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**-872 fellows, 22% of us being from foreign countries (USA, China, India, ...). 46 of our fellows are Nobel Prizes, -8 Divisions.**

**-President EurASc: Rodrigo Ferrão de Paiva Martins, University NOVA de Lisboa, Portugal**



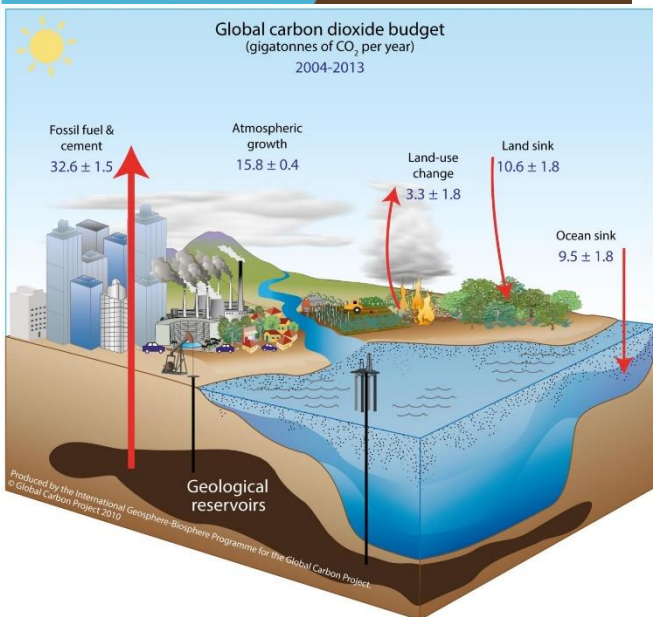
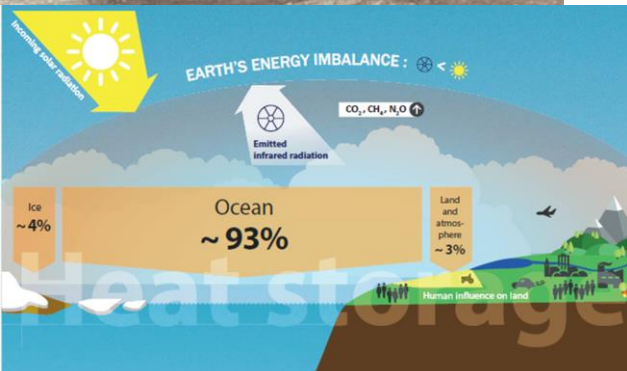
**-Earth and Environmental Sciences Division, chaired by John R. Porter, University of Copenhagen, Denmark, IPCC Coordinating Lead Author – Food Security.**





**Planet Ocean offers unvaluable resources and ecosystem services to humanity.** The ocean used to be the master of climate but now:

- 90% of the excess heat** due to the green house gas emissions is absorbed by the ocean; **30% of the anthropogenic CO<sub>2</sub>** emissions are picked up by the ocean.
- Transfer of **pollutants**; **overexploitation** of resources.



-So, it's hard time for the ocean, with many consequences for our daily life.

# United Nations Decade of Ocean Science for Sustainable Development (2021-2030)

Credit: NASA



2020 and 2022

FRONTIER FORUM ON PROGRESS  
IN OCEAN SCIENCE AND TECHNOLOGY



Professor Jing Zhang,  
ECNU, Shanghai



Professor emeritus Paul  
Tréguer, IUEM-UBO, Brest

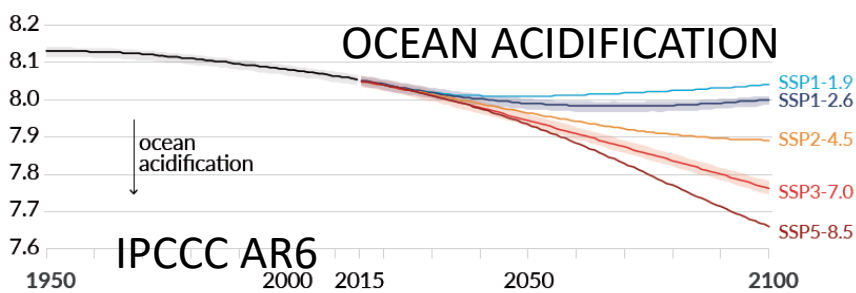
# 1-What are the impacts of climate change on the ocean? Among them:

-risks of **submersion** for european countries.

-ocean **acidification** vs. biological resources.



