

July 2025 : Third-warmest July on record for the global ocean; Mediterranean Sea experiences highest average marine heatwave intensity for a July month

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Source: European Union, Copernicus Marine Service Data 2025 © Mercator Ocean

Press Release, Toulouse, France, 7 August 2025 - July 2025 has been marked by extraordinary marine heatwave (MHW) activity in the Mediterranean Sea, according to the latest ocean temperature bulletin released by Mercator Ocean International, operator of the EU's Copernicus Marine Service. This comprehensive report analyses ocean temperature trends, heatwave extent, intensity, and duration, providing critical insights to the scientific, environmental, and climate monitoring communities worldwide.

Sea Surface Temperature Anomalies

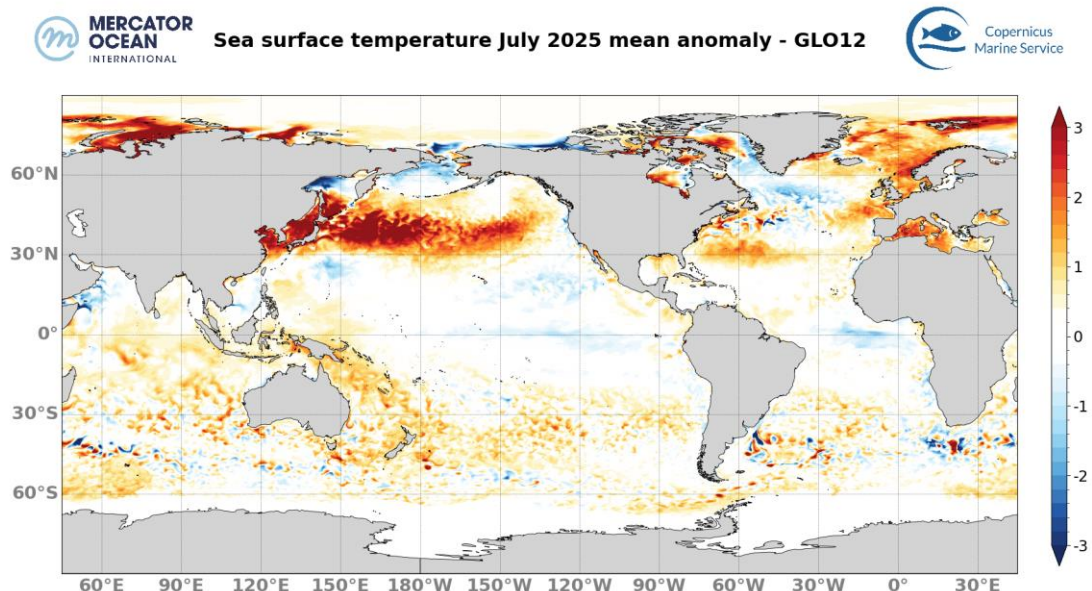


Figure 1: July 2025 Mean SST Anomaly relative to a 30-year climatology (1993-2022), calculated using daily data from Mercator Ocean International's GLO12 analysis and forecasting system for 2025 and from the GLORYS12 reanalysis for the climatological mean

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Global Ocean ranks third warmest July on record

- Approximately **71% of the global ocean experienced above-average temperatures**, with **13% exceeding the average by at least 1°C**, with high regional anomalies in the **North Pacific, North Atlantic, and Indian Oceans** (Figure 1)
- At the global scale, July 2025 ranked as the third warmest July on record, with a mean SST of **$20.80 \pm 0.07^{\circ}\text{C}$** , behind only 2024 ($20.91 \pm 0.06^{\circ}\text{C}$) and 2023 ($20.93 \pm 0.06^{\circ}\text{C}$) (Figure 2)

Mediterranean Sea registers warmest July on record

- The mean sea surface temperature (SST) reached an unprecedented **$26.68 \pm 0.15^{\circ}\text{C}$** , surpassing the previous July record set in 2023 of $26.65 \pm 0.21^{\circ}\text{C}$.
- The warming was widespread, with **95% of the Mediterranean displaying above-average temperatures** and 63% of the basin exceeding the long-term average by at least 1°C, and 40% by at least 2°C. The western Mediterranean was most severely affected by these extreme anomalies.

