An open-air lab to study effects of climate change

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Scientists analysing marine species of Chile's Seno Ballena

- In one of the most inhospitable places on Earth, the southernmost part of Chile's Patagonia region, scientists are studying whales, dolphins and algae in order to help predict how climate change will affect the world's oceans.
- Seno Ballena fjord produces the kind of conditions that should be seen in other marine systems in the next few decades, when dramatic changes are expected in the environment due to increased carbon dioxide emissions in the atmosphere and the melting of glaciers.

Dire consequences

- The researchers are analysing the chemical, physical and biological variables of the waters, which show lower levels of pH, salinity and calcium, especially in the most shallow areas, as a consequence of climate change.
- The chilly fjord waters provide one of the most productive marine habitats in the world, where sardines and krill can be found in huge numbers.
- But climate change poses a threat to its ecosystem as the melting of a glacier on Santa Ines island and increased rainfall have led to rising levels of freshwater.
- If that continues, it would have dire consequences for whales as the plankton they feed on could disappear.
- Researchers are taking samples from eight stations around Seno Ballena to measure the effects of the melting glacier on Santa Ines.
- For now, they noted a slight drop in the number of humpback whales but an increase in other species such as sea lions, which previously were not present in that region, and dolphins.
- They also found a lower concentration of calcium carbonate, something

which can affect the shells of marine organisms such as mollusks or krill, a staple of whale.

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