

The Maritime Logs

June 2024 |
Edition |



"News, fun
infographics, and
plenty of
opportunities."

"Learn about our
ocean for FREE
every month!"



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Oceans News



- By reducing 5% of pollution per year, microplastic levels could stabilize, but would still not decrease past 2100.
- Due to La Nina and rising ocean temperatures, there could be a stronger Atlantic hurricane season this year.
- Over 100 new species were discovered in the ocean this year! In January, an expedition group discovered new corals, glass sponges, jellyfish, crustaceans, and more.

Call for Action

By using public transportation, reusable items, and eco-friendly materials, we can help in stabilizing the environment's levels of microplastics. Because we find these microplastics everywhere, from food to our bloodstream, it is important to support the cause.

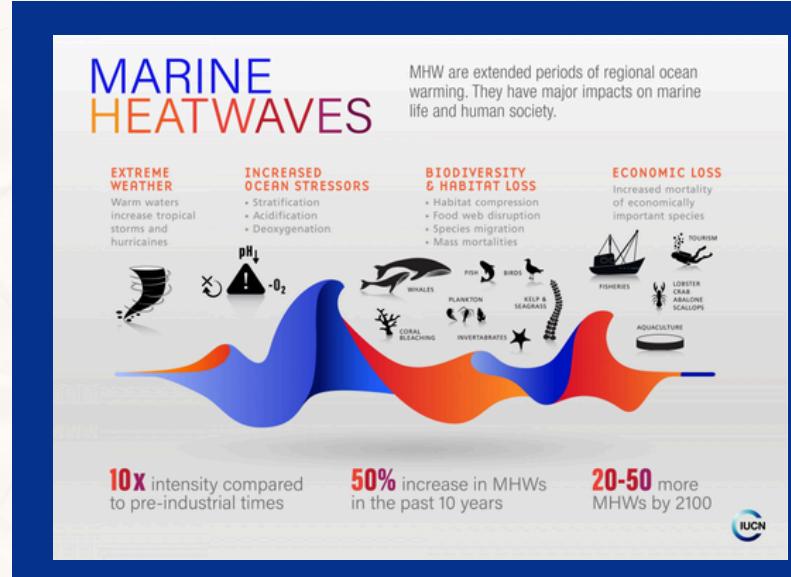
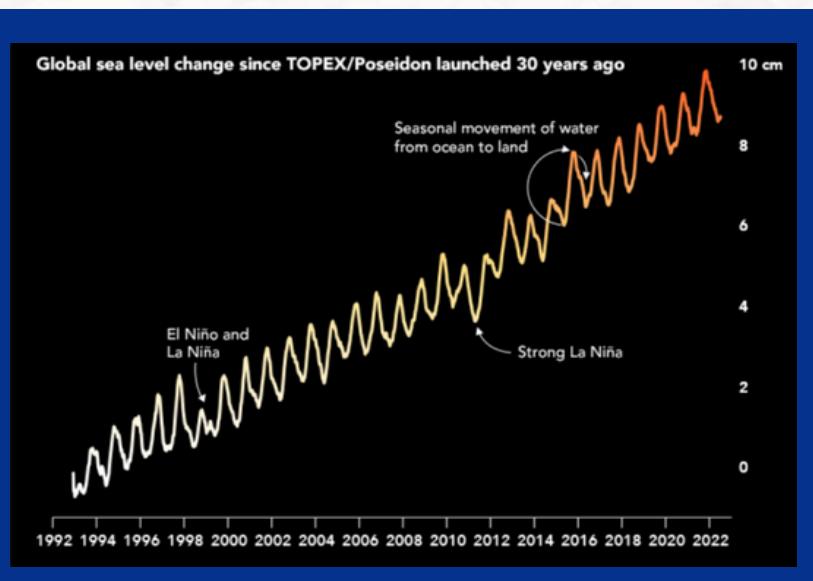


Rising Ocean Heat

CHLOE G.

Everyone has heard of global warming at least once, whether or not they believe in it. However, did you know the extent our beloved ocean has been impacted? **This year, 2024, has been the ocean's warmest by far**, and the last 10 years has been the warmest decade at least since the 1800's.

The ocean heat has been exponentially increasing because of global warming. 90% of it is occurring in the water, and – due to the increase in temperatures – the water expands, resulting in increasing global sea levels. Global warming has been responsible for $\frac{1}{3}$ to $\frac{1}{2}$ of this rise, and it isn't a good change. Since 1992, the global sea levels have risen 10.1 centimeters or 3.98 inches, and, over the past 140 years, it has risen 21 to 24 centimeters or 8 to 9 inches. This number is expected to accelerate. During the 1993's to 2022's, the heat-gain rates – if averaged over the surface of the Earth – are approximately 0.64 to 0.83 Watts per square meter over the full depth of the ocean. Although it is less than 1 Watt per square meter, if we were to multiply it with 360 million square kilometers, which is the surface area of the ocean, the resulting value is enough to convey an enormous global energy imbalance.

