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## **Appendix 2.1 - Reporting of PM emissions**

<u>Table A2.1: Inclusion/exclusion of the condensable component from PM,,10,, and PM,,2.5,, emission factors</u> (NOTE: NFR categories with no reported activity or PM emissions (notation keys 'NO' or 'NA' in the NFR tables) are excluded here!)

| = NFR<br>code       | = Source / sector name   |                            |               |              | CONCENSATION |    | = EF reference and/or comments                                 |  |  |
|---------------------|--|----------------------------|---------------|--------------|--------------|----|--|--|--|
| =                   | =  |                            | = included    | = excluded = |              | =  |  |  |  |
| < NFR 1 -<br>Energy |  |                            |               |              |              | •  |  |  |  |
| < 1.A.1.a           | < Public electroproduction   | ricity and heat            | =             | = ##green    | X :          | ## | <  |  |  |
| < 1.A.1.b           | < Petroleum r  | efining                    | =             | = ##green    | x :          | ## | <  |  |  |
| < 1.A.1.c           | < Manufacture and other ene  |                            | =             | = ##green    | x -          | ## | <  |  |  |
| < 1.A.2.a           | < Stationary combustion in manufacturing industries and construction: Iron and steel     |                            | =             | = ##green    | x -          | ## | <  |  |  |
| < 1.A.2.b           | < Stationary combustion in<br>manufacturing industries an<br>construction: Non-ferrous m |                            |               | = ##red      | ?#           | ## | < no indication  |  |  |
| < 1.A.2.c           | < Stationary c<br>manufacturing<br>and constructi<br>Chemicals                           | j industries               | =             | =            |              | <  |  |  |  |
| < 1.A.2.d           | < Stationary c<br>manufacturing<br>and constructi<br>Paper and Prir                      | j industries<br>on: Pulp,  | =             | =            |              | <  |  |  |  |
| < 1.A.2.e           | < Stationary c<br>manufacturing<br>and constructi<br>processing, be<br>tobacco           | industries<br>on: Food     | =             | = ##green    | x -          | ## | <  |  |  |
| < 1.A.2.f           | < Stationary c<br>manufacturing<br>and constructi<br>metallic miner                      | industries<br>on: Non-     | =             | =            |              | <  |  |  |  |
| < 1.A.2.g vii       | < Mobile combined manufacturing and construction specify in the                          | j industries<br>on (please | =<br>##orange | x^^1^^##     |              |    | < country-<br>specific EF<br>likely to include<br>condensables |  |  |
| < 1.A.2.g<br>viii   | < Stationary c<br>manufacturing<br>and constructi<br>(please specify                     | industries<br>on: Other    | =             | = ##green    | x ·          | ## | <  |  |  |

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| < 1.A.3.a i(i)     | < International aviation LTO                           | = ##red       | ?##       | < country-<br>specific EF<br>without clear<br>indication |  |  |
|--------------------|--|---------------|-----------|--|--|--|
| < 1.A.3.a<br>ii(i) | < Domestic aviation LTO (civ                           | = ##red       | ?##       | < country-<br>specific EF<br>without clear<br>indication |  |  |
| < 1.A.3.b i        | < Road transport:<br>Passenger cars                    | =<br>##orange | x^^1^^##  |  | < country-<br>specific EF<br>likely to include<br>condensables |  |
| < 1.A.3.b ii       | < Road transport: Light duty vehicles                  | =<br>##orange | x^^1^^##  |  | < country-<br>specific EF<br>likely to include<br>condensables |  |
| < 1.A.3.b iii      | < Road transport: Heavy duty vehicles and buses        | =<br>##orange | x^^1^^##  |  | < country-<br>specific EF<br>likely to include<br>condensables |  |
| < 1.A.3.b iv       | < Road transport: Mopeds<br>& motorcycles              | =<br>##orange | x^^1^^##  |  | < country-<br>specific EF<br>likely to include<br>condensables |  |
| < 1.A.3.b v        | < Road transport: Gasoline 6                           | evaporation   | = NA      | <  |  |  |
| < 1.A.3.b vi       | < Road transport:<br>Automobile tyre and brake<br>wear | =             | = ##green | x ##   | <  |  |
| < 1.A.3.b vii      | < Road transport:<br>Automobile road abrasion          | =             | = ##green | x ##   | <  |  |
| < 1.A.3.c          | < Railways   | =<br>##orange | x^^1^^##  |  | < country-<br>specific EF<br>likely to include<br>condensables |  |
| < 1.A.3.d<br>i(ii) | < International inland water                           | ways          | = IE      | < includ   | led in NFR 1.A.3.d   |  |
| < 1.A.3.d ii       | < National navigation (shipping)                       | = ##green     | x^^1^^##  |  | < country-<br>specific EF<br>likely to include<br>condensables |  |
| < 1.A.3.e i        | < Pipeline transport                                   | =             | = ##green | x ##   | <  |  |
| < 1.A.4.a i        | < Commercial/Institutional:<br>Stationary              | =             | = ##green | x ##   | <  |  |
| < 1.A.4.a ii       | < Commercial/Institutional:<br>Mobile                  | =<br>##orange | x^^1^^##  |  | < country-<br>specific EF<br>likely to include<br>condensables |  |
| < 1.A.4.b i        | < Residential: Stationary                              | =             | = ##green | x ##   | <  |  |
| < 1.A.4.b ii       | < Residential: Household an (mobile)                   | d gardening   | = ##red   | ?##  | < country-<br>specific EF<br>without clear<br>indication       |  |

