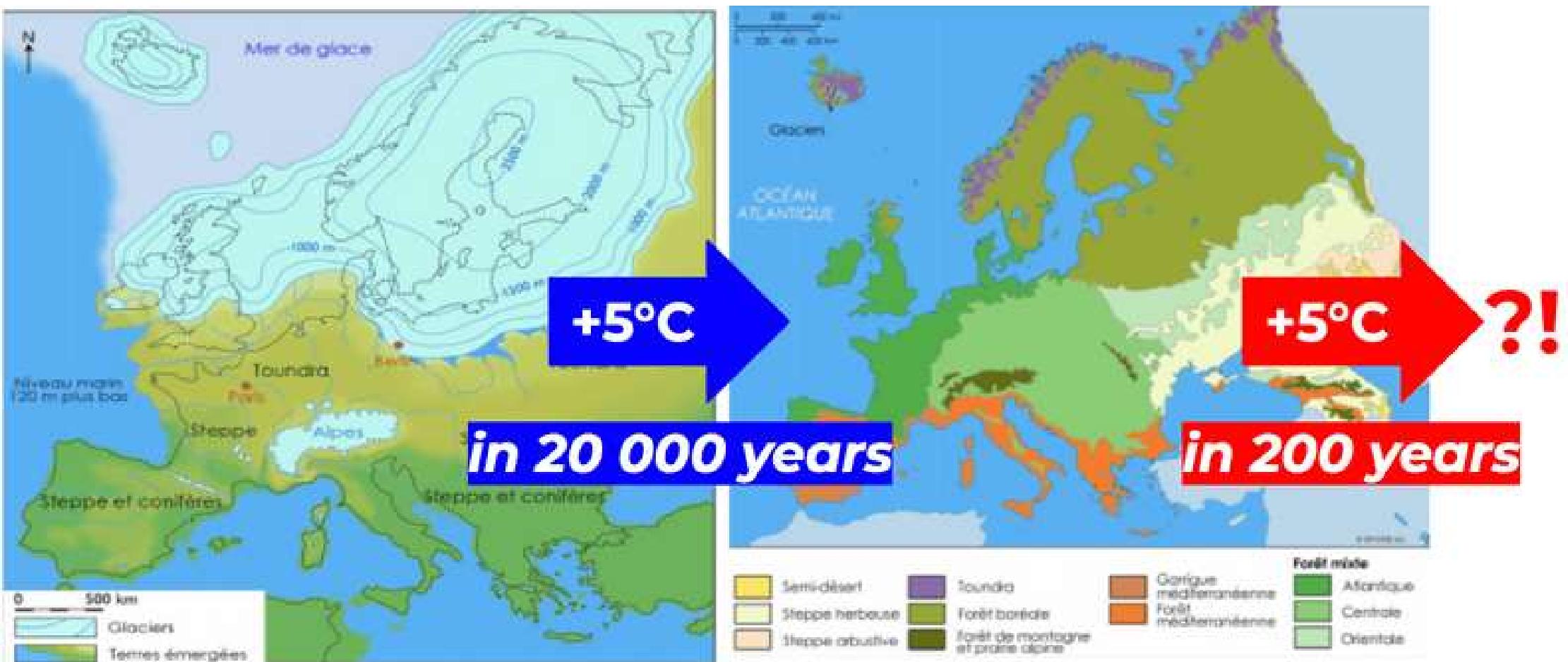


### Wild mammals

2% of biomass



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



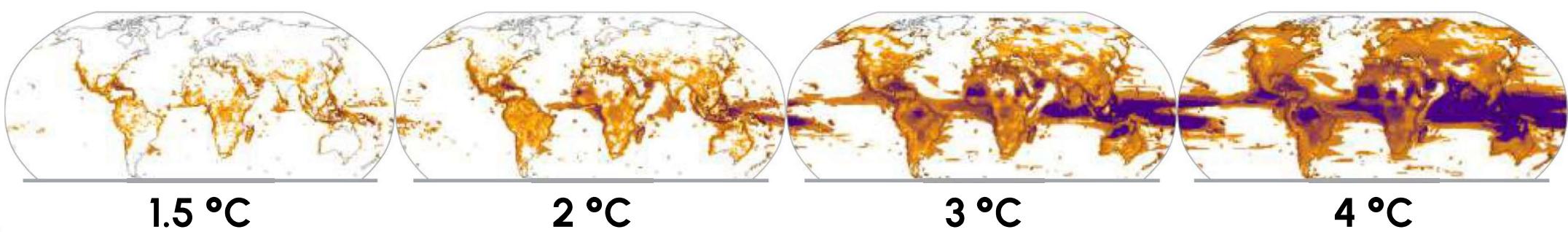
**Europe, 20 000 years ago**  
1 to 2 km of icecap over the north of Europe

**Europe, today**

Source : Carbone 4



## RISK OF SPECIES LOSS DUE TO WARMING



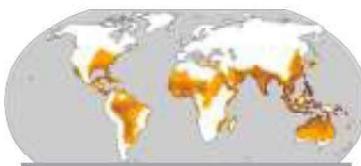
- Global warming is a deadly threat to biodiversity
- The impacts of global warming are getting worse faster with every rise in temperature
- Every tenth of a degree counts!

Adapted from IPCC synthesis AR6 figure SPM.3

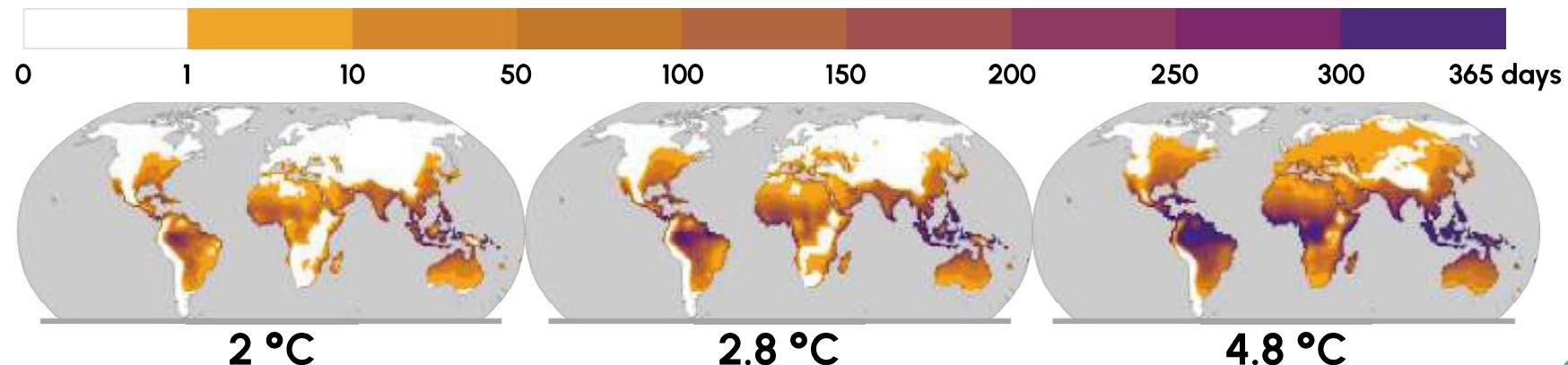


## GLOBAL WARMING AS A RISK TO HUMAN HEALTH

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



1991 - 2005



**Every tenth of a degree counts!**

# CLIMATE : OVERCOMING THE TRIANGLE OF INACTION

## ASSIGNING RESPONSIBILITY TO OTHERS DOES NOT TRIGGER ACTIONS

6 "Politicians do little for the public interest, they are often there for their personal interest."

5 "We have the policies we deserve: it's up to citizens to vote for the relevant politicians."

4 "Most resources are in the hands of companies, the Government cannot afford all investments."

1 "Large corporations and lobbies have the power to act and they curb ecological initiatives as much as possible."

2 "The choices are up to the consumer, we deliver what they want."

