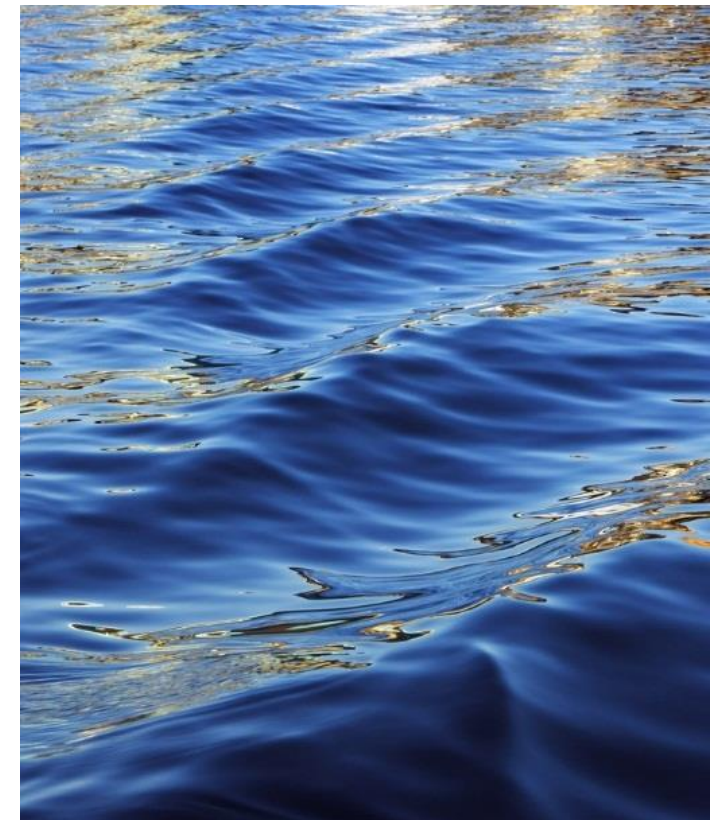




Greener Green Climate Change

Partner name: ULiège
Date: 3 April 2023



Partners


1. BLUE ROOM INNOVATION – SPAIN
2. IDEC – GREECE
3. FEDERATION DES ASSOCIATION DE PARENTS D'ELEVES DU LUXEMBOURG
4. UNIVERSITE DE LIEGE – BELGIUM
5. PRIMARY SCHOOL OF VAREIA – GREECE
6. Instituto Agrario Bell-lloc del Pla SA – SPAIN
7. Scuola Europea di Varese – ITALY




Content

- What is the difference between weather and climate ?
- What is global warming ?
- Which evolution for future of the global warming ?





What is the difference
between weather and
climate ?



Difference between weather and climate

Weather

- instantaneous concept
- evolution directly perceptible by humans
- For example:
 - This morning, it is 10°C in Liege
 - The atmospheric pressure is 1000hPa
 - The wind is blowing from the SW at 15km/h.

Climate

- statistical concept
- evolution completely imperceptible by humans without instrumentation
- For example:
 - In Liege, over the climatic period, 1981-2010
 - The average temperature was 9.9°C
 - It rains 882 mm on average per year
 - It freezes on average 57.7 days per year.