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|   |  | I  | 1  | _  |  | I  | ш   |
|---|--|--|--|--|--|--|---|
| Agriculture/For<br>Stationary   | restry/Fishing:  | =  | = ##green  | x #  | ##   | <  |   |
|   |  |  | x^^1^^##   |  |  | < country-<br>specific EF<br>likely to includ<br>condensables  | e   |
| < Agriculture/lishing   | Forestry/Fishin  | ng: National   | = ##red  | ?#   | #  | < country-<br>specific EF<br>without clear<br>indication   |   |
|   |  | =  | = ##green  | x #  | ##   | <  |   |
| < Other, Mobile (including military, land based and recreational boats) |  | =<br>##orange  | x^^1^^##   |  |  | < country-<br>specific EF<br>likely to includ<br>condensables  | e   |
| _   |  | =  | = ##green  | X #  | ##   | <  |   |
| solid fuels: Sol  | id fuel  | =  | = ##green  | x #  | ##   | <  |   |
| < Venting and flaring (oil, gas, combined oil and gas)                  |  |  | = ##red  | ?#   | #  | < EMEP GB<br>2016 EF<br>without any<br>indication  |   |
|   |  |  |  | '  |  |  |   |
| < Cement pro  | duction  |  | = ##red  | ?#   | #  | < country-<br>specific EF<br>without any<br>indication   |   |
| < Lime production   |  |  | = ##red  | ?#   | #  | < country-<br>specific EF<br>without any<br>indication   |   |
| < Glass production  |  |  | = ##red  | ?#   | #  | < country-<br>specific EF<br>without any<br>indication   |   |
| < Quarrying and mining of minerals other than coal                      |  |  | = ##red  | ?#   | #  | < EMEP GB<br>2016 EF<br>without any<br>indication  |   |
| < Construction and demolition   |  |  | = ##red  | ?#   | #  | < EMEP GB<br>2016 EF<br>without any<br>indication  |   |
| < Storage, handling and transport of mineral products                   |  |  | = IE   |  | < included in  | n NFR 2.L  |   |
|   | Agriculture/For Stationary  < Agriculture/For Off-road vehic machinery  < Agriculture/Institute/ | Agriculture/Forestry/Fishing: Stationary  < Agriculture/Forestry/Fishing: Off-road vehicles and other machinery  < Agriculture/Forestry/Fishing ishing  < Other stationary (including military)  < Other, Mobile (including military, land based and recreational boats)  < Fugitive emission from solid fuels: Coal mining and handling  < Fugitive emission from solid fuels: Solid fuel transformation  < Venting and flaring (oil, ga oil and gas)  < Cement production  < Glass production  < Quarrying and mining of n than coal  < Construction and demolitic  < Storage, handling and tran  < Storage, handling and tran  < Storage, handling and tran | Agriculture/Forestry/Fishing: Stationary  Agriculture/Forestry/Fishing: Off-road vehicles and other machinery  Agriculture/Forestry/Fishing: ##orange machinery  Agriculture/Forestry/Fishing: National fishing  Other stationary (including military, land based and recreational boats)  Fugitive emission from solid fuels: Coal mining and handling  Fugitive emission from solid fuels: Solid fuel transformation  Venting and flaring (oil, gas, combined oil and gas)  Cement production  Cement production  Cement production  Courrying and mining of minerals other than coal  Construction and demolition  Storage, handling and transport of | Agriculture/Forestry/Fishing: Stationary = ##green Stationary = ##green Stationary = ##orange Off-road vehicles and other machinery = ##orange machinery = ##red = ##red = ##red = ##red = ##red = ##green = # | Agriculture/Forestry/Fishing: = ##green X # Stationary | Agriculture/Forestry/Fishing: Stationary  Agriculture/Forestry/Fishing: Warnange machinery  Agriculture/Forestry/Fishing: Warnange machinery  Agriculture/Forestry/Fishing: National fishing  Other stationary final fishing warnange warn | Agriculture/Forestry/Fishing: = ##green x ## < Country-Specific EF likely to includ condensables without clear indication without any indication state of Empt GB and Gass production and demolition = ##red ?## ##red ?## \$\$\text{\$\text{\$\text{\$Agriculture/Forestry/Fishing: National fishing}}\$\$\$\text{\$\tex |