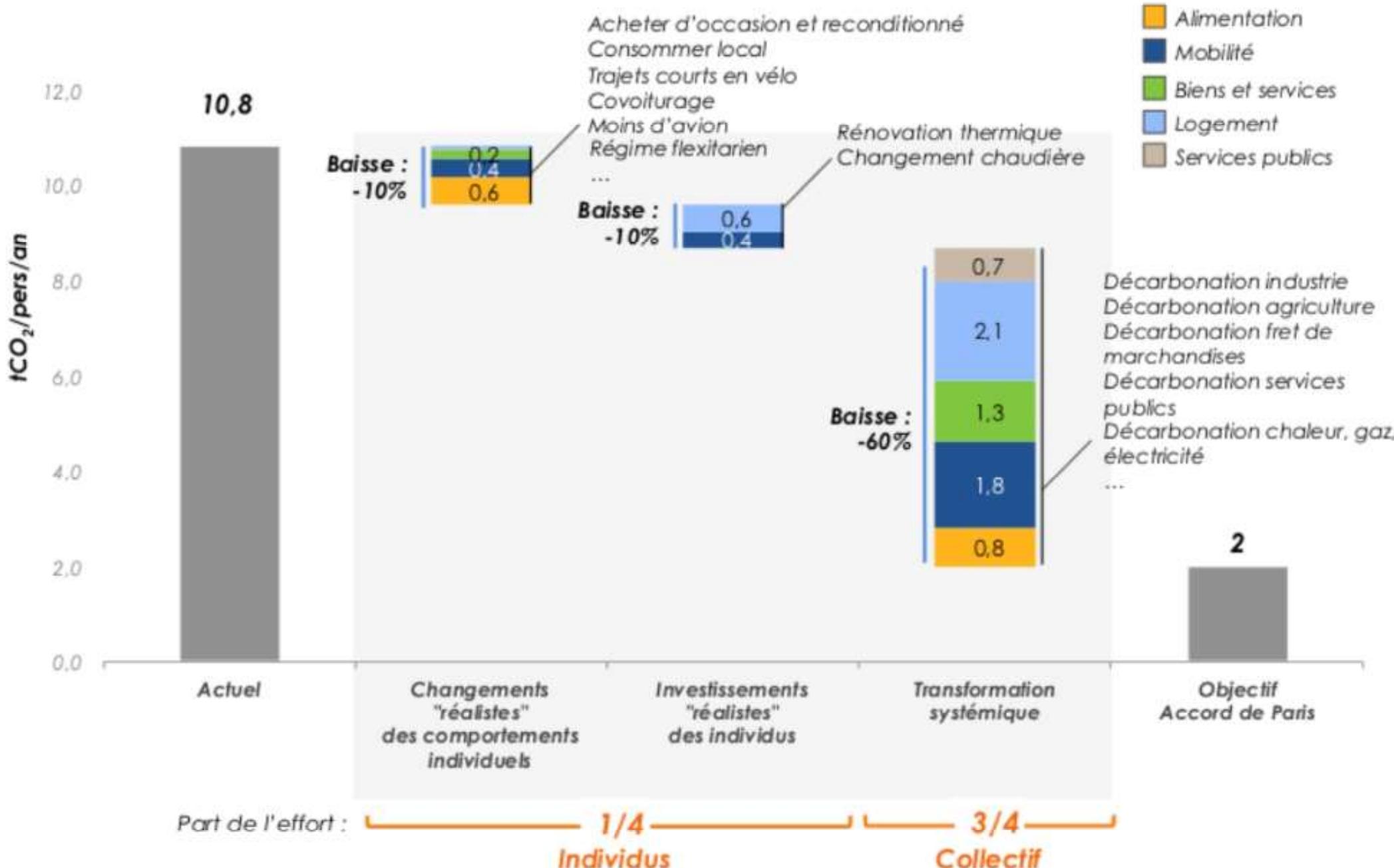
3 "It's up to the Government to set the new rules: if our company moves before our competitors, we will lose money."



Source : Pierre Peyretou

# Leviers de réduction de l'empreinte carbone moyenne

Engagement personnel « réaliste » des individus\*





Fort impact environnemental



Ecogeste difficile à réaliser



Ecogeste facile à réaliser



Faible impact environnemental