

The Nitric Acid Climate Action Group (NACAG)

Paving the Way for the Sustainable Transformation of the Nitric Acid Sector

In an effort to boost climate action and incentivize the realization of low-cost emission reduction potentials, the German Federal Ministry for the Environment, Nature Conservation Nuclear Safety (BMU) has launched the Nitric Acid Climate Action Group (NACAG). NACAG's objective is to incentivize the installation and operation of effective nitrous oxide (N₂O) abatement technology in every nitric acid production plant worldwide. In this way, NACAG aims to promote the climate-friendly transformation of the global nitric acid sector.

Nitrous Oxide (N₂O) Emissions

Nitrous oxide is a potent greenhouse gas (GHG) and ozone-depleting substance. Its global warming potential (GWP) is 265 times that of carbon dioxide (CO₂). One of the primary sources of N₂O emissions is the production of nitric acid, which is predominantly used for manufacturing nitrogen-based fertilizers. There are more than 500 nitric acid production plants in around 70 countries worldwide. In many cases, the N₂O emissions are released unabatedly into the atmosphere. However, N₂O emissions from nitric acid production can be reduced relatively easily and at a low cost compared to other greenhouse gas abatement options. Abatement costs range US\$1-3 t/CO₂eq per ton of CO₂eq, depending on the employed abatement technology and technical plant characteristics.

NACAG's Approach

NACAG helps partner countries to overcome initial structural and investments barriers by providing them with financial and technical assistance in exchange for the political commitment for the long-term climate-friendly transformation of the nitric acid sector. The initiative provides technical and political support to all partner countries and supports countries with the ODA status that need economic assistance to procure abatement technologies financially.

NACAG's Technical Support Unit advises partner governments on policy instruments for mitigating N₂O emissions in the nitric acid sector and its integration of the sector into the Nationally Determined Contributions (NDCs) of the Paris Agreement. Furthermore, NACAG offers financial support to purchase and install state-of-the-art N₂O mitigation and monitoring technology in eligible production facilities, fully covering these costs. For plant operators to qualify for this funding, the government of the respective country must sign a political commitment – Statement of Undertaking (SoU) - to ensure the continuation of the mitigation activities under their own responsibility from 2024 onwards.

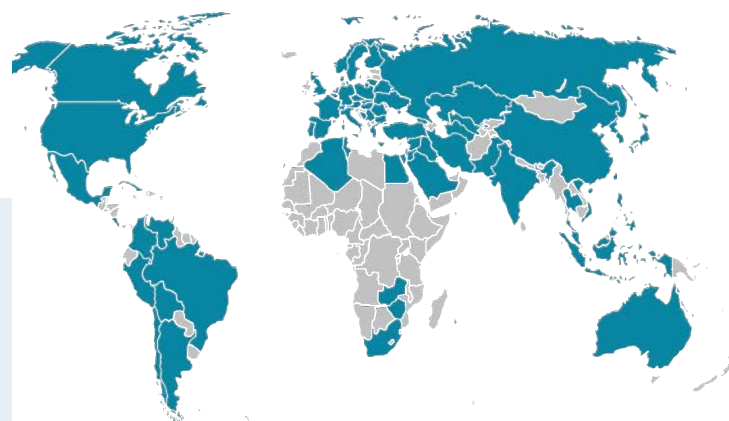
A Global Action Group

By transferring the responsibility for the mitigation activities to the partner countries post-2023 as well as leaving the resulting emission reductions for use within the national mitigation strategy, NACAG aims to ensure the climate-friendly transformation of the global nitric acid sector. This approach corresponds to the spirit of the Paris Agreement, which assigns responsibility for emission reduction efforts to all countries while acknowledging the principle of common but differentiated responsibilities.

Its global approach ensures the creation of level-playing field over time for all stakeholders and thus reduces negative economic impacts and at the same time supports plant operators adapting to changing international market conditions such as implied by a possible carbon border adjustment mechanism.

All interested partners, including governments, plant operators and donors, are welcome to join this global action group and, in doing so, contribute to sustainable climate change mitigation.

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Global overview of nitric acid producing countries
Number of nitric acid plants worldwide: approx. 500

NACAG Nitric Acid
Climate Action Group

For more information please visit our website
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