

3.1 - Agricultural: Other

Short description

NFR-Code	Name of Category	Method	AD	EF	Key Category ¹	State of reporting
3.1	Agriculture other					
consisting of / including source categories						
3.1	Storage of digestate from energy crops	T2 (NH ₃ , NO _x)	Q, PS	CS (NH ₃ , NO _x)	no key category	

Legend T = key source by Trend / L = key source by Level

Methods D: Default RA: Reference Approach T1: Tier 1 / Simple Methodology * T2: Tier 2* T3: Tier 3 / Detailed Methodology * C: CORINAIR CS: Country Specific M: Model as described in the EMEP/CORINAIR Emission Inventory Guidebook - 2019, in the group specific chapters.

AD:- Data Source for Activity Data NS: National Statistics RS: Regional Statistics IS: International Statistics PS: Plant Specific data AS: Associations, business organisations Q: specific questionnaires, surveys

EF - Emission Factors D: Default (EMEP Guidebook) C: Confidential CS: Country Specific PS: Plant Specific data

Country specifics

In 2019, NH₃ emissions from category 3.1 (agriculture other) derived up to 0.6 % from total agricultural emissions, which is equal to ~ 3.2 kt NH₃. NO_x emissions from category 3.1 contribute 0.15 % (~ 0.17 kt) to the total agricultural emissions. All these emissions originate from the storage of digestate from energy crops (for details on anaerobic digestion of energy crops see Rösemann et al. 2021, Chapter 10 ¹⁾). Note that these emissions of NH₃ and NO_x from storage of anaerobically digested energy crops are excluded from emission accounting by adjustment as they are not considered in the NEC and Gothenburg commitments (see adjustments). The emissions resulting from the application of energy crop digestates as organic fertilizer are dealt with under 3.D.a.2.c.

Activity Data Time series of activity data have been provided by KTBL (Kuratorium für Technik und Bauwesen in der Landwirtschaft / Association for Technology and Structures in Agriculture). From

Trend discussion for Key Sources

NH₃ and NO_x from storage of anaerobically digested energy crops are no key source.

Recalculations

Table 3 shows the effects of recalculations on NH₃ and NO_x emissions. Differences to the last year's submission are due to the update of activity data (**recalculation No 12**, see main page of the agricultural sector (<https://iir-de-2020.wikidot.com/3-agriculture>)). Further details about recalculations are described in Rösemann et al. (2021), Chapter 3.5.2.

Table 4: Comparison of NH₃ and NO_x emissions of the submissions (SUB) 2020 and 2021

NH ₃ / NO _x emissions in Gg															
	SUB	1990	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
NH ₃	2021	0.0015	0.0190	0.1563	1.2267	3.0426	3.4504	2.9206	3.3062	3.2814	3.3428	3.3004	3.2741	3.2013	3.2013
NH ₃	2020	0.0015	0.0190	0.1563	1.2267	3.0426	3.4504	2.9206	3.3062	3.2814	3.3428	3.3004	3.2741	3.2895	
NO _x	2021	0.0001	0.0010	0.0084	0.0659	0.1634	0.1852	0.1568	0.1775	0.1762	0.1795	0.1772	0.1758	0.1719	0.1719
NO _x	2020	0.0001	0.0010	0.0084	0.0659	0.1634	0.1852	0.1568	0.1775	0.1762	0.1795	0.1772	0.1758	0.1766	

Uncertainty

Details will be described in [chapter 1.7](#).

1)

Rösemann et al. (2021): Rösemann C., Haenel H-D., Vos C., Dämmgen U., Döring U., Wulf S., Eurich-Menden B., Freibauer A., Döhler H., Schreiner C., Osterburg B. & Fuß, R. (2021): Calculations of gaseous and particulate emissions from German Agriculture 1990 -2019. Report on methods and data (RMD), Submission 2021. Thünen Report (in preparation).

<https://www.thuenen.de/de/ak/arbeitsbereiche/emissionsinventare/>