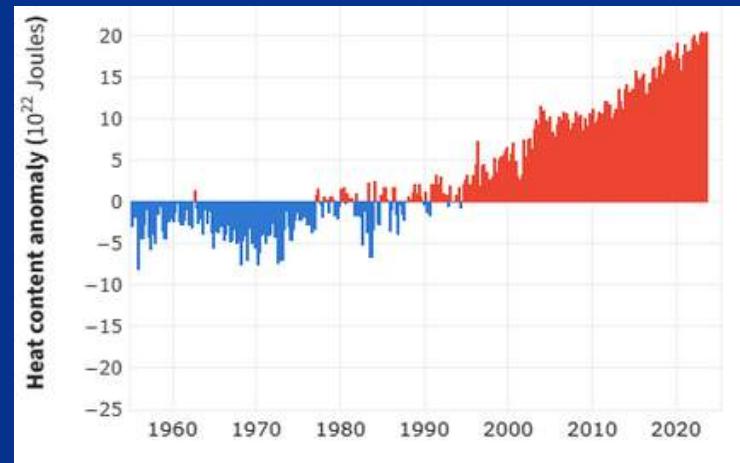


Whenever the ocean temperature is above the 90th percentile for a period of time, it would be considered a marine heat wave, which can last for weeks, or even years. Well, what is the significance of these waves? **These heat waves indicate that, compared to past observations during the same time of the year, temperatures are 90% warmer.**

Rising Ocean Heat

CHLOE G.

This heat is destructive. Glaciers are melting. Natural ecosystems are disrupted. And ice shelves are thinning. Ice decreases the influence of solar energy and atmospheric heat from the water. Without ice, the water would be further impacted by global warming. For example, if glaciers and areas of ice melt, the global sea level will rise, and since glaciers contain enough water to raise the level by half a meter, this would detrimentally affect coastal regions through increasing coastal erosion and threatening coastal structures; it would also decrease usable drinking water.



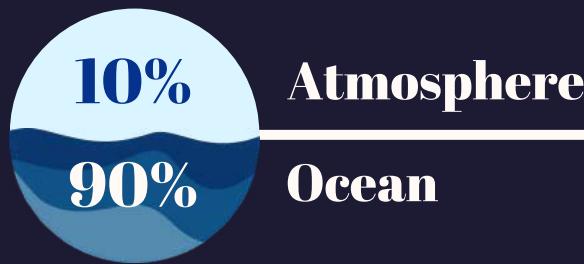
While global warming is sparing our atmosphere currently, the ocean heat would eventually be released, adding additional warming once greenhouse gas emissions stop. This cycle of contributing to ocean heat and, thus, global warming – a constant back and forth – would eventually need to be stopped before temperatures become too high.