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| < 2.A.6    | < Other mineral products (please specify in the IIR)                               | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |
|------------|--|---------------------|-----------------------|---|--|
| < 2.B.3    | < Adipic acid production   | = NE                | < no EF i             | n EMEP GB 2019  |  |
| < 2.B.5    | < Carbide production   | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |
| < 2.B.7    | < Soda ash production  | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |
| < 2.B.10.a | < Chemical industry: Other (please specify in the IIR)                             | = ##red             | ?##                   | < carbon black:<br>country-specific<br>EF without any<br>indication |  |
| < 2.B.10.a | < Chemical industry: Other (please specify in the IIR)                             | = ##red <b>?</b> ## |                       | < fertilizer production: country-specific EF without any indication |  |
| < 2.B.10.b | < Storage, handling and transport of chemical products (please specify in the IIR) | = IE < includ       |                       | ded in NFR 2.L  |  |
| < 2.C.1    | < Iron and steel production  | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |
| < 2.C.2    | < Ferroalloys production   | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |
| < 2.C.3    | < Aluminium production   | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |
| < 2.C.4    | C.4 < Magnesium production   |                     | productio<br>secondar | nary magnesium<br>n; emission for<br>y magnesium<br>n allocated in  |  |
| < 2.C.5    | < Lead production  | = ##red <b>?</b> ## |                       | < country-<br>specific EF<br>without any<br>indication              |  |
| < 2.C.6    | < Zinc production  | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |
| < 2.C.7.a  | < Copper production  | = ##red             | ?##                   | < country-<br>specific EF<br>without any<br>indication              |  |

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|                          |  |  |             |                            |  |  | · ·  |         |   |
|--------------------------|--|--|-------------|----------------------------|--|--|--|---------|---|
| < 2.C.7.c                | < Other metal production (please specify in the IIR) |  |             | = ##red                    | ?#   | ##   | < no indication  | on      |   |
| < 2.C.7.d                |  | ndling and trar<br>s (please spec                    |             | = IE < included in NFR 2.L |  |  | in NFR 2.L   |         |   |
| < 2.D.3.b                |  |  |             | = ##red                    | ?#   | ##   | < country-<br>specific EF<br>without any<br>indication |         |   |
| < 2.G                    | < Other produ  | ıct use: Tobacc                                      | CO          | = ##red                    | ?#   | ##   | < country-<br>specific EF<br>without any<br>indication |         |   |
| < 2.G                    | < Other produ  | ıct use: Firewo                                      | rks         | = ##red                    | ?#   | ##   | < EMEP GB<br>2019 EF<br>without any<br>indication      |         |   |
| < 2.G                    | < Other product use: Charcoal                        |  |             | = ##red                    | ?#   | <pre>&lt; EF   EMEP EF with indical</pre>              |  | .9      |   |
| < 2.H.1                  | < Pulp and paper industry                            |  |             | = ##red                    | ?## speci  |  | < country-<br>specific EF<br>without any<br>indication |         |   |
| < 2.H.2                  | < Food and beverages industry                        |  |             | = ##red                    | ?#   | ‡#   | < EMEP GB<br>2016 EF<br>without any<br>indication      |         |   |
| < 2.1                    | < Wood processing                                    |  | = ##red     | ?#                         | ‡#   | < country-<br>specific EF<br>without any<br>indication |  |         |   |
| < 2.J                    | < Produ  |  | superscript | ction of PC                | Ps   |  |  | =<br>NE | < |
| < 2.L                    | storage, trans                                       | iction, consum<br>portation or ha<br>(please specify | andling of  | = ?                        | <pre>&lt; country-specific EF without any indication</pre> |  |  |         |   |
| < NFR 3 -<br>Agriculture |  |  |             |                            |  |  |  |         |   |
| < 3.B.1.a                |  | nagement - Da  | iry cattle  | = ##red                    | ?#   | ##   | < EMEP GB<br>2016 EF<br>without any<br>indication      |         |   |
| < 3.B.1.b                | < Manure management - Non-dairy cattle               |  | = ##red     | ?#                         | ##   | < EMEP GB<br>2016 EF<br>without any<br>indication      |  |         |   |
| < 3.B.2                  | < Manure management - Sheep                          |  |             | = ##red                    | ?#   | ##   | < EMEP GB<br>2016 EF<br>without any<br>indication      |         |   |