Difference between weather and climate

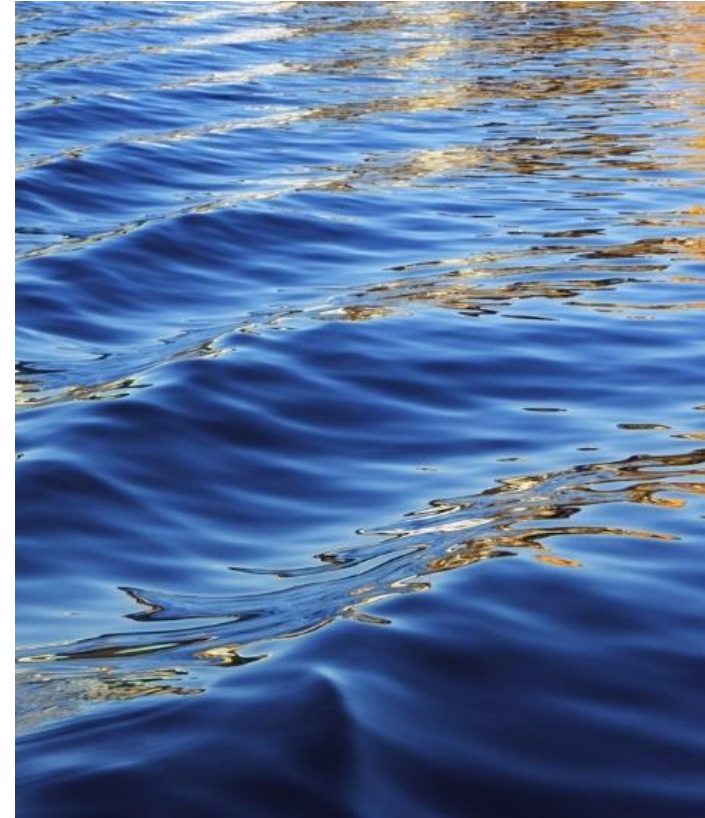


- Confusing between :
 - the daily time scale related to the arrival of cold air
 - the time scale of global warming which corresponds to $+1^{\circ}\text{C}/100$ years.
- Confusing between
 - the regional spatial scale of the USA
 - the spatial scale of the whole Earth with respect to global warming.



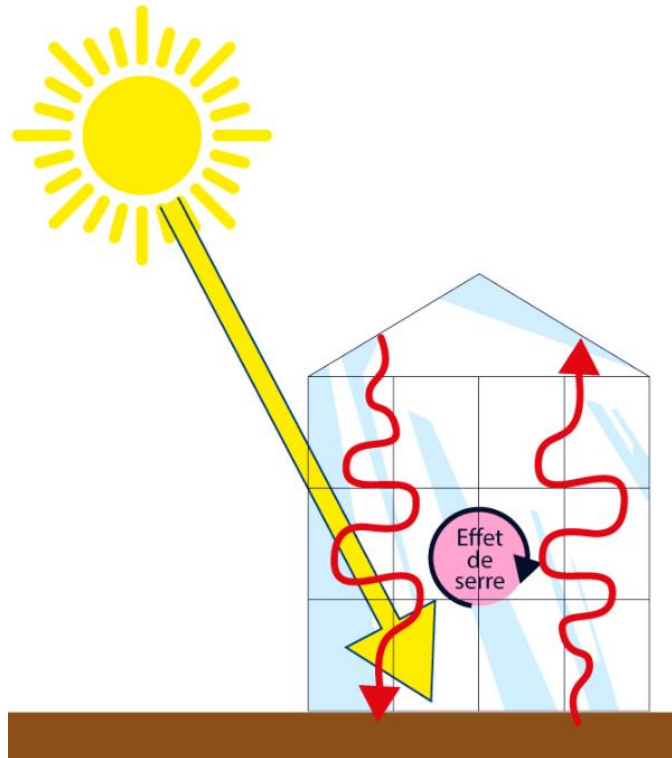


What is global warming ?

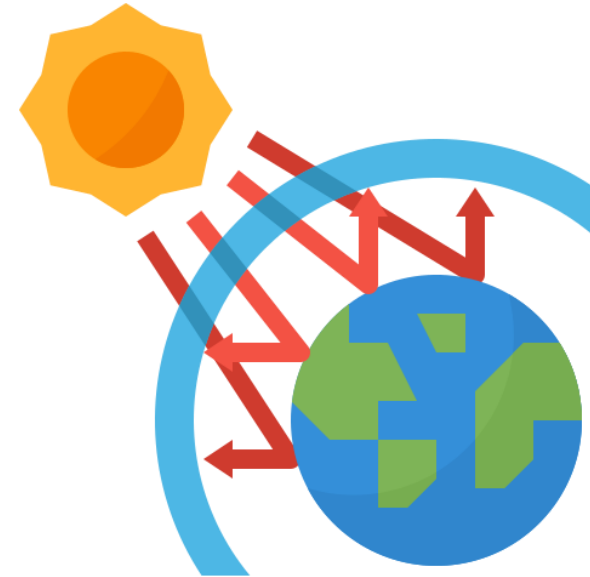


What is global warming ?

