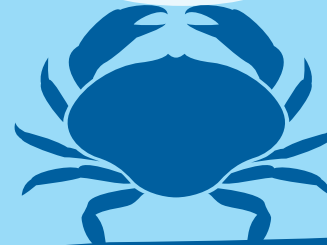
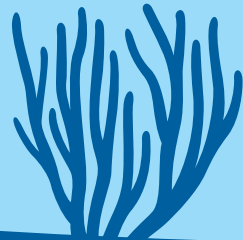


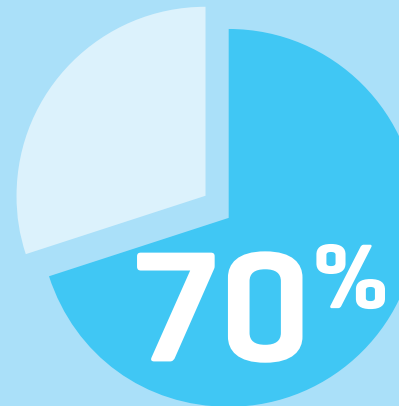
Ocean Facts

World Ocean Day 2021

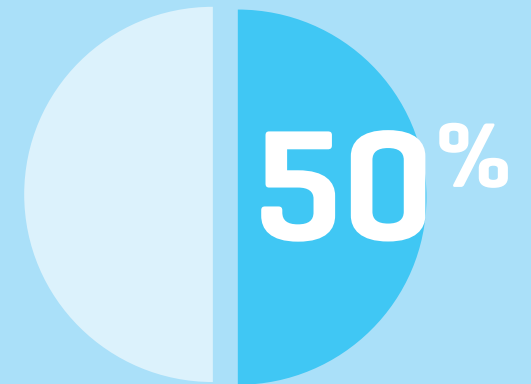


Ocean Fact 01: The Global Ocean

Did you know that the **entire ocean covers 70 percent** of the surface of our planet, and the **deep sea 50 percent**? The area of the Pacific Ocean alone is larger than the entire land area of the Earth.



