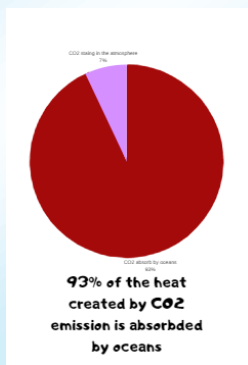




<https://childrenfortheoceans.eu/>

Climate change and oceans

Oceans represent 2/3 of the planet surface and are extremely impacted by climate change. They are a real regulator of climate perturbations. They absorb 93% of the heat created by the rise of the CO₂ in the atmosphere what changes their own temperature. Thus, in the water by 300m of depts, temperature rose by 0.3° and will keep increasing. At the surface, if the greenhouse gas emissions are not diminished, water temperatures could be up to 3° above nowadays one.



Oceans absorb atmosphere heat through two processes. On the one hand, by absorbing the CO₂ being on the water surface, coming from the rain, or dissolved by a chemical reaction. On the other hand, thanks to phytoplanktons present in the water close from the surface absorb the CO₂ and transform it in oxygen through the photosynthesis process. Marine flows make colder waters circulate and foster the CO₂ catchment. Nevertheless, with the global

warming, this absorption phenomenon is slowed down limiting the regulator role of the ocean.

Consequences are dramatic for marine ecosystems. With the water warming, numerous species living in cold water could be disappearing. Toxic

algae could proliferate and make some ecosystem uninhabitable for marine mammals. Finally, the rise of sea waters is alarming. It could be up to 40cm or 100cm making disappear some islands and coasts.

1 atomic bomb per second

it's the equivalent of the heat captured every second by the oceans for the last 150 years.