Nitrogen Opportunities for Agriculture, Food & Environment

UNECE Guidance Document on Integrated Sustainable Nitrogen Management

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This book is the published version of the UNECE Guidance Document on Integrated Sustainable Nitrogen Management (ECE/EB.AIR/149), as adopted by the Executive Body of the Convention on Long-range Transboundary Air Pollution (the Geneva Air Convention), at its 40th session (18th December 2020), together with additional images for which © is as indicated.

The Guidance Document on Integrated Sustainable Nitrogen Management was prepared by the Task Force on Reactive Nitrogen in accordance with item 2.2.3 of the 2020–2021 workplan for the implementation of the Convention (ECE/EB.AIR/144/Add.2). The long-term strategy for the Convention for 2020–2030 and beyond (ECE/EB.AIR/142/Add.2, decision 2018/5) recognized the disruption of the nitrogen cycle as one of the most important challenges for environmental policy that required an integrated approach (paras. 68 and 79 (d)). The purpose of the document is to mobilize Parties' efforts to control pollution from agricultural sources in the context of the wider nitrogen cycle in an integrated manner harvesting multiple co-benefits of improved nitrogen management. The document is in particular aimed to support the implementation of the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone. The work was completed before 24th February 2022.

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Cover photo

On-farm use of trailing hose technique (Field Measure 6) to reduce ammonia emissions in a sensitive landscape. For optimal performance, hose exits should be set within 15 cm of the ground, though may be raised when turning and transporting manure to fields.
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'*Nitrogen Opportunities for Agriculture, Food & Environment*' is the first ever United Nations Guidance Document on Integrated Sustainable Nitrogen Management. It brings all major forms and impacts of nitrogen together for multiple environmental and economic benefits.

The Nitrogen Guidance Document focuses on agriculture in the context of the food system and environment. It identifies the principles of integrated sustainable nitrogen management, followed by measures to reduce nitrogen losses from livestock housing and manure storage, including measures to promote nutrient recovery. It then identifies measures to reduce nitrogen losses from organic and inorganic fertilizers, and measures that focus on landscape and land-use management, finishing by considering coherent 'measures packages'.

While this guidance document has been formally adopted by the UNECE Convention on Long-range Transboundary Air Pollution (ECE/EB.AIR/149), it is equally relevant to support national and international policies on water, climate, biodiversity, soils and stratospheric ozone depletion. The document contributes to implementing UNEA Resolutions 4/14 and 5/2, and the Colombo Declaration ambition to halve nitrogen waste from all sources.

The document has been prepared under the lead of the Task Force on Reactive Nitrogen of the UNECE Convention, with the support of the GEF/UNEP International Nitrogen Management System.

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