Ocean

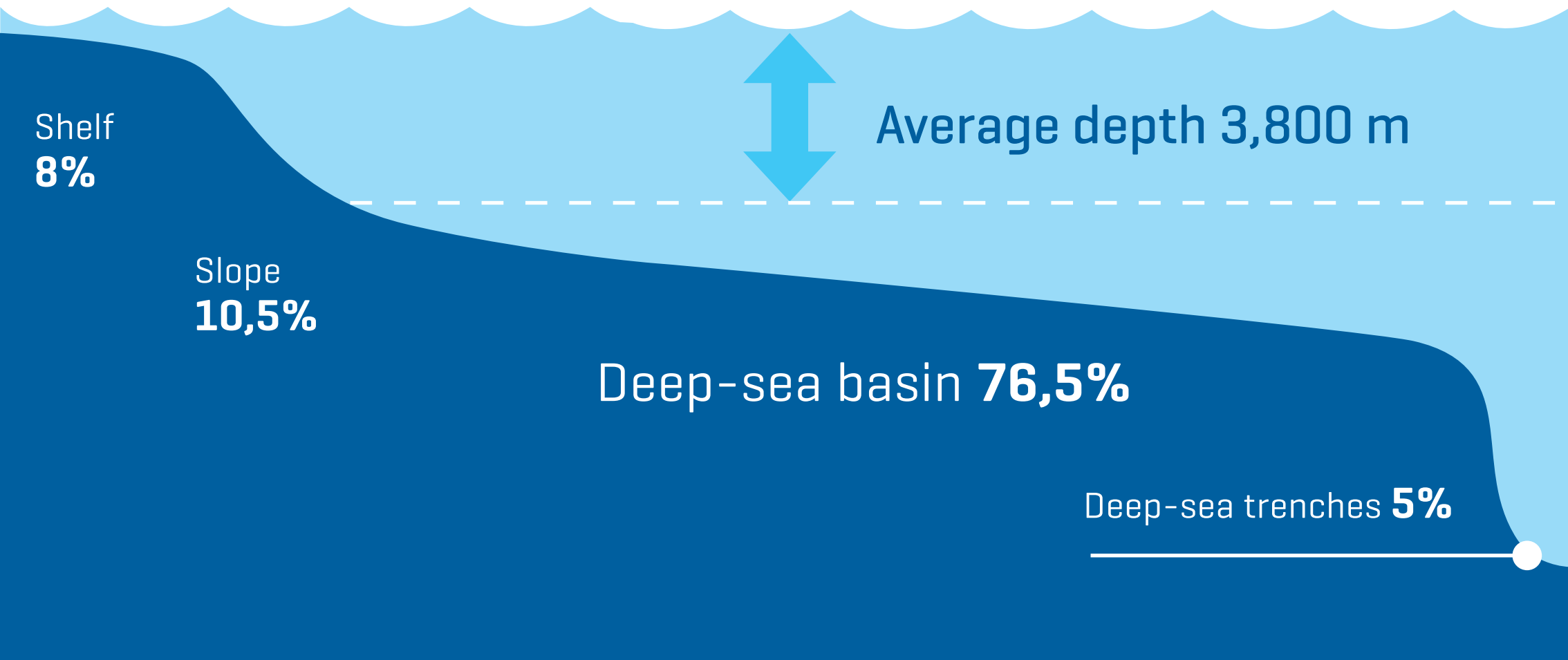


Deep sea

Ocean Fact 02: The Deep Ocean

Did you know that the ocean is on average depth of **3,800 metres?**

The deepest point of the ocean is the Challenger Deep in the Mariana Trench at about **11,000 metres.**





Ocean Fact 03: Mapping

Did you know that high-resolution multibeam echo sounder data are only available for just under **20 percent of the entire seafloor?**

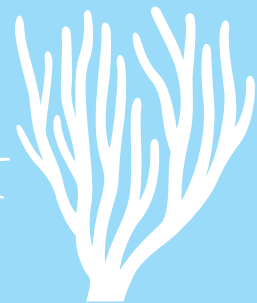
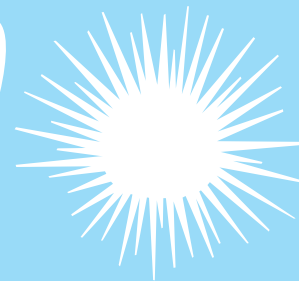
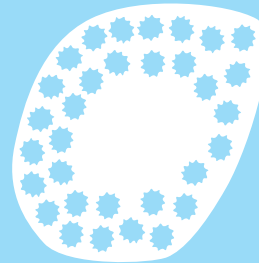
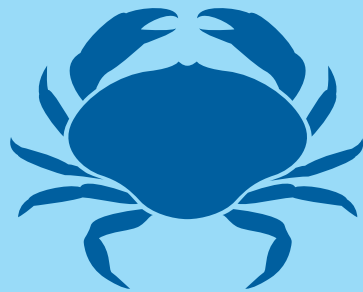
Echo sounders are the only method to map the large areas of the seafloor directly.

20%

Ocean Fact 04: Biodiversity

Did you know that the ocean contains roughly **one million different species of plants and animals**, up to **two thirds** of which have not been named and described yet?

