

Press Release



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The Southeast Pacific produces more nitrous oxide than previously thought

Kiel marine scientists publish new data on greenhouse gas emissions

22 June 2015/Kiel. In addition to carbon dioxide there are plenty of other greenhouse gases. Nitrous oxide is one of them. However, a global assessment of emissions from the oceans is difficult because the measurement methods used so far have only allowed rough estimates. Using a new technology for continuous measurement

nitrous oxide are emitted to the atmosphere from the oxygen minimum zone in the tropical Southeast Pacific. This is up to a fifth of the estimated marine nitrous oxide emissions worldwide and significantly exceeds similar upwelling areas in other tropical oceans," says Arévalo-Martínez.

The investigation of greenhouse gas emissions is also important to anticipate future changes in time and to assess their impact on climate. "The OMZs have expanded in recent years, but before we can see an increase or decrease of greenhouse gas emissions, we need to know the actual state," says Professor Bange.

Reference:

Arévalo-Martínez, D.L. 2019. Nitrous oxide emissions from the oxygen minimum zone in the tropical Southeast Pacific. *Deep Sea Research* 168: 103181. doi:10.1016/j.dsr.2019.103181