

Conferences Actives Multimédias

TOULOUSE
INP N7

Mini-mural based on the
concept of serious games:



The decrease in marine biodiversity

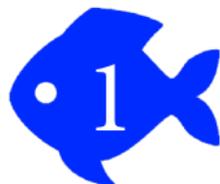
This mini-mural details the main causes and consequences of
marine biodiversity loss.

Pierre Artus, Noé Boiteau, Magali Taladoire

Overfishing



Since the beginning of the 17th century, humans have recognised that the ocean's fisheries resources are being overexploited. But since the 20th century, this has intensified in a worrying way. Indeed, the new industrial fishing is little controlled, fish and seafood are caught in large quantities, regardless of their size and area. This can even endanger the existence of certain species.

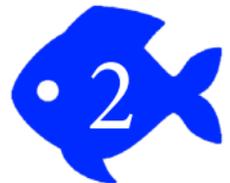


Migration

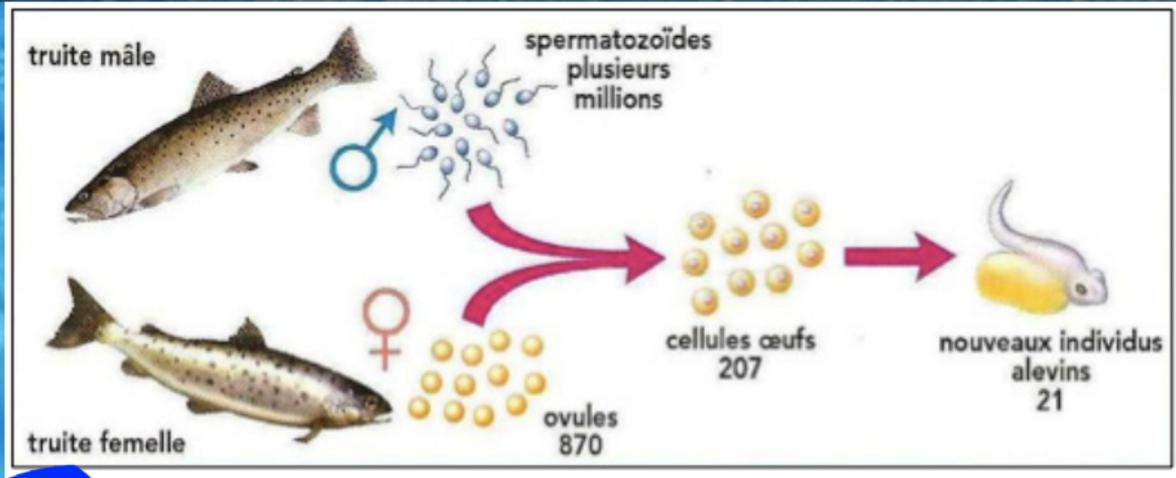


In the immense space that is the ocean, the different species have many habits of which migration is part. Whether the motivation is for feeding or reproduction, it is essential in the life of a species. However, for some time now, we have been observing numerous migratory upheavals.

Set 1

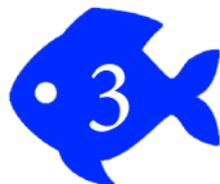


Disruption of reproduction



All the modifications directly impacting the marine populations on their locations, their numbers of individuals and their dwelling places complicate the reproduction and development of certain species.

Set 1

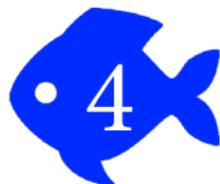


Famine



Marine biodiversity is a huge food source for humanity, which we cannot do without at present. However, the reduction in biodiversity is jeopardising this resource, leading to famines that affect the least developed countries first.