← 1 Million Species →

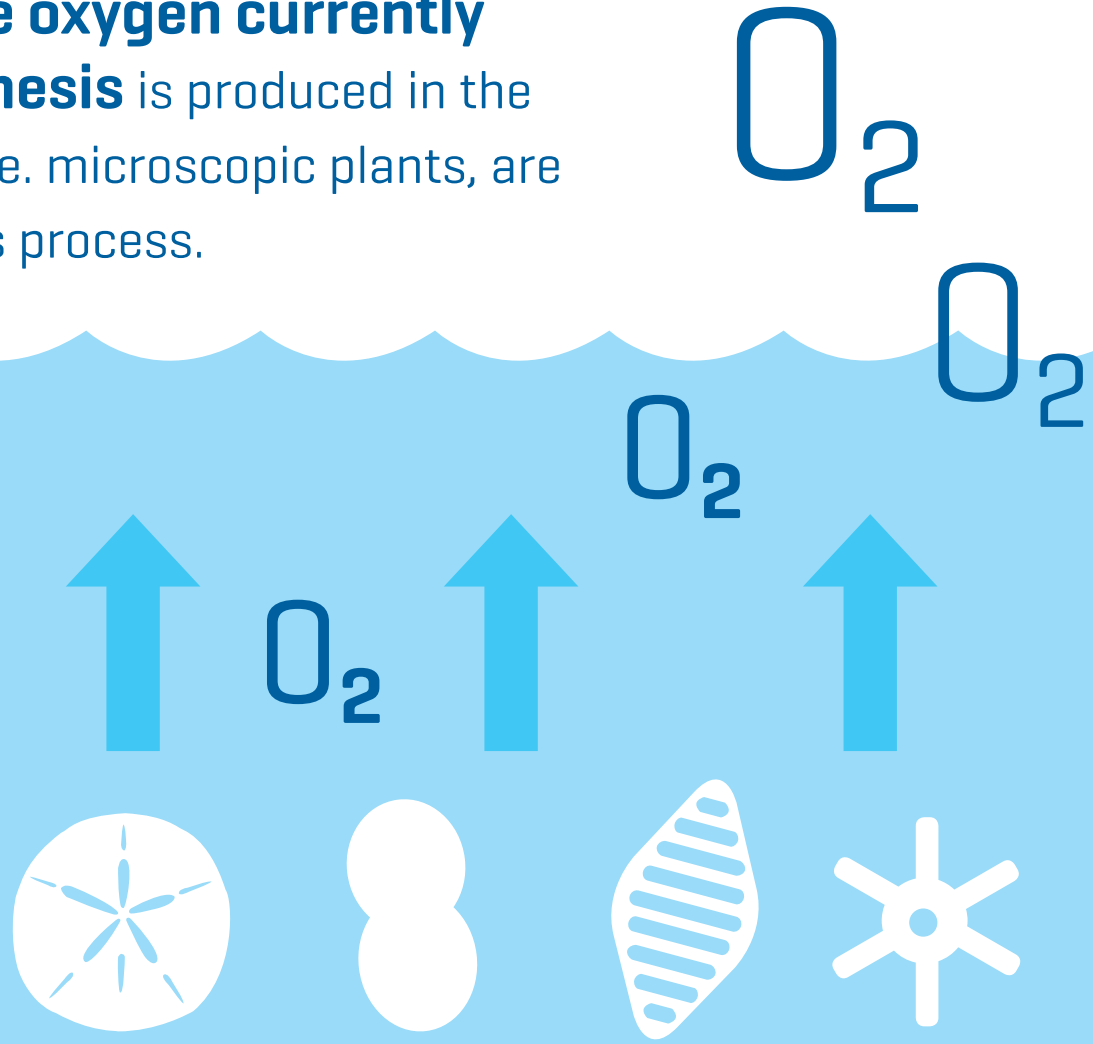
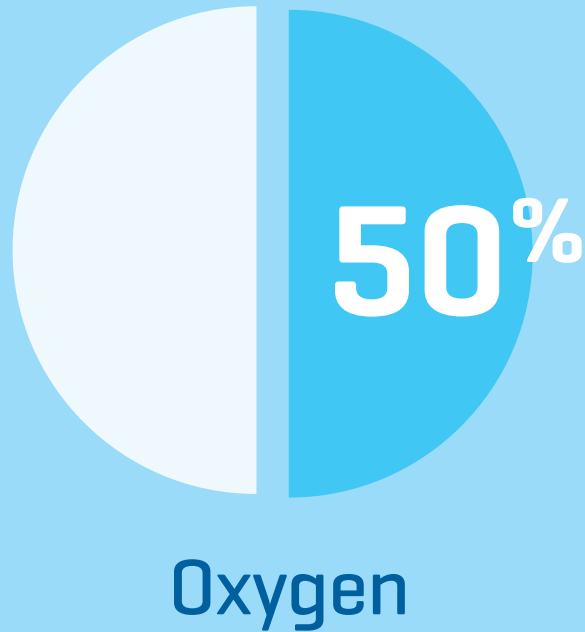