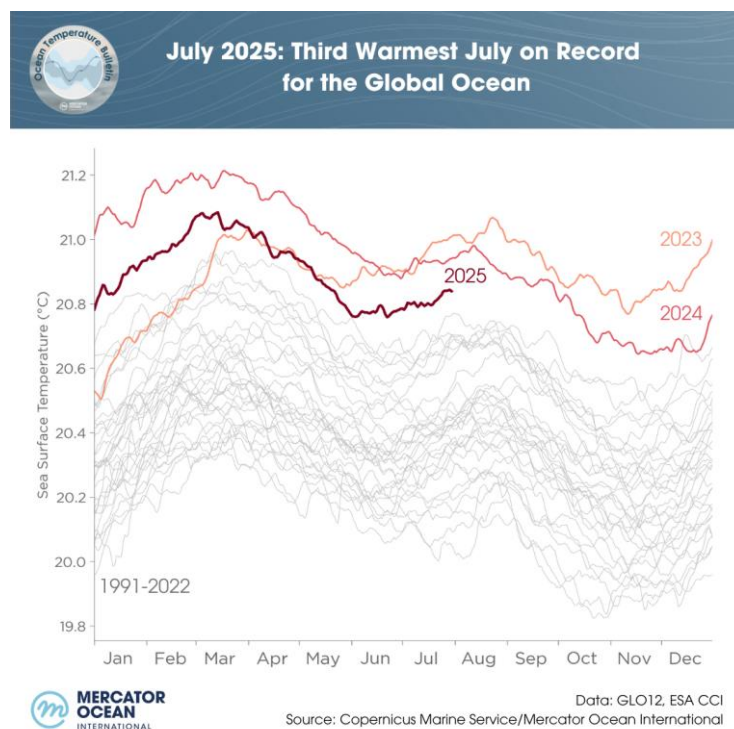
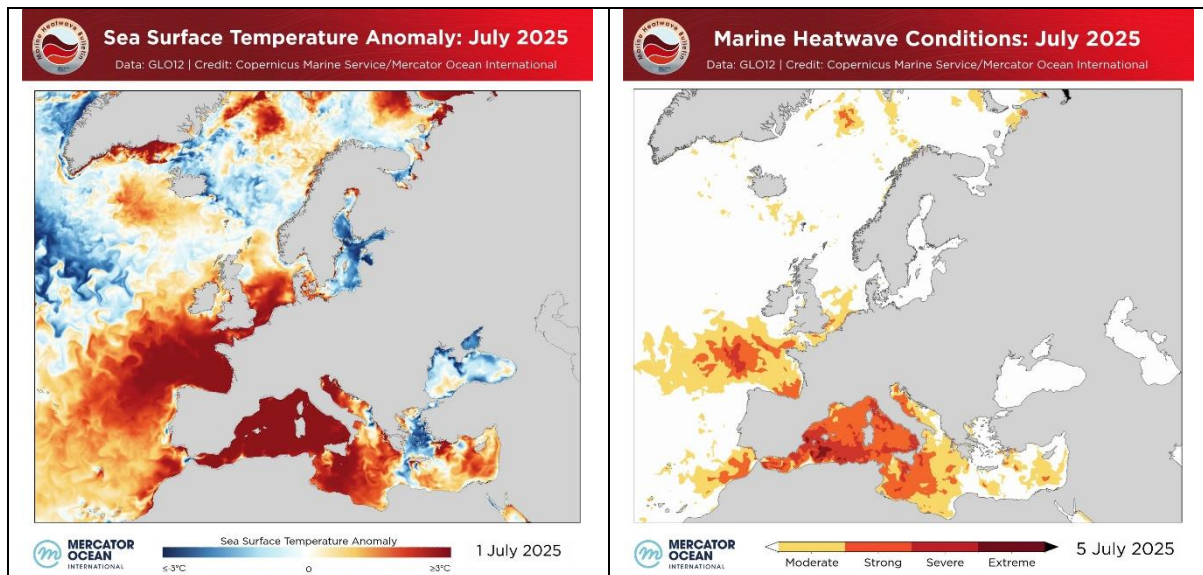