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|                    |   |                                 |             |                       |     |                       |  | <br> |
|--------------------|---|---------------------------------|-------------|-----------------------|-----|-----------------------|--|------|
| < 3.B.3            | < Manure management - Swine   |                                 |             | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < 3.B.4.a          | < Manure mar  | I — I L                         |             | < EMEP GB without any |     |                       |  |      |
| < 3.B.4.d          | < Manure management - Goats   |                                 |             | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < 3.B.4.e          | < Manure mar  | nagement - Ho                   | rses        | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < 3.B.4.f          | < Manure mar asses  | nagement - Mu                   | les and     | = IE                  |     | < EMEP GB without any |  |      |
| < 3.B.4.g i        | < Manure mar  | nagement - Lay                  | ying hens   | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < 3.B.4.g ii       | < Manure management - Broilers  |                                 |             | = ##red               | ?## |                       | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < 3.B.4.g iii      | < Manure management - Turkeys   |                                 |             | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < 3.B.4.g iv       | < Manure management - Other poultry   |                                 |             | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < 3.B.4.h          | < Manure mar<br>(please specify   | nagement - Oth<br>y in the IIR) | ner animals | = NE                  |     | < EMEP GB without any |  |      |
| < 3.D.c            | Farm-level agricultural operations including storage, handling and transport of agricultural products |                                 |             | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |
| < NFR 5 -<br>Waste |   |                                 |             |                       |     |                       |  |      |
| < 5.A              | < Biological Treatment of Waste - Solid<br>Waste Disposal on Land                                     |                                 |             | = ##red               | ?#  | ##                    | < EMEP-GB<br>2019: EF<br>without any<br>indication     |      |
| < 5.C.1.b v        | < Cremation   |                                 |             | = ##red               | ?#  | ##                    | < country-<br>specific EF<br>without any<br>indication |      |
| < 5.E.2            | < Other Waste: Building and Car Fires   |                                 |             | = ##red               | ?#  | ##                    | < EMEP GB<br>2016 EF<br>without any<br>indication      |      |

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| < MEMO<br>ITEMS -<br>NOT TO BE<br>INCLUDED<br>IN<br>NATIONAL<br>TOTALS |                                    |                   |            |         |     |  |
|--|------------------------------------|-------------------|------------|---------|-----|--|
| < 1.A.3.a<br>i(ii)   | < Internationa                     | al aviation cruis | se (civil) | = ##red | ?## | < country-<br>specific EF<br>without clear<br>indication |
| < 1.A.3.a<br>ii(ii)  | < Domestic aviation cruise (civil) |                   |            | = ##red | ?## | < country-<br>specific EF<br>without clear<br>indication |
| < 1.A.3.d i(i)   | < Internationa                     | al maritime nav   | vigation   | = ##red | ?## | < country-<br>specific EF<br>without clear<br>indication |
| < 1.A.5.c  | < Multilateral                     | operations        |            | = NE    | <   |  |
| < 11.B   | < Forest fires                     |                   |            | = ##red | ?## | < EMEP GB<br>2016 EF<br>without any<br>indication        |
| 1  |                                    |                   |            |         |     |  |