known

unknown

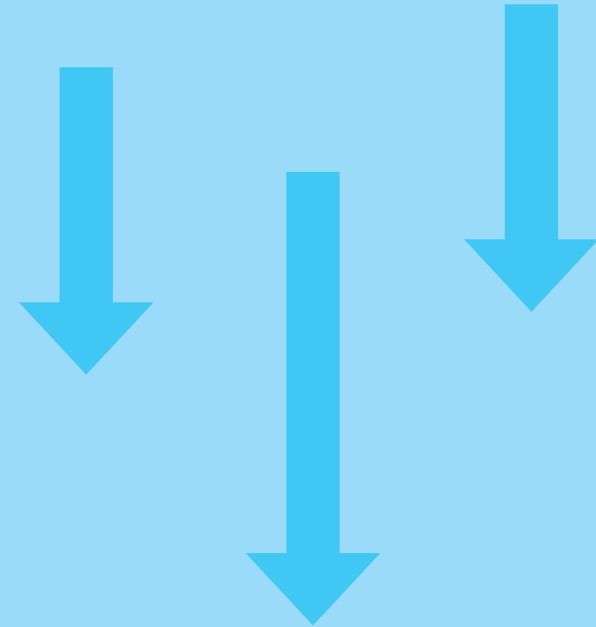
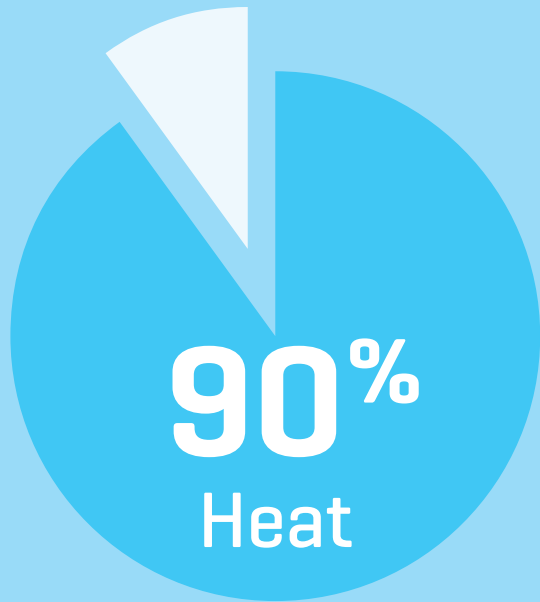
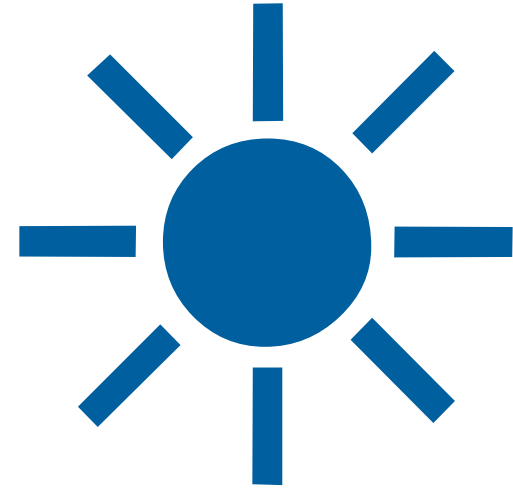
Ocean Fact 05: Oxygen through Plankton

Did you know that **half of the oxygen currently generated by photosynthesis** is produced in the ocean? The phytoplankton, i.e. microscopic plants, are essentially responsible for this process.



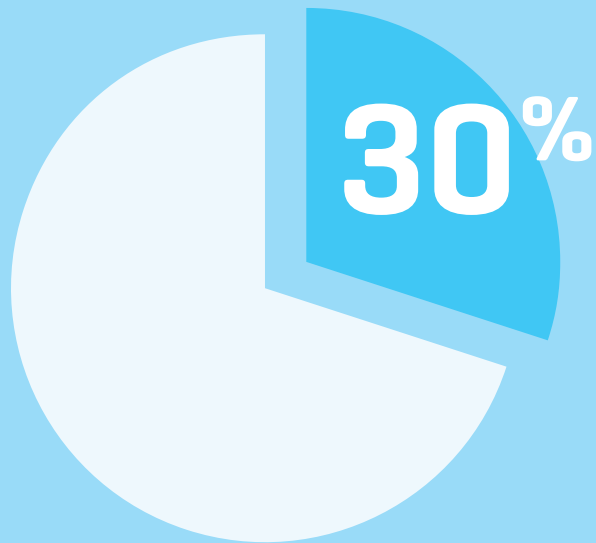
Ocean Fact 06: Heat Storage

Did you know that the ocean is delaying the effects of climate change by absorbing more than **90 percent of the extra heat energy** so far?

