1.A.3.b vii - Road Transport: Automobile Road Abrasion

Short description

In sub-category *1.A.3.b vii - Road Transport: Automobile Road Abrasion* emissions from road abrasion in Road Transport are reported. Therefore, this sub-category is an important source for a) particle emissions and b) emissions of heavy metals, POPs etc. included in these particles.

Category Code	**Method**					**AD**					**EF**				
1.A.3.b.vii	T1, T3					NS, M					CS				
Key Category	**SO_2**	**NO_x**	**NH_3**	**NMVOC**	**CO**	**BC**	**Pb**	**Hg**	**Cd**	**Diox**	**PAH**	**HCB**	**TSP**	**PM_{10}**	**$PM_{2.5}$**
1.A.3.b.vii	-	-	-	-	-	-	-/-	-	-/-	-	-	-	L/-	L/-	L/-

Methodology

Activity data

Abrasive emissions from tyre and brake wear are estimated based on vehicle-type specific mileage data.

For detailed mileage data, please see superordinate chapter on abrasive emissions from road vehicles.

Emission factors

Table 1: Default tier1 emission factors applied

~ Vehicle Type	= **PCs**	= **LDVs**	= **HDVs**	= **Buses**	= **MTWs**	**1**
< **Particulate Matter**, in [mg/km]						
< BC	> 0.00	> 0.00	> 0.00	> 0.00	> 0.000	
< PM,,2.5,,	> 4.05	> 4.05	> 20.5	> 20.5	> 1.62	
< PM,,10,,	> 7.50	> 7.50	> 38.0	> 34.2	> 3.00	
< TSP	> 15.0	> 15.0	> 76.0	> 76.0	> 6.00	
< **Priority Heavy Metals**, in [µg/km]						
< Pb	> 0.062	> 0.062	> 0.312	> 0.062	> 0.025	
< Hg	> 0	> 0	> 0	> 0	> 0	
< Cd	> 0.003	> 0.003	> 0.016	> 0.003	> 0.001	
< **Other Heavy Metals**, in [µg/km]						
< As	> 0.0390	> 0.0390	> 0.198	> 0.039	> 0.016	
< Cr	> 1.08	> 1.08	> 5.47	> 1.08	> 0.432	
< Cu	> 0.037	> 0.037	> 0.186	> 0.037	> 0.015	
< Ni	> 0.570	> 0.570	> 2.89	> 0.570	> 0.228	
< Se	> 0	> 0	> 0	> 0	> 0	
< Zn	> 1.29	> 1.29	> 6.54	> 1.29	> 0.516	

Discussion of emission trends

Table 2: Outcome of Key Category Analysis

fo:	**SO_2**	**NO_x**	**NH_3**	**NMVOC**	**CO**	**BC**	**Pb**	**Hg**	**Cd**	**Diox**	**PAH**	**HCB**	**TSP**	**PM_{10}**	**$PM_{2.5}$**
by:	-	-	-	-	-	-	-/-	-	-/-	-	-	-	L/-	L/-	L/-

Particulate Matter

(from wear/abrasion only; no fuel combustion included)

Emissions from road abrasion are directly linked to driven mileage. Thus, the overall trend of emissions from road abrasion is similar to the trend for total driven mileage.

Recalculations

Activity data (mileage) have been revised due to the regular revision of the TREMOD model. (see superordinate chapter]).

However, the biggest changes occur in the tier1 **emission factors** that have been revised fundamentally in order to be in line with the tier1 default values provided in the EMEP/EEA Guidebook 2019. Unfortunately, the variety of old and revised emission factors cannot be compared here in a comprehendible way.

For more information on recalculated emission estimates for Base Year and 2018, please see the pollutant-specific recalculation tables following chapter 8.1 - Recalculations].

Planned improvements

Besides a routine revision of the underlying model, no specific improvements are planned.

FAQs

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bibliography : 1 : EMEP/EEA, 2019: EMEP/EEA air pollutant emission inventory guidebook 2019; https://www.eea.europa.eu/publications/emep-eea-guidebook-2019; Copenhagen, 2019. bibliography