Set 1

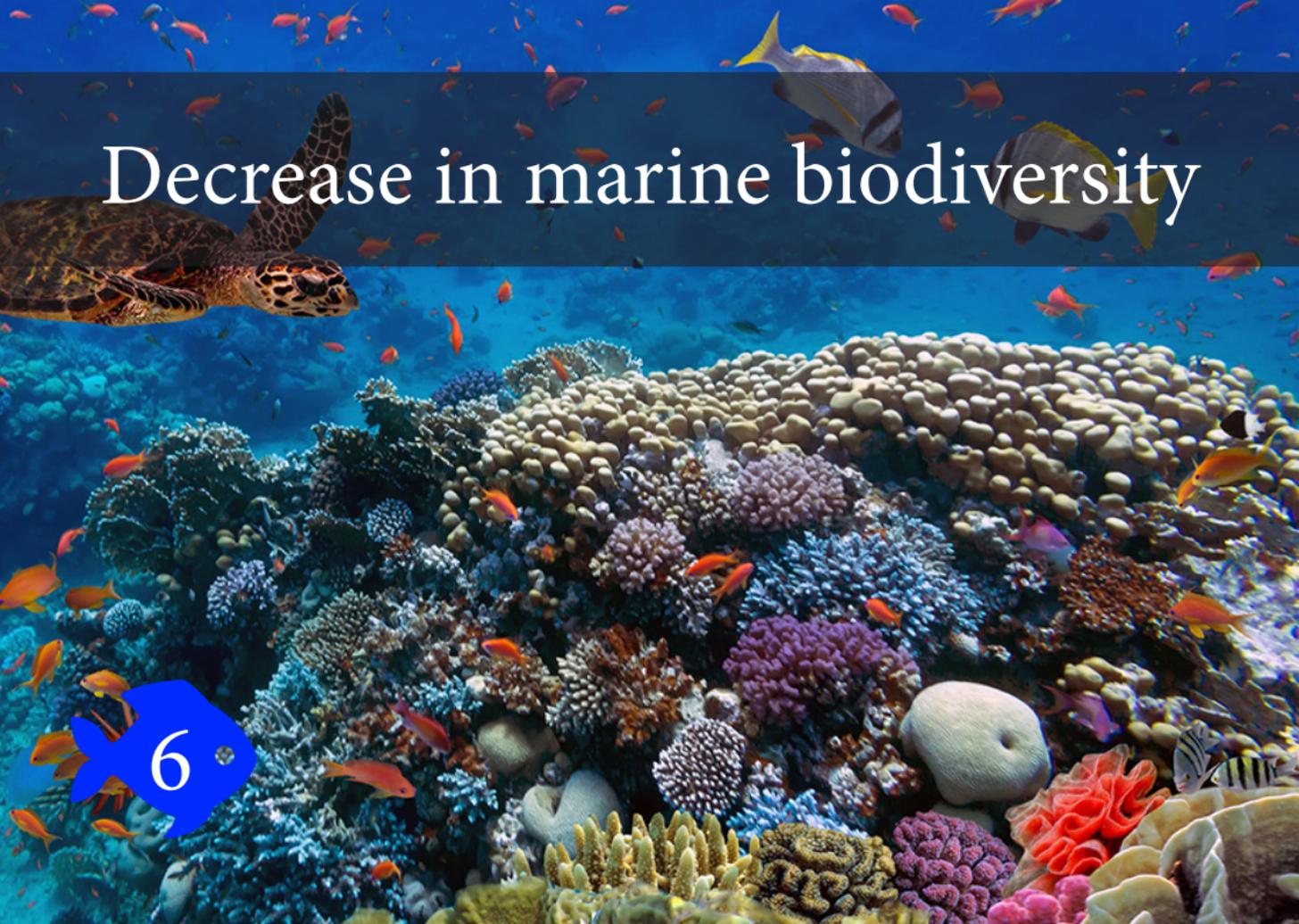


Medical research and industry



A decrease in marine biodiversity includes a decrease in the number of genes and molecules present in the ocean, which may be important for medical research and industry.



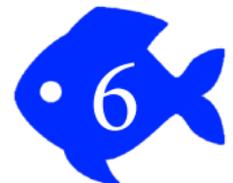


Decrease in marine biodiversity

6

Marine biodiversity is under threat due to a number of factors. This decline in diversity is not without consequences for life on Earth.

