Appendix 2.1 - Reporting of PM emissions

Documentation entries of the Central System Emissions database for the condensable fraction of PM_{2.5}.



NFR categories with no reported activity or PM_{2.5} emissions are excluded here

The condensable fraction of particulate matter ($PM_{2.5}$) is documented for all activities in the emissions database. A documentation entry has been created for each time series, indicating the following options for condensable particulate matter:

- Yes (measured/determined), the condensable fraction of PM_{2.5} was measured and is included in the emission values
- No, the condensable fraction has not been determined and is not included in the emission values
- NA (no condensable PM_{2.5} is generated in the process)
- Unknown, the condensable fraction for PM_{2.5} is unknown and could be zero

Below is an excerpt from the database, showing the aforementioned documentation entries by source category.

NFR Sc	ource Category	no documentation available	(measured/determined)	Not Applicable (no condensable PM _{2.5} are generated in the process)	No (potentially possible)	Unknown	Number of document entries
NFR 1	Energy	•		•		•	
1.A.1.a	Public electricity and heat production	-	-	-	147	-	147
1.A.1.b	Petroleum refining	-	-	-	31	-	31
1.A.1.c	Manufacture of solid fuels and other energy industries	-	-	-	49	-	49
1.A.2.a	Stationary combustion in manufacturing industries and construction: Iron and steel	-	-	-	22	-	22
1.A.2.b	Stationary combustion in manufacturing industries and construction: Non-ferrous metals	-	-	-	-	-	-
1.A.2.c	Stationary combustion in manufacturing industries and construction: Chemicals	-	-	-	-	-	-
1.A.2.d	Stationary combustion in manufacturing industries and construction: Pulp, Paper and Print	-	-	-	-	-	-
1.A.2.e	Stationary combustion in manufacturing industries and construction: Food processing, beverages and tobacco	-	-	-	-	-	-
1.A.2.f	Stationary combustion in manufacturing industries and construction: Non-metallic minerals	-	-	-	-	-	-
1.A.2.g vii	Mobile combustion in manufacturing industries and construction (please specify in the IIR)	-	4	-	-	-	4

