

## **A new estimate of global oceanic methane and nitrous oxide emissions from the MEMENTO database**

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Oceanic emissions constitute a substantial source to the atmospheric budget of nitrous oxide and a minor source for methane. Although measurements of both gases have been conducted for more than fifty years, existing emission estimates are still associated with high uncertainties due to the large spatial and temporal variability of both gases in the ocean. Based on available surface measurements from the MEMENTO (MarinE MethanE and NiTrous Oxide) database, we are developing a routine to compute global maps of methane and nitrous oxide distributions. These maps will help to identify regions of high surface methane and nitrous oxide as well as regions of high spatial and temporal variability. We will use our global concentration maps to calculate the first global emission estimate for methane and an updated emission estimate for nitrous oxide. The MEMENTO database is available via <https://memento.geomar.de/home>.