LOW-TECH AT SAILOWTECH

DISSOLVED CO2 SENSOR

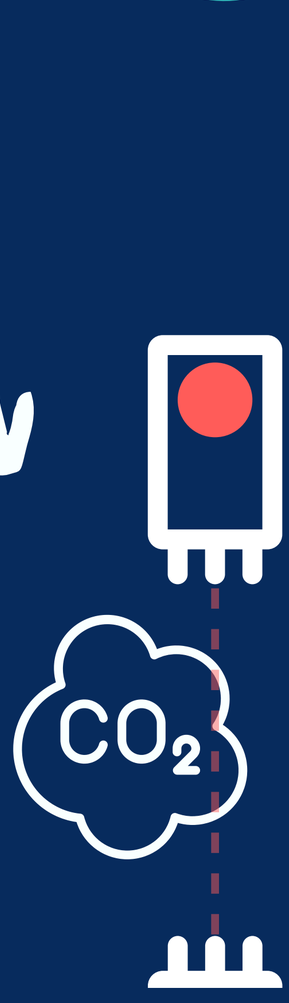
Oceans absorb **~⅓** of human-made CO_2, playing a **vital role** in climate regulation. However, rising CO_2 levels drive ocean **acidification**, disrupting marine ecosystems and threatening biodiversity. Accurate CO_2 level **monitoring is essential** to determine carbon sinks, yet traditional methods are costly and complex.

➡ Our affordable, **open-source** sensor provides continuous CO_2 measurement in seawater, designed for easy deployment. Using NDIR technology, it ensures high accuracy while integrating temperature, pressure, and humidity sensors in a compact, waterproof system.

Dissolved CO_2 can not be easily measured directly from the water, so we need to **mix water with air.**

The resulting air has now the same **CO_2 concentration** as in the water

We achieved an **accuracy** of ±30 ppm !



The **CO_2 level** in the air is measured using **NDIR** (infrared light) sensor.

A classical sensor would cost around **1200$** but our compact system is only **300$** !

Water is **pumped continuouly** from the sea (or from an ocean, or a lake, or a bathtub).

More **data** to understand **climate change**, carbon sinks and carbon emissions.!

EPFL MAKE !
USEFUL. CREATIVE. SUSTAINABLE.

MADE IN PARTNERSHIP WITH SENSE LAB EPFL

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