1.4.2 g manufacturing industries and		let it		I	I	T	T	
1.A.3.b Domestic Aviation - - - - 4 4 487 1.A.3.c Railways - 11 - 1 - 12 1.A.3.d Domestic Navigation - - - - 487 1.A.3.c Railways - 11 - 1 - 12 1.A.3.d Domestic Navigation - - - - 3 - 5 1.A.3.e Other Transportation - - - - 3 - 3 1.A.4.a Commercial/Institutional: - - - 1 1.A.4.a Commercial/Institutional: 3 - - 28 1.A.4.b Residential: Stationary - - 14 - 14 1.A.4.b Residential: Household and		construction: Other (please	-	-	-	102	-	102
1.A.3.b Road Transport	1 Δ 3 a	<u> </u>		_	_	_	4	4
1.A.3.c Commercial/Institutional:				469		_	_	·
1.A.3.b Domestic Navigation - 5 - 1 - 6		·				1		
1.A.3.e Other Transportation		-						
1.A.4.a Commercial/Institutional:								
Stationary			-	-	-	3	-	3
1.A.4.b Residential: Stationary	i	Stationary	-	-	-	28	-	28
Residential: Household and gardening (mobile)	1		-	3	-	-	-	3
1.A.4.c Agriculture/Forestry/Fishing:	1.A.4.b i	Residential: Stationary	-	-	-	14	-	14
Sationary	1		-	-	-	4	4	8
1.4.4.C. Off-road vehicles and other machinery	1.A.4.c		-	-	-	15	-	15
1.A.5.0 Other stationary (including military)	1	Off-road vehicles and other	-	6	-	-	-	6
1.1.1.3.5 military			-	-	-	-	3	3
1.A.5.b military, land based and recreational boats - - - - 9 - 9 1. 9 1. 1. 1. 1. 1.	1.A.5.a	Other stationary (including military)	-	-	-	10	-	10
1.B.1.a fuels: Coal mining and handling - - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 8 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - <td>1.A.5.b</td> <td>military, land based and</td> <td>-</td> <td>-</td> <td>-</td> <td>9</td> <td>-</td> <td>9</td>	1.A.5.b	military, land based and	-	-	-	9	-	9
1.B.1.b fuels: Solid fuel transformation - - 6 2 - 8 1.B.2.c Venting and flaring (oil, gas, combined oil and gas) - - - - 1 - 1 1.D.1.a Civil Aviation (international) - - - - 4 4 1.D.1.b Maritime Navigation (international) - - - - 4 4 1.D.1.b Forest Fires - - - - 1 1 1.B. Forest Fires - - - - 1 1 1.B. Forest Fires - - - - 1 1 1.B. Forest Fires - - - - 1 1 1 1.B. Forest Fires - - - - 1 <td>1.B.1.a</td> <td>fuels: Coal mining and</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>-</td> <td>1</td>	1.B.1.a	fuels: Coal mining and	-	-	1	-	-	1
1.B.2.c combined oil and gas	1.B.1.b	fuels: Solid fuel	-	-	6	2	-	8
1.D.1.b. (international) - - - 2 2 11.B. Forest Fires - - - 1 1 NFR 2 - IPPU 2.A.1 Cement production - - - 1 - 1 2.A.2 Lime production - - - - 2 2 2 2.A.3 Glass production - - - - - 6 - - - 6 2 - - 6 - - - 6 - - - 6 - - - 6 - - - 6 - - - 6 - - - 6 - - - 6 - - - 6 - - - 6 - - - 4 - - 4 - - 4 - - 4 - - 4 - - - 5 - - 5 - - 5 -	1.B.2.c		-	-	-	1	-	1
1.D.1. (international)	1.D.1.a	Civil Aviation (international)	-	-	-	-	4	4
11.B Forest Fires - - - 1 1 NFR 2 - IPPU 2.A.1 Cement production - - - 1 - 1 2.A.2 Lime production - - - - 2 2 2.A.3 Glass production - 6 - - 6 2.A.4.A Ceramics - - - - 6 2.A.5.b Quarrying and mining of minerals other than coal - - - - 15 15 2.A.5.b Construction and demolition - - 5 - - 5 2.B.5 Carbide production - - - - 5 - - 5 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - - 7 7 2.C.2 </td <td>1.D.1.b</td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>2</td> <td>2</td>	1.D.1.b		-	-	-	-	2	2
NFR 2 - IPPU 2.A.1 Cement production - - - 1 - 1 2.A.2 Lime production - - - - 2 2 2.A.3 Glass production - 6 - - - 6 2.A.4.A Ceramics - - - - 15 15 2.A.5.a Quarrying and mining of minerals other than coal - - 4 - - 4 2.A.5.b Construction and demolition - - 5 - - 5 2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - 1 1 2.C.1 Iron and steel production - - - - 7 7	11.B		_	_	_	-	1	1
2.A.1 Cement production - - - 1 - 1 2.A.2 Lime production - - - - 2 2 2.A.3 Glass production - 6 - - - 6 2.A.4.A Ceramics - - - - 15 15 2.A.5.a Quarrying and mining of minerals other than coal - - 4 - - 4 2.A.5.b Construction and demolition - - 5 - - 5 2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - - 1 1 2.B.10 Other - - - - - 1 1 2.C.1 Iron and steel production - - - - 7 7 2.C.2. </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td>								_
2.A.2 Lime production - - - 2 2 2.A.3 Glass production - 6 - - 6 2.A.4.A Ceramics - - - - 15 15 2.A.5.a Quarrying and mining of minerals other than coal - - - - 4 - - 4 2.A.5.b Construction and demolition - - - 5 - - 5 2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - - 1 1 2.C.1 Iron and steel production - - - - - 7 7 2.C.2 Ferroalloys production - - - - - 1 1 2.C.3a By-Product Emissions - - - - -	_			_	_	1		1