Set 1



Disruption of the growth of marine organisms



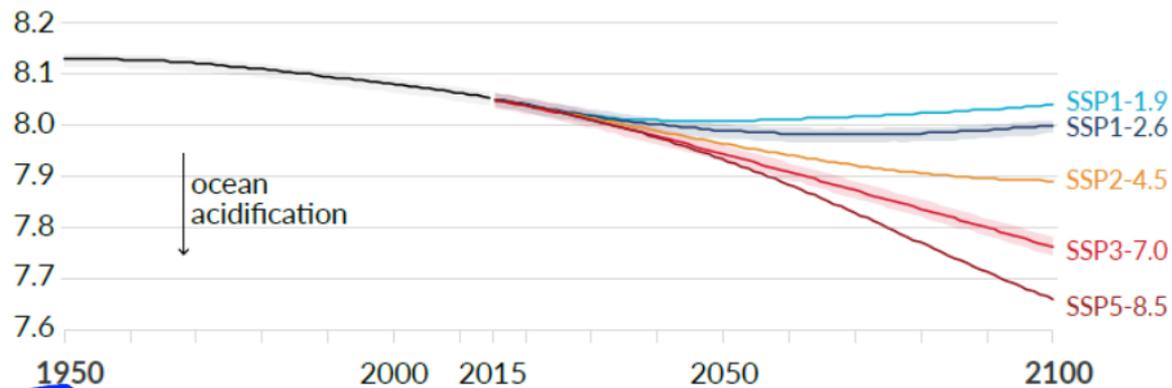
Ocean acidification impacts the growth of some marine organisms that have a calcareous skeleton or shell.

Set 1

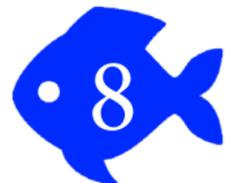


Ocean acidification

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



Ocean acidification (pH reduction) threatens the ocean ecosystem, including the ability of plankton and corals to thrive. Plankton itself is at the bottom of the food chain, but also plays a key role in most biogeochemical cycles in the aquatic environment.



Exceptional weather events

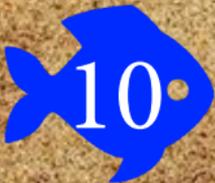
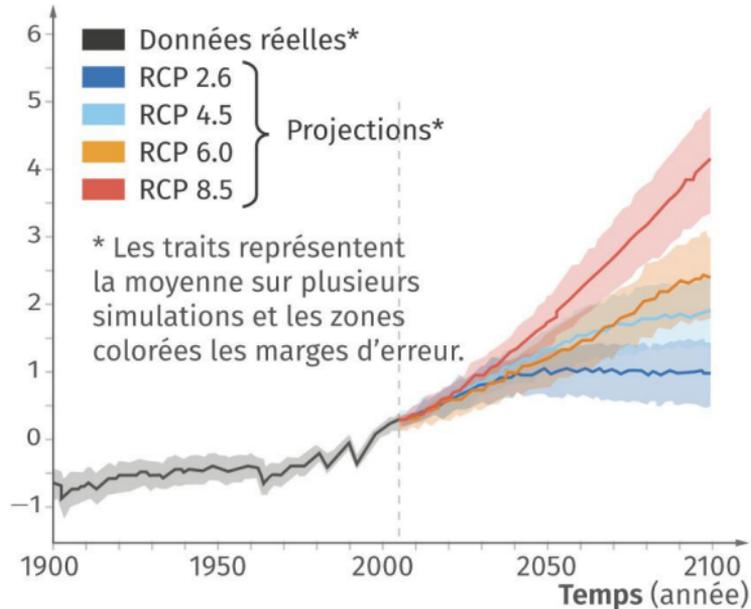


With global warming, many weather events such as hurricanes, floods and heat waves are becoming more frequent and severe. These events can even threaten the living areas of some species.

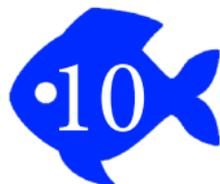


Temperature increase

Réchauffement global en surface (°C)



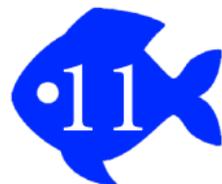
Since the beginning of the 20th century until today, that is to say the industrial era, the average temperature of the planet has not stopped increasing to reach the value of 1°C more. This is the highest temperature increase ever recorded during the Anthropocene. Rising water temperatures affect the habits of marine life and coastal ecosystems.



Alteration of coastal ecosystems



Coastal ecosystems such as mangroves or sea grass beds are real carbon sinks. They also act as nurseries for many species. Their alteration therefore has a significant impact on the marine ecosystem.



Pollution



From plastic waste to chemical discharges from industry to oil spills, the ocean is being put to the test. This pollution is not without consequences on the marine fauna and flora.