



Press Release

Toulouse, France – 5 June 2024

Human activity pushes global warming rates to record highs, experts warn

- **Global warming due to human activity is advancing at 0.26 °C per decade—the highest rate ever recorded according to the latest *Indicators of Global Climate Change* report, signed by over 50 leading international scientists including Mercator Ocean International oceanographer Karina von Schuckmann**
- **Research shows the level of human-induced global warming has continued to increase over the past year, even though climate action has slowed the rise in greenhouse gas emissions**

Global temperatures are heading in the wrong direction and faster than ever before. The second annual *Indicators of Global Climate Change* report reveals global warming due to human activity is advancing at 0.26 °C per decade, the highest rate ever recorded.

Published by over 50 international scientists in the journal *Earth System Science Data*, including Mercator Ocean International oceanographer Karina von Schuckmann, the research shows human-induced global warming has risen to 1.19 °C over the past decade (2014-2023), an increase from the 1.14 °C seen in 2013-2022.

"In-situ and satellite observations continue to show unprecedented amounts of heat accumulated in the Earth system, and stored in the Ocean, the cryosphere, the continents and the atmosphere at a rate that is 50% higher than the long-term average", observes Karina von Schuckmann. *"The rate of Earth's heat increase – particularly manifested in the Ocean - was almost double in between 2011 and 2023 compared to what it was from 1976 to 2023. The Ocean is our sentinel for planetary warming".*

This high rate of warming is still a matter of scientific investigation, but several studies highlight the combination of sustained high levels of greenhouse gas emissions equivalent to 53 billion tonnes of CO₂ per year - as well as ongoing improvements in air quality, which are reducing the strength of human-caused cooling from particles in the atmosphere. According to the report, remaining carbon budget - how much CO₂ can be emitted before committing us to 1.5 °C of global warming - is only around 200 gigatonnes, around four years' worth of current emissions.

Looking at 2023 in isolation, warming caused by human activity reached 1.3 °C. This is lower than the total amount of warming we experienced in 2023 (1.43 °C), indicating that natural climate variability, in particular El Niño, also played a role in 2023's record temperatures.

The warning comes as climate experts meet in Bonn to prepare the ground for the COP29 climate conference which will take place in November in Baku, Azerbaijan.

This report, with its annually updated and reliable Ocean climate indicators, aims to bridge the information gap left before the publication of the next 2027 report by the [Intergovernmental Panel on Climate Change](#) (IPCC). The new report is accompanied by an open data, open science platform – the Climate Change Tracker's [Indicators of Global Climate Change dashboard](#) which provides easy access to updated information on the key climate indicators.

Access the Indicators of Global Climate Change Report [here](#)

About Mercator Ocean International

Mercator Ocean International (MOi) is a non-profit organization (in the process of transforming into an intergovernmental organization) committed to building a science-based digital Ocean to support the conservation and sustainable use of the Ocean.

MOi provides an operational digital description of marine environments worldwide and assists international organisations in implementing community and institutional programs, projects, and initiatives. MOi continually fosters interactions between scientists, policymakers, public and institutional decision-makers, and civil society.

Led by Director General Pierre Bahurel, MOi is based in Toulouse and has over 100 employees. Its ten current associate/shareholder entities are leading international scientific actors: CNR (National Research Council of Italy), CNRS (National Center of Scientific Research, France), Ifremer (French Research Institute for Exploitation of the Sea), IRD (Institute of Research for Development, France), Météo-France, SHOM (Hydrographic and Oceanographic Service of the French Navy), CMCC (Centro Euro-Mediterraneo sui Cambiamenti Climatici, Italy), MetOffice (UK), NERSC (Nansen Environmental and Remote Sensing Center, Norway), and Puertos del Estado (Spain).

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