2.A.3 Glass production - 6 - - - 6 2.A.4.A Ceramics - - - 15 15 2.A.5.a Quarrying and mining of minerals other than coal - - 4 - - 4 2.A.5.b Construction and demolition - - 5 - - 5 2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - - 1 1 2.B.10 Other - - - - - 1 1 2.C.1 Iron and steel production - - - - 7 7 2.C.2 Ferroalloys product Emissions - - - - - - 2 2 2.C.4 Magnesium production - - - - - -							2	
2.A.4.A Ceramics - - - - 15 15 2.A.5.a Quarrying and mining of minerals other than coal - - 4 - - 4 2.A.5.b Construction and demolition - - 5 - - 5 2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - - 1 1 2.C.1 Iron and steel production - - - - 7 7 2.C.2 Ferroalloys production - - - - 1 1 2.C.3.a By-Product Emissions - - - - - - - - - 2.C.4 Magnesium production -<								
2.A.5.a Quarrying and mining of minerals other than coal - - 4 - - 4 2.A.5.b Construction and demolition - - 5 - - 5 2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - 1 1 1 2.C.1 Iron and steel production - - - - 7 7 7 2.C.2 Ferroalloys production - - - - 1 1 1 2.C.3.a By-Product Emissions - - - - - 2 2 2 2.C.4 Magnesium production - <td></td> <td>·</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>		·			-			
2.A.5.b Construction and demolition - - 5 - - 5 2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - 1 1 2.C.1 Iron and steel production - - - - 7 7 2.C.2 Ferroalloys production - - - - 1 1 2.C.3.a By-Product Emissions - - - - 2 2 2.C.4 Magnesium production - - - - - - - 2.C.5 Lead production - - - - - 2 2 2.C.6 Zinc production - - - - - - 2 2		Quarrying and mining of		-	4		-	
2.B.5 Carbide production - - - - 1 1 2.B.8 Petrochemical and Carbon Black Production - - - - 1 1 2.B.10 Other - - - - 1 1 2.C.1 Iron and steel production - - - - 7 7 2.C.2 Ferroalloys production - - - - 1 1 2.C.3.a By-Product Emissions - - - - 2 2 2.C.4 Magnesium production - - - - - - - 2.C.5 Lead production - - - - 2 2 2.C.6 Zinc production - - - - - 2 2								F
2.B.8 Petrochemical and Carbon Black Production - - - 1 1 2.B.10 Other - - - - 1 1 2.C.1 Iron and steel production - - - - 7 7 2.C.2 Ferroalloys production - - - - 1 1 2.C.3.a By-Product Emissions - - - 2 2 2.C.4 Magnesium production - - - - - - 2.C.5 Lead production - - - - 2 2 2.C.6 Zinc production - - - - 2 2							-	
2.B.8 Black Production - - - 1 1 2.B.10 Other - - - - 1 1 2.C.1 Iron and steel production - - - 7 7 2.C.2 Ferroalloys production - - - - 1 1 2.C.3.a By-Product Emissions - - - - 2 2 2.C.4 Magnesium production - - - - - - - 2.C.5 Lead production - - - - 2 2 2.C.6 Zinc production - - - - 2 2	Z.B.5		-	<u>-</u>	-	-	1	1
2.C.1 Iron and steel production - - - 7 7 2.C.2 Ferroalloys production - - - 1 1 2.C.3.a By-Product Emissions - - - - 2 2 2.C.4 Magnesium production - - - - - - - 2.C.5 Lead production - - - - 2 2 2.C.6 Zinc production - - - - 2 2		Black Production	-	-	-	-		
2.C.2 Ferroalloys production - - - 1 1 2.C.3.a By-Product Emissions - - - - 2 2 2.C.4 Magnesium production - - - - - - 2.C.5 Lead production - - - 2 2 2.C.6 Zinc production - - - - 2 2			-	-	-	-		
2.C.3.a By-Product Emissions - - - - 2 2 2.C.4 Magnesium production - - - - - - 2.C.5 Lead production - - - - 2 2 2.C.6 Zinc production - - - - 2 2			-	-	-	-	7	
2.C.4 Magnesium production - - - - - - 2.C.5 Lead production - - - - 2 2 2.C.6 Zinc production - - - - 2 2			-	-	-	-	1	1
2.C.5 Lead production - - - 2 2 2.C.6 Zinc production - - - 2 2	2.C.3.a	By-Product Emissions	-	-	-	-	2	2
2.C.6 Zinc production - - - 2 2	2.C.4	Magnesium production	-	-	-	-	-	-
2.C.6 Zinc production - - - 2 2	2.C.5	-	-	-	-	-	2	2
·			-	-	-	-		
	2.C.7	Other	-	-	-	-	3	3

SUM		-	507	58	443	155	1,163
5.E	Other waste (please specify in the IIR)	-	-	-	-	6	6
5.C	Waste Incineration	-	-	-	1	1	2
5.A	Biological treatment of waste - Solid waste disposal on land	-	-	1	-	-	1
NFR 5	- Waste						
3.D	Agricultural Soils	-	-	1	-	-	1
3.B	Manure Management	-	-	20	-	-	20
NFR 3	- Agriculture						
2.L	Other production, consumption, storage, transportation or handling of bulk products (please specify in the IIR)	-	-	1	-	89	90
2.1	Wood processing	-	-	1	-	-	1
2.H.2	Food and beverages industry	-	-	-	-	2	2
2.H.1	Pulp and paper industry	-	-	-	2	-	2
2.G.4	Other	-	3	-	-	1	4
2.G.3	N ₂ O from Product Uses	-	-	-	-	-	-
2.G.2	SF ₆ and PFCs from Other Product Use	-	-	-	-	-	-
2.G.1	Electric Equipment	-	-	-	-	-	-
2.D.3.b	Road paving with asphalt	-	-	-	-	1	1