(c) Global ocean surface pH (a measure of acidity)

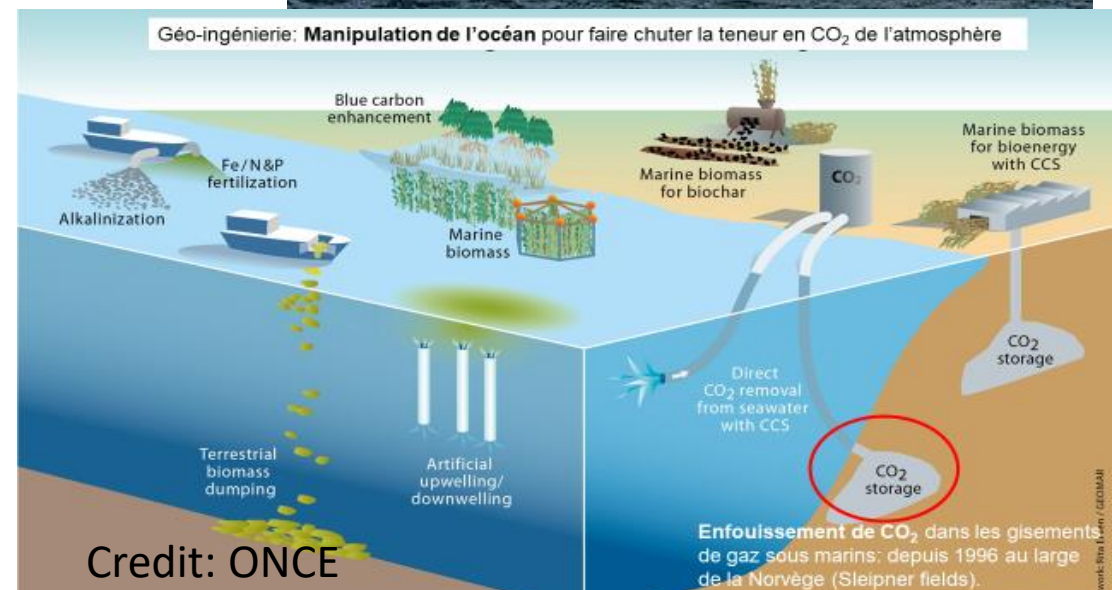


# Solutions

-Drastically **reduced GHG release** in atm.

-Rapidly develop **renewable energies**.

-**Stop** funding fossil energies.



## 2-What are the other impacts of anthropogenic activities?

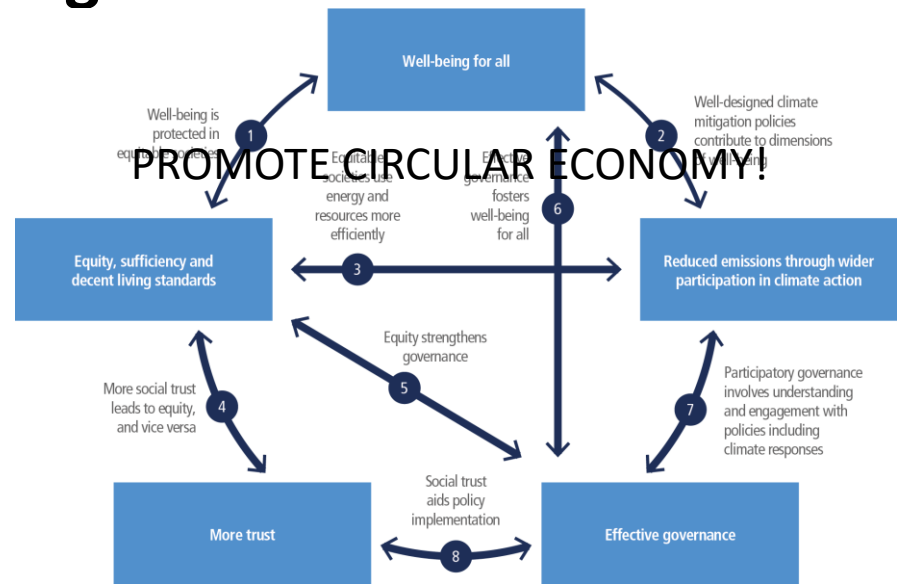
- overexploitation** of resources.
- the release of **pollutants** and **plastics** (cf. the macro- and microplastics problem).



## Solutions:

- Regulate the exploitation** of the ocean and coastal fisheries. EP is doing a good job!
- Stop releasing** pollutants and plastics (Kenya cf.)

Help provided par Artificial Intelligence for building **digital twins of the ocean** as tools for MSP.



**EurASc strongly supports the IPOS initiative**, especially as a tool for putting the **ocean issues at the highest international level**, and to dialog with political and economical stakeholders and deciders.