Figure 2: Daily sea surface temperatures averaged for the global ocean 1991-2020 using ESA's Climate Change Initiative (grey shades), and between 2021-2025 (colored shades) using Mercator Ocean International's GLO12 analysis and forecast.

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Marine Heatwaves (MHWs) extent and intensity



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Global Ocean: July 2025 marks the 2nd highest marine heatwave intensity on record (after 2023) and the 4th longest duration (after 2015, 2024 and 2023)

- At global level, marine heatwaves mostly affected regions in the northern hemisphere (in their summertime). **In total, 14 % of the global ocean was exposed to a strong-or-above MHW during July 2025, the 3rd highest extent after July 2023 and 2024.**
- Note that only four months of July in the historical records (2015, 2023, 2024 and 2025) showed more than 10% of the basin exposed to strong-or-above MHWs.

Mediterranean Sea: July 2025 had the strongest marine heatwave intensity ever recorded in July, and the 2nd and 3rd for MHW extent and duration

- The **Mediterranean Sea experienced a very high peak in MHW coverage** in the first week of July, **with up to 65% of the basin exposed**. A situation also extraordinary for its intensity with 45% of the basin exposed to **strong, severe, and even extreme categories, an area much larger than that in moderate category condition (20%)**. By the end of the month, the extent reduced notably to 15%, mainly with moderate intensity.
- **68% of the Mediterranean Sea was affected by strong or higher category marine heatwaves during July 2025, marking it as the second widest coverage on record for such intense conditions.**



North Atlantic: July 2025 had the third strongest marine heatwave intensity on record for July

- The North Atlantic Ocean experienced moderate levels of MHW in July 2025 (in extent and intensity) following the record situations in July 2023 and 2024, with approximately **18% of the basin exposed to strong or more intense MHW** conditions.

Other oceanic regions

- The Western North Pacific (Sea of Okhotsk) or at the boundary of the North Atlantic and the Arctic Ocean (Norwegian sea) saw very intense MHW events in July 2025, with implications for marine life and atmospheric interactions.

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For more infographics and illustrations on Sea Surface Temperature anomalies and MHWs for July 2025, read [this article](#) on Mercator Ocean website.

For more information on Marine heatwaves forecasts in August, follow our [weekly bulletins](#).

Visualize today's the sea surface temperatures and anomalies on the Copernicus Marine Service viewer: [Viewer SST today](#)

Media Contact

Laurence Collet

Corporate Communications & Media Relations, Mercator Ocean International

Email: press@mercator-ocean.fr

About Mercator Ocean International

Mercator Ocean International is a world leader in digital oceanography, providing trusted ocean analysis, forecasting, and intelligence to advance science, policy, and societal needs. Founded in 1995 and headquartered in Toulouse, France, the organisation employs 120 staff and is led by Director General Pierre Bahurel. As a European organization registered in France, Mercator Ocean International operates the Copernicus Marine Service on behalf of the European Union and is recognised as a global ocean prediction centre. It co-develops the European Digital Twin of the Ocean with European partners and hosts the G7 Future of the Seas and Oceans Initiative Coordination Centre. More information on <https://www.mercator-ocean.eu/>

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**About Copernicus Marine Service**

The [Copernicus Marine Service](#) is dedicated to ocean observation, monitoring and forecasting. It is funded by the European Commission (EC) and implemented by Mercator Ocean international. Copernicus Marine provides regular and systematic reference information on the state of the physical and biogeochemical ocean at the global and European regional scale. Mercator Ocean's marine heatwave bulletins rely on Copernicus Marine data.