Like a gardener greenhouse



Heat is “trapped” by greenhouse gases



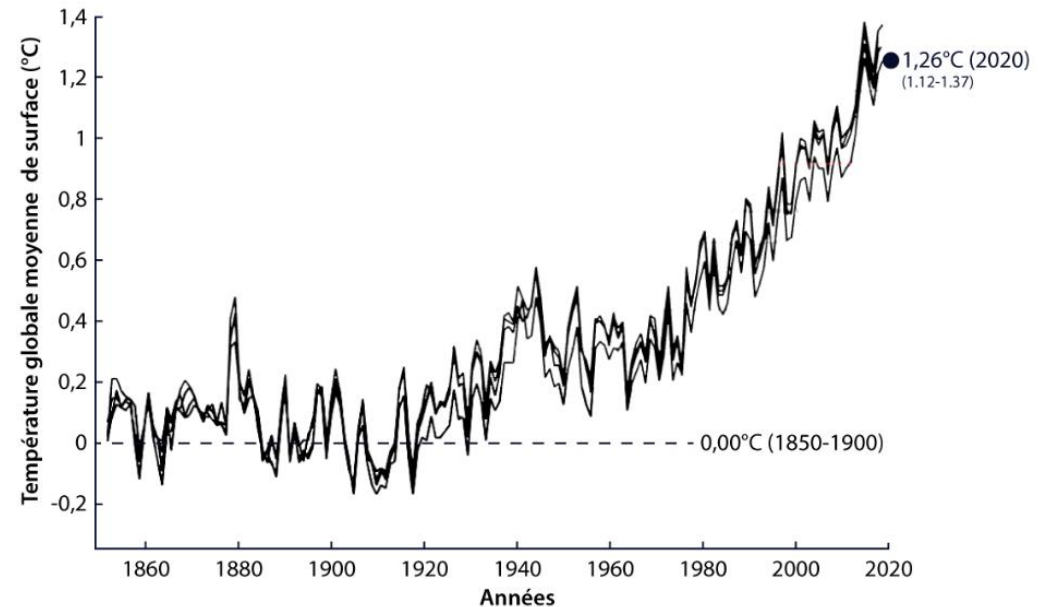
- the more greenhouse gases are injected in atmosphere
- the more heat is trapped



Global warming increase from 19 century

- + 1,26°C in 2020
 - At global scale
 - Compared to the 1850-1900 temperature mean

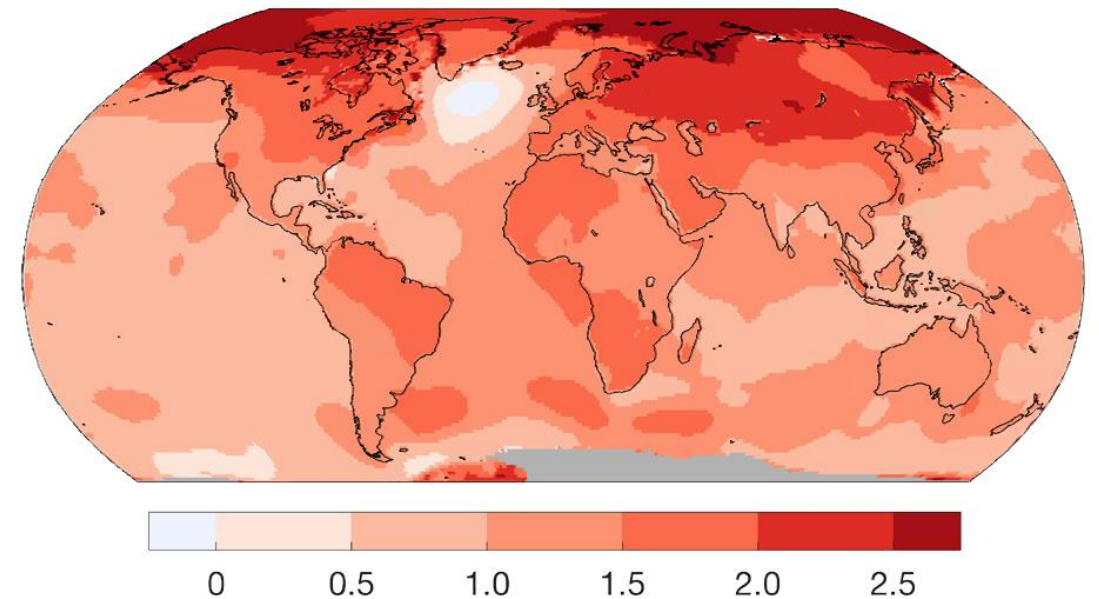
Changement observé de la température de surface moyenne mondiale
par rapport à 1850-1900 en utilisant quatre ensembles de données



