

relative change													
HDVs: Trucks													
Submission 2021													
Submission 2020													
absolute change													
relative change													
HDVs: Buses													
Submission 2021													
Submission 2020													
absolute change													
relative change													
Motorcycles & Mopeds													
Submission 2021													
Submission 2020													
absolute change													
relative change													
REVISED TOTAL MILEAGE													
Submission 2021													
Submission 2020													
absolute change													
relative change													

For changes in the **emission factors** applied, please refer to the sub-ordinate chapters on **tyre and brake wear** and **road abrasion**.



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 the **routine revision of the TREMOD model**, no specific improvements are planned.

³⁾ ⁴⁾

¹⁾, ²⁾, ³⁾ Knörr et al. (2020a): Knörr, W., Heidt, C., Gores, S., & Bergk, F.: ifeu Institute for Energy and Environmental Research (Institut für Energie- und Umweltforschung Heidelberg gGmbH, ifeu): Fortschreibung des Daten- und Rechenmodells: Energieverbrauch und Schadstoffemissionen des motorisierten Verkehrs in Deutschland 1960-2035, sowie TREMOD, im Auftrag des Umweltbundesamtes, Heidelberg & Berlin, 2020.

⁴⁾ EMEP/EEA, 2019: EMEP/EEA air pollutant emission inventory guidebook – 2019