1.A.2.f - Stationary Combustion in Manufacturing Industries and Construction: Non-Metallic Minerals

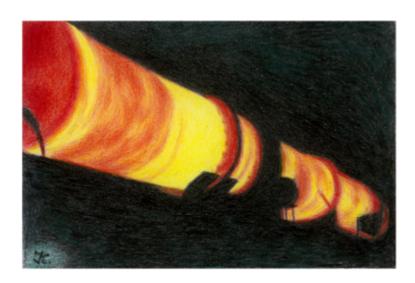
Short Description

Sub-category 1.A.2.f - Non Ferrous Metals refers to emissions from fuel consumption for burning processes in energy-intensive mineral industries.

NFR Code	Method AD		EF						
1.A.2.f	T1	NS	CS						
Method(s) applied									
D	Default								
T1	Tier 1 / Simple Metho	Tier 1 / Simple Methodology *							
T2	Tier 2*								
Т3	Tier 3 / Detailed Meth	Tier 3 / Detailed Methodology *							
С	CORINAIR	CORINAIR							
CS	Country Specific	Country Specific							
M	Model	Model							
* as described in the EME	P/EEA Emission Inventory	Guidebook - 2019, ir	n category chapters.						
(source for) Activity D	ata								
NS	National Statistics	National Statistics							
RS	Regional Statistics								
IS	International Statistic	CS							
PS	Plant Specific	Plant Specific							
As		Associations, business organisations							
Q	specific Questionnaires (or surveys)								
M	Model / Modelled								
С	Confidential	Confidential							
(source for) Emission I	actors								
D	Default (EMEP Guidel	Default (EMEP Guidebook)							
CS	Country Specific	Country Specific							
PS	Plant Specific	Plant Specific							
M	Model / Modelled	Model / Modelled							
С	Confidential								

NO _x	NMVOC	SO ₂	NH ₃	PM _{2.5}	PM ₁₀	TSP	ВС	СО	Heavy Metals	POPs
-/-	-/-	-/-	-/-	IE	IE	ΙE	ΙE	-/-	NA	NA

Method(s) applied						
D	Default					
T1	Tier 1 / Simple Methodology *					
T2	Tier 2*					
Т3	Tier 3 / Detailed Methodology *					
С	CORINAIR					
CS	Country Specific					
М	Model					
* as described in the EMEP/E	EA Emission Inventory Guidebook - 2019, in category chapters.					
(source for) Activity Data						
NS	National Statistics					
RS	Regional Statistics					
IS	International Statistics					
PS	Plant Specific					
As	Associations, business organisations					
Q	specific Questionnaires (or surveys)					
M	Model / Modelled					
С	Confidential					
(source for) Emission Fact	tors					
D	Default (EMEP Guidebook)					
CS	Country Specific					
PS	Plant Specific					
М	Model / Modelled					
С	Confidential					



In order of significance relating energy use and emissions, the covered industries are:

- burning of cement clinker,
- burning of quicklime,
- melting of glass,
- burning of ceramics.

Method

Regarding the burning processes emissions can allocated to the use of fuels or to the production process. Current allocation is regarding the main importance of the production process.

Activity data

The key source of all conventional fuel data is the national energy balance. Moreover the use of additional statistical data is necessary in order to disaggregate data. Data source for fuel inputs for energy-related process combustion in cement industry are manufacturing-sector statistics (Statistik des produzierenden Gewerbes); reporting number (Melde-Nr.) 23.51, Cement production. Furthermore the cement industry uses significant amounts of substitute fuels that do not appear in national statistics and in the Energy Balance. Relevant production figures and fuel-use amounts have been taken from statistics of the VDZ cement-industry association. The fuel-input data for ceramics production has also been taken from manufacturing industry statistics (Statistik des produzierenden Gewerbes); reporting no. (Melde-Nr.) 23.32, brickworks (Ziegelei), production of other construction ceramics. The same statistic is also used as source for fuel input of glass (reporting number: 23.1, Production of glass and glassware) and lime production (reporting number: 23.52, Lime).

Emissions

Due to allocating emissions to process part we have removed most of time series inconsistencies. The current situation is the following:

Table 1: relevance of emission sources regarding the fuel use due to burning processes in 1.A.2.f

	SO _x	NO _x	СО	NMVOC	NH ₃	TSP	ВС
cement	IE ¹	IE ¹	medium	IE ¹	IE ¹	IE ²	NE
lime	IE ¹	IE ¹	IE ¹	IE ¹	low	IE ²	NE
glass	IE ²	IE ¹	IE ¹	IE ¹	IE ¹	IE ²	NE
ceramics	IE ³	IE ³	low	IE ¹	IE ¹	IE ¹	NE

¹ Included in process related emissions, in all cases it is the link to complementary source category.

The entire appraisal of the emissions situation succeeds only in connection with the process related emissions. Especially further relevant pollutants as heavy metals or persistent organics are shown as process related generally.

Recalculations

Recalculations were necessary due to revised AD for the last available year.



For pollutant-specific information on recalculated emission estimates for Base Year and 2021, please see the recalculation tables following chapter 8.1 - Recalculations.

Planned improvements

At the moment, no category-specific improvements are planned.

² Some artifacts occur for 1990 emissions that cannot be shifted.

³ Inclusion in process related emissions occurs from different time points onwards.