Source : https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter_01.pdf

Global warming increase from 19 century

- + 1,26°C in 2020
 - At global scale
 - Compared to the 1850-1900 temperature mean
- It impacts all the whole world



Source : https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter_01.pdf



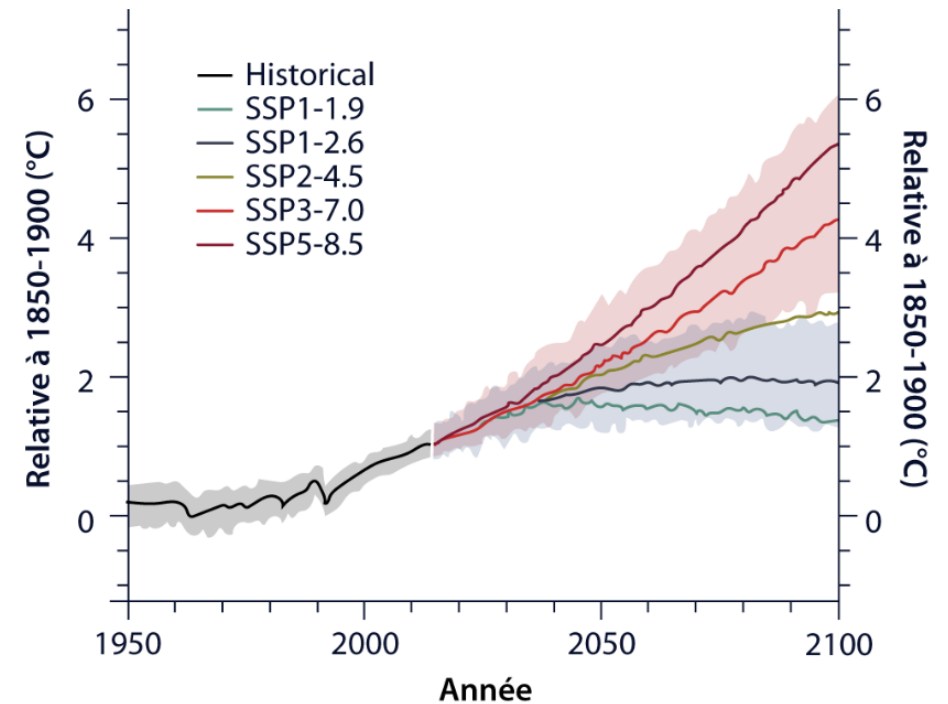
Which evolution for future
of the global warming ?



Which evolution for future of the global warming ?

- Different socio-economic scenarios are establish
 - From **low (SSP1)** greenhouse gases emissions
 - To **high (SSP5)** greenhouse gases emissions
- Temperature reaches from **+1,5°C to 5,5°C** depending on the scenario

Évolution globale projetée de la température en surface



Source : https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter_04.pdf



Global warming is not just a question of thermometer ...

- Impacts on :
 - the melting of the polar ice sheets and glaciers
 - the melting of permafrost
 - the rise of sea level
 - the intensification of some extreme events
 - more intense rains
 - record floods
 - more and more frequent droughts
 - increasing impact on our agriculture.
- Schools have roles to :
 - Inform
 - Raise awareness
 - empower
- the future citizens





Project 2021-1-ES01-KA220-SCH-000032687

