

German Environment Agency

Umwelt 
Bundesamt

2019 ERMES PLENARY MEETING

German roadmap on transport emissions

Dr. Christiane Vitzthum von Eckstädt

Section I 2.2

