

Ocean Warming and Sea Level Rise

NEGOTIATORS MUST FOCUS ON THE IMPORTANCE OF OCEAN HEALTH IN MANAGING CLIMATE CHANGE

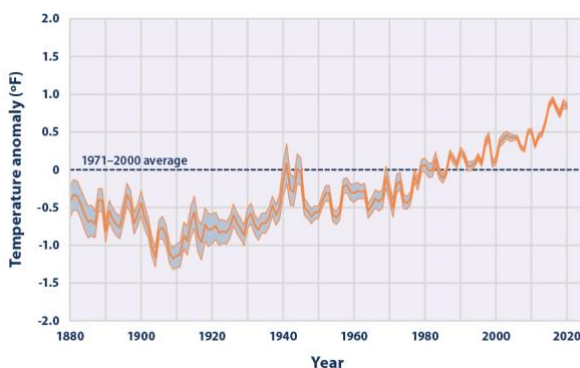
- **Oceans** continue to be a natural mitigator to the effects of climate change
- **Stronger mitigation targets** at a global level are needed, backed by a robust monitoring and compliance mechanism
- **Policies to protect ocean health** was not implemented at COP27
- **Funding must be allocated** in a more effective manner to focus on ocean health.
- **Conservation of oceanic areas** needs to be on the forefront of global nature preservation.
- **Re-evaluation of fishery management techniques** is crucial so that the effects of rising temperatures is not amplified by poor management techniques

What's the issue?

At COP26, the inclusion and importance of dialogue relating to the oceans role in climate change was solidified. The importance of the oceans role was recognized in the convention, where *Parties agreed to protect the climate system (Article 2), defined as the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions (Article 1.3)*. It was also recognized in the Paris agreement, where *Parties noted the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth*

In the Glasgow Climate Pact, parties continued the dialogue that was solidified above and agreed upon and noted the importance of ensuring the integrity of all ecosystems, as well as the importance of protecting, conserving, and restoring natural ecosystems.

Although parties were able to agree on the importance of the ocean and its role in global climate change, policies are often overshadowed and looped into policies regarding global emissions levels. Since greenhouse gas emissions (GHG's) are the primary cause in rising ocean temperatures. The changes in ocean surface temperature over time can be seen below.



Source: NOAA, 2022

Why is this important?

The role of the ocean is extremely important if policy makers want to curb the effects of climate change. The ocean currently covers 71% of the Earth's surface, and accounts for the absorption of roughly 90% of the heat produced from GHG's and roughly 30% of carbon emissions (UNFCCC, 2022).

The oceans play such an important role, since they help to regulate and drive weather patterns. Exchanging heat, moisture, and carbon with the atmosphere. Since 1901, the global sea surface temperature has increased at an average rate of 0.14 degrees Celsius per decade (EPA, 2022).

When oceans warm the water goes through thermal expansion, which leads to the global sea level rising which will cause devastating, irreversible damage to countries, especially small island developing states. The ocean warming may also result in other things such as: the population size of species in a given location, migratory and breeding patterns, coral bleaching, frequency and intensity of algae blooms, and a higher risk of snow, rain, and drought.

If ocean warming is not addressed in the near future, and fisheries continue to implement unsustainable artificial insemination of fish species, then the damages done to our ecosystem and economy will likely prove to be disastrous.

What happened at COP 27 on this issue?

Ocean warming, and ocean health were very pressing topics at this year's conference, with speakers from all backgrounds and disciplines having spoken at the Ocean Pavilion. One constant between any talk that was given at the conference, however, is the financial component. While we know the problems that are plaguing our oceans, there is a very large funding gap to oceans vs other climate technology efforts.

In fact, SDG14, which is to “Conserve and sustainably use the oceans, seas, and marine resources for sustainable development” (Goal 14) is currently the least funded SDG, with the total committed in 2019 being just \$1,920.12 million USD, with the next closest SGD funding being “Responsible Production and Consumption” at \$3,313.97 million and the highest funded goal being “Peace and Justice Strong Institutions” at \$27,080.78 million USD (The SDG Financing Lab). Being that the oceans are the single most key natural CO2 regulator, it is crucial that the gap in funding is reduced, and more financing is allocated to SDG14 and ocean health.

It was reported during a side event at the ocean pavilion titled “Accelerating Investments in SDG14 and the Blue Economy” that currently, the ocean economy is valued at roughly 2-3 trillion USD and has a potential to 2050 of 15 trillion USD. It was also stated that as far as natural disasters are concerned, the cost of prevention vs the cost of restoration of the communities effected is 1:8-10. Also, according to the IPCC in 2019, climate induced declines in ocean health will cost the global economy roughly \$400 billion per year by 2050 and \$2 trillion per year by 2100. That is why it is vital that the oceans’ role in climate change be taken with much more gravity and viewed as an investment rather than a sunk cost. The cost to protect and conserve our oceans and their health is much lower than the cost of restoration should policy makers decide not to do anything. Blue bonds, “a debt instrument issued by governments, development banks or others to raise capital from impact investors to finance marine and ocean-based projects that have positive environmental, economic and climate benefits”, have opened the door to innovative credit structures to help the effects of climate change on ocean health, but without concrete pipelines of projects there is very low credibility to create the bonds needed (World Bank Group, 2018).

This year’s conference however did not prove to advance policies related to ocean health, with the Sharm el-Sheikh Implementation Plan simply encouraging parties to consider ocean-based action in their national climate goals (UNFCCC, 2022). There is not nearly enough being done to protect our greatest natural tool in curbing the effects of climate change and should be implemented much more stringently in the future.

“If we are on the highway to hell, the ocean is our best airbag” – Claire Martin, VP of Sustainability at CMA CGM.

Policy recommendations

1) Increase funding for SDG14 and other ocean conservancy funds

SDG14 being the lowest funded of the SDGs is frankly a representation of the misunderstanding and possible ignorance of policy makers of climate initiatives. SDG14 having roughly \$1.4 billion dollars less in funding than the next lowest goal and a gap of \$25 billion to the highest funded goal misrepresents the importance of the ocean’s role. Increasing funding to SDG14 is a crucial and necessary step in advancing the conservancy and protection of our oceans and seas.

2) Create more transboundary, interconnected marine areas

At COP26, Colombia, Panama, Ecuador, and Costa Rica became the first countries to agree upon and create an interconnected protected area. They linked protected areas from each country in an extension of the Eastern Tropical Pacific Marine Corridor. This created the world’s largest and biologically rich corridor, with a fishing free area covering over 500,000 Km² on vital migratory routes (UNESCO, 2021). Creating more jointly protected marine areas will not only allow countries to reach ocean protection goals but also address issues related to overfishing and marine biodiversity.

3) Put pressure on creating industrial fishing regulations

It was reported at COP27 during a side event titled “Science for Climate Action” that it would require 2/3 of parties to agree to slow industrial fishing in order to get policies put into action and that 30 by 30 goals must be implemented in order to avoid mass extinction. While I am a big supporter of sport fishing and the idea that good angler is a good scientist and ideally conservationist, however industrial fishing is taking a large toll on fish population and poor management practices are hurting populations more than they are helping them.

References

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