Ocean Temperatures

Areas of Absorbed Anthropogenic Heat

1971 - 2018



Species' Biodiversity



68-77 F
Exponentially Increases

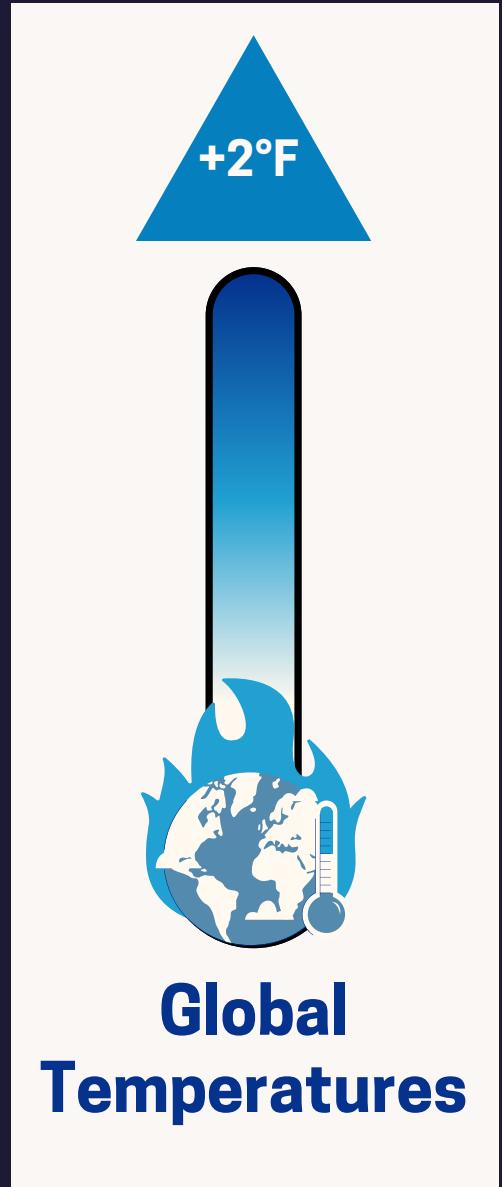
Ocean Levels



About
+8 in
1900's - Present
at least
+2 in
Last 20 yrs



Artic
46 YEARS OF DECLINE
LOSS OF...
247,000 sq miles = 640,000 sq km
OF ICE



2023

**Warmest Recorded
Year By Far**

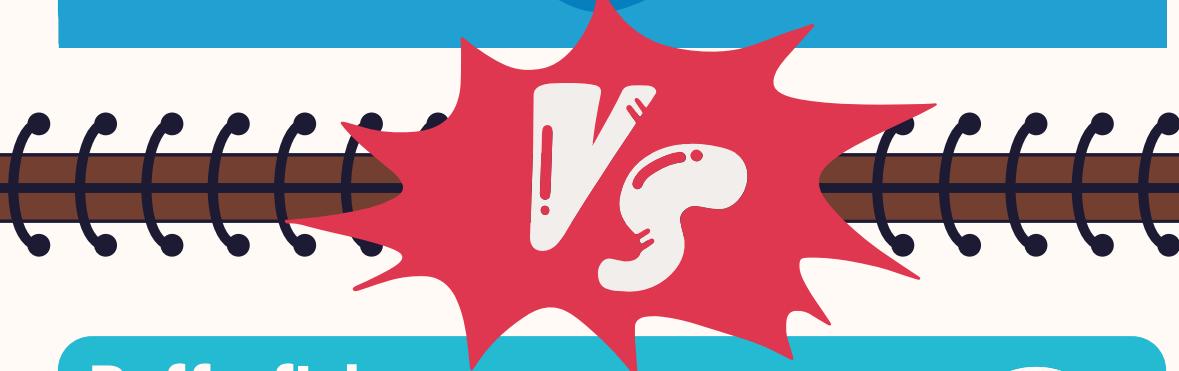
Porcupinefish



THE
YOL

Family: Diodontidae

- Less commonly eaten
- Visible spikes deflated and inflated



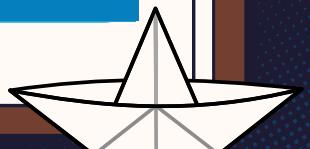
Pufferfish



THE
YOL

Family: Tetraodontidae

- More commonly eaten (Fugu)
- No visible spikes when deflated



I Can't Believe It's Not **Fish!**

Just because it's
called a fish, doesn't
mean it is a fish!

Starfish



Starfish are echinoderms, and they aren't even fish-shaped!

Jellyfish



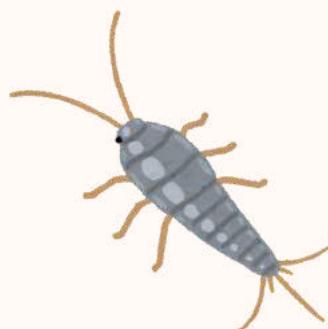
Jellyfish are more closely related to coral, with both being Cnidarians.

Cuttlefish



Cuttlefish are mollusks and lack all the characteristics of a true fish.

Silverfish



Silverfish might move like fish, but they are a land insect. And they look nothing like a fish.

5 LGBTQ+ Role Models in Ocean Conservancy

POE SID

The ocean does not discriminate. The first recorded instance of octopuses mating in the wild was between two male octopuses. Sea slugs and sea stars have hundreds of “genders”. Clownfish transition from male to female, and wrasse fish transition from female to male. Most seahorses are bisexual. So, it really shouldn’t come as a surprise to learn that many of the humans adoring and advocating for the ocean and marine life are also queer. Without further ado, here are five (listed in no particular order) LGBTQ+ role models in ocean research and advocacy:

1. Rachel Carson (1907–1964)

First up is Rachel Carson, a 20th century environmentalist and naturalist, queer woman, marine biologist, and author of *Silent Spring*, *The Sea Around Us*, *Undersea* and many other works. *Silent Spring*, a book Carson published in 1962 to speak out against the unregulated use of DDT and other chemical pesticides,



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