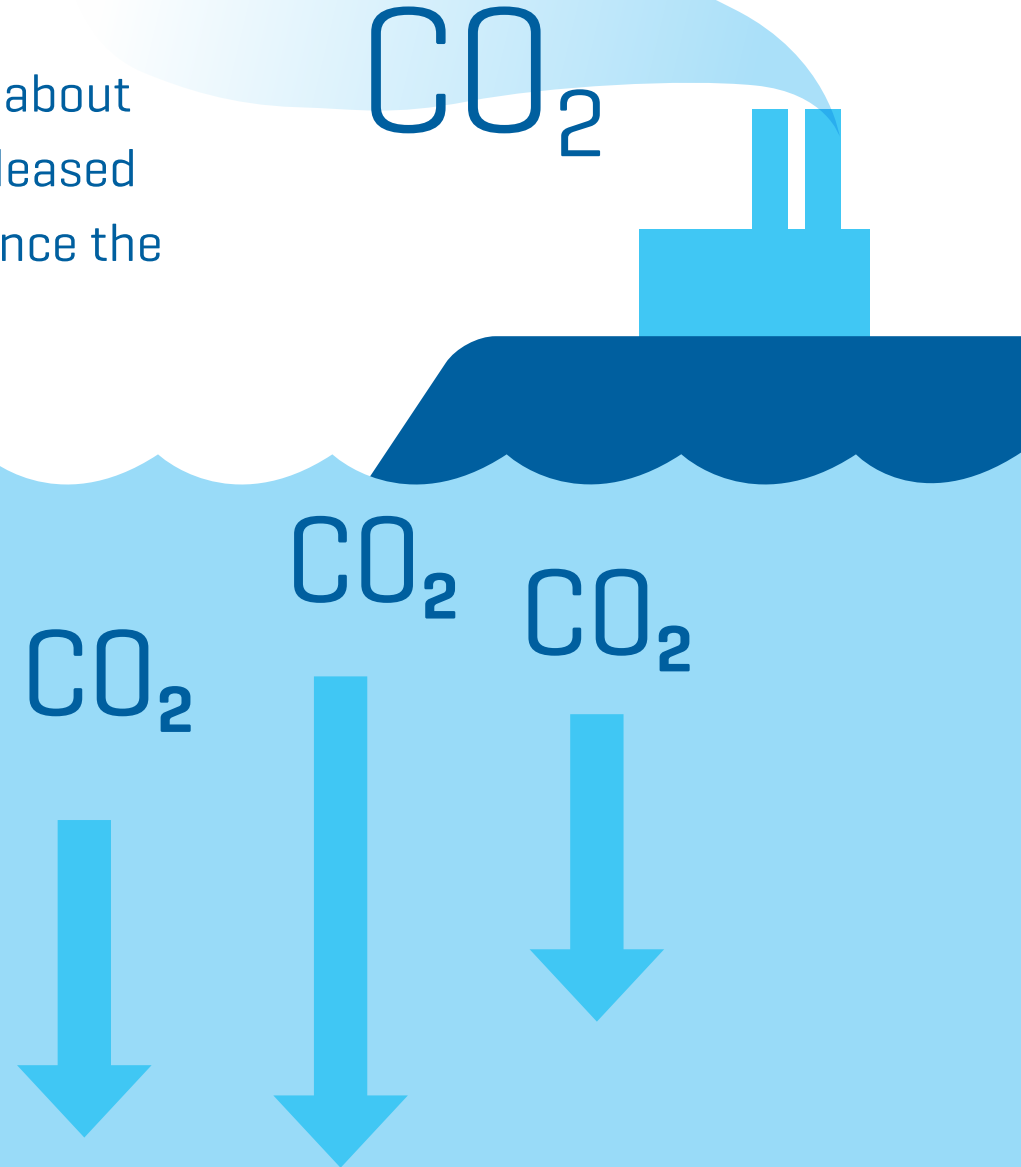


Ocean Fact 07: Carbon Storage

Did you know that the ocean has absorbed about **30 percent of the carbon dioxide** released into the atmosphere by human activities since the beginning of industrialisation?



Carbon dioxide



Ocean Fact 08: Acidification

Did you know that the **pH value in the ocean has decreased from 8.2 to 8.1** due to the previous uptake of CO_2 ? This seems to be a small difference but it already corresponds to an **increase in acidity of 30 percent**.

CO_2

Acidity

1820



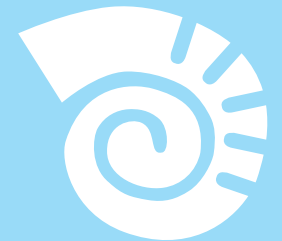
+30%

2020

+150?%

2100

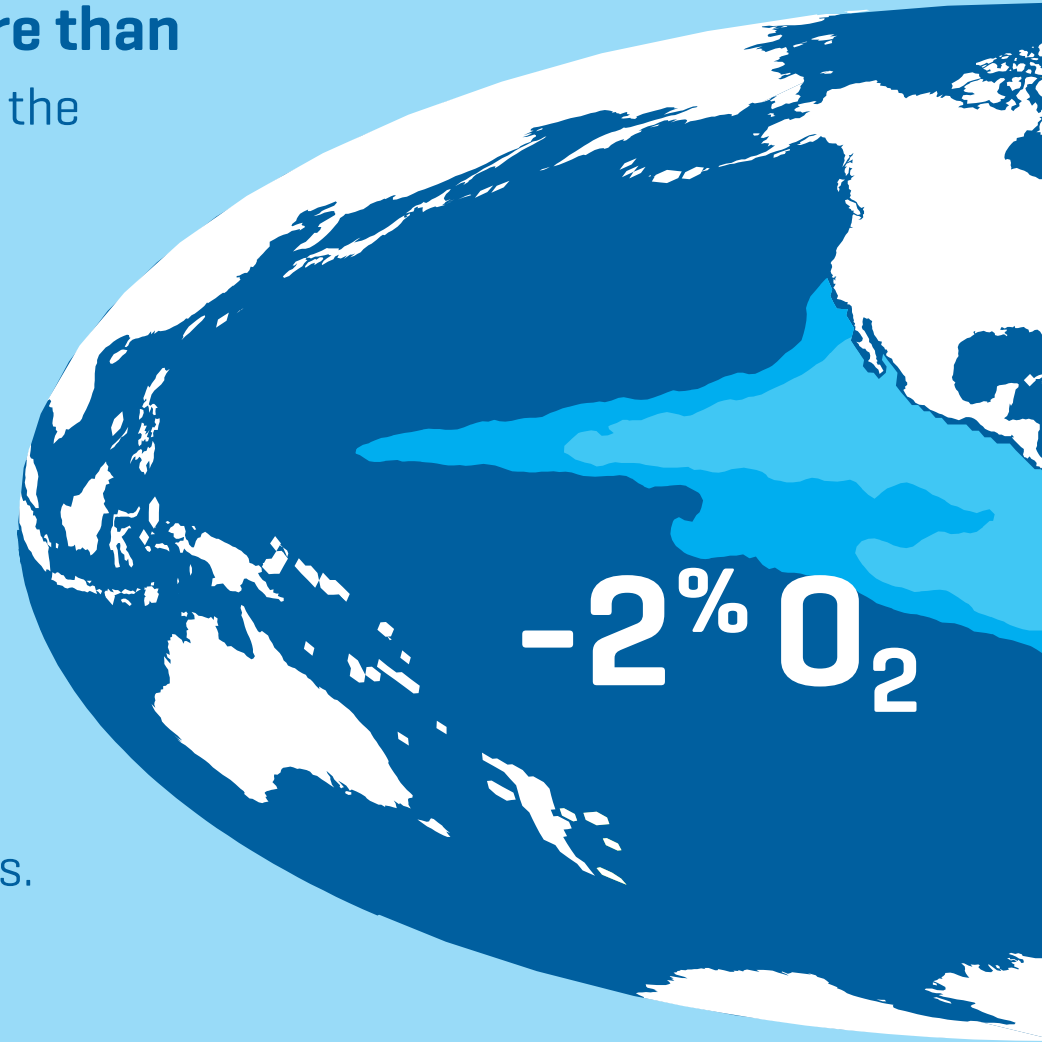
By the end of the century, the pH value could probably drop by another 0.3 to 0.4 units, making seawater **100 to 150 percent more acidic**. This would become in particular an increasing problem for calcifying organisms, even leading to the disappearance of entire species.



Ocean Fact 09: Oxygen Loss

Did you know that the ocean has lost **more than two percent of its oxygen** globally in the past 50 years? The main cause is global warming. The warmer the seawater, the less O_2 can be bound in the water.

In some areas of the ocean, oxygen levels have decreased by **up to 40 percent**. The amount of water in the ocean that lacks any oxygen **has grown by a factor of four** in the past 50 years.



Ocean Fact 10: Global Sea Level

80

70

60

50

40

30

20

Did you know that the average global sea level has already risen by **about 15 centimetres** in the 20th century?

1901-1999: +15 cm

2100: +50 to +100 cm

According to current projections, a global mean rise **of 50 to 100 centimetres** must be expected by the end of this century. Even without any greenhouse gas emissions, the sea level would rise for several centuries due to the inertia of the climate system.