

MCC Press Release

## UN report with MCC involvement shows new, grim records in the climate crisis

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Humankind is heading for a 3-degree Celsius world. William Lamb has led the chapter on global emissions in the UNEP Emissions Gap Report: “A trend reversal is yet to come”.

**Berlin, 20.11.2023.** The world is witnessing a disturbing acceleration of the climate crisis. This is the opening statement in the executive summary of the “Emissions Gap Report 2023” by the UN Environment Programme (UNEP). Temperatures, greenhouse gas emissions and the share of carbon dioxide (CO<sub>2</sub>) in the atmosphere are all at a record high. Current climate protection policies will only be sufficient to limit global heating to 3 degrees Celsius (previous year’s report: 2.8 degrees), and the implementation of all announcements only 2.5 degrees (previous year: 2.4 degrees). The important chapter “Global emissions trends” was lead-managed at the Berlin-based climate research institute MCC (Mercator Research Institute on Global Commons and Climate Change).

According to the report, global greenhouse gas emissions rose to a new all-time high of 57.4 million tonnes of CO<sub>2</sub> equivalent last year; these include climate killers such as methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and fluorinated greenhouse gases, expressed as the amount of CO<sub>2</sub> with equivalent heating effect. Even the growth rate continues to rise: at 1.2 percent in 2022, it was 0.3 percentage points higher than the average growth rate for 2010 to 2019 (i.e., the ten years before the coronavirus pandemic). The CO<sub>2</sub> concentration in the Earth’s atmosphere rose to 417.9 ppm (parts per million air molecules), compared to 280 ppm before industrialisation. And the goal proclaimed in the 2015 global climate agreement – to pursue efforts to limit global heating to a long-term average of 1.5 degrees – contrasts with another grim record for 2022: from a short-term perspective, on as much as 86 single days, the planet was already more than 1.5 degrees hotter than before industrialisation.

“Even though there are now net-zero announcements covering 80 percent of global emissions, the emissions themselves continue to increase and a trend reversal is still yet to come,” says [William Lamb](#), researcher in the MCC working group Applied Sustainability Science, and one of the two lead authors of the UNEP report’s emissions chapter. “Neither the current crisis in the supply of fossil fuels – caused by Russia’s war of aggression against Ukraine – nor the progress made in renewable energies have been sufficient to bring about a true global climate transition. Things are going in the wrong direction, but as we show in our chapter, not to the same extent everywhere.”

This is illustrated by the preliminary country figures for 2022, which not yet include the pending carbon balance of forests and agricultural land. Greenhouse gas emissions particularly increased in Indonesia (10.0

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percent) and India (5.1 percent), but only moderately in the US (1.6 percent) and China (0.3 percent); they fell in the EU (minus 0.8 percent), Russia (minus 1.0 percent) and Brazil (minus 2.5 percent). At 30 percent, China's current global share of emissions is significantly higher than that of the US and the EU combined, which stands at 18 percent. However, this does not reflect historical responsibility for the climate crisis: of the global emissions between 1850 and 2021, only 13 percent originated in China, compared to a total of 32 percent in the USA and the current EU member states.

The chapter led by MCC also contains figures on the climate footprint of income groups across all countries. It shows that the richest 10 percent generate almost half of all greenhouse gas emissions – and no less than a third of this global upper class now lives in developing and emerging economies, rather than in rich industrialised countries. “The age-old discussion about inequality in living standards is becoming even more relevant against the backdrop of the climate crisis,” says MCC researcher Lamb. “Big houses, big cars, lots of air travel, high meat consumption – it’s not entirely a private matter.”

**Reference of the cited article:**

Lamb, W., Pathak, M., et al., 2023, Global emissions trends, Chapter 2, UNEP (2023), The Emissions Gap Report

<https://www.unep.org/resources/emissions-gap-report-2023>

**About MCC**

MCC explores and provides solution-oriented policy portfolios for climate mitigation, for governing the global commons in general, and for enhancing the many aspects of human well-being. Our seven working groups are active in fields like economic growth and development, resources and international trade, cities and infrastructure, governance, and scientific policy advice. Co-founded by the Mercator Foundation and the Potsdam Institute for Climate Impact Research. | [www.mcc-berlin.net/en](http://www.mcc-berlin.net/en) | [https://twitter.com/MCC\\_Berlin](https://twitter.com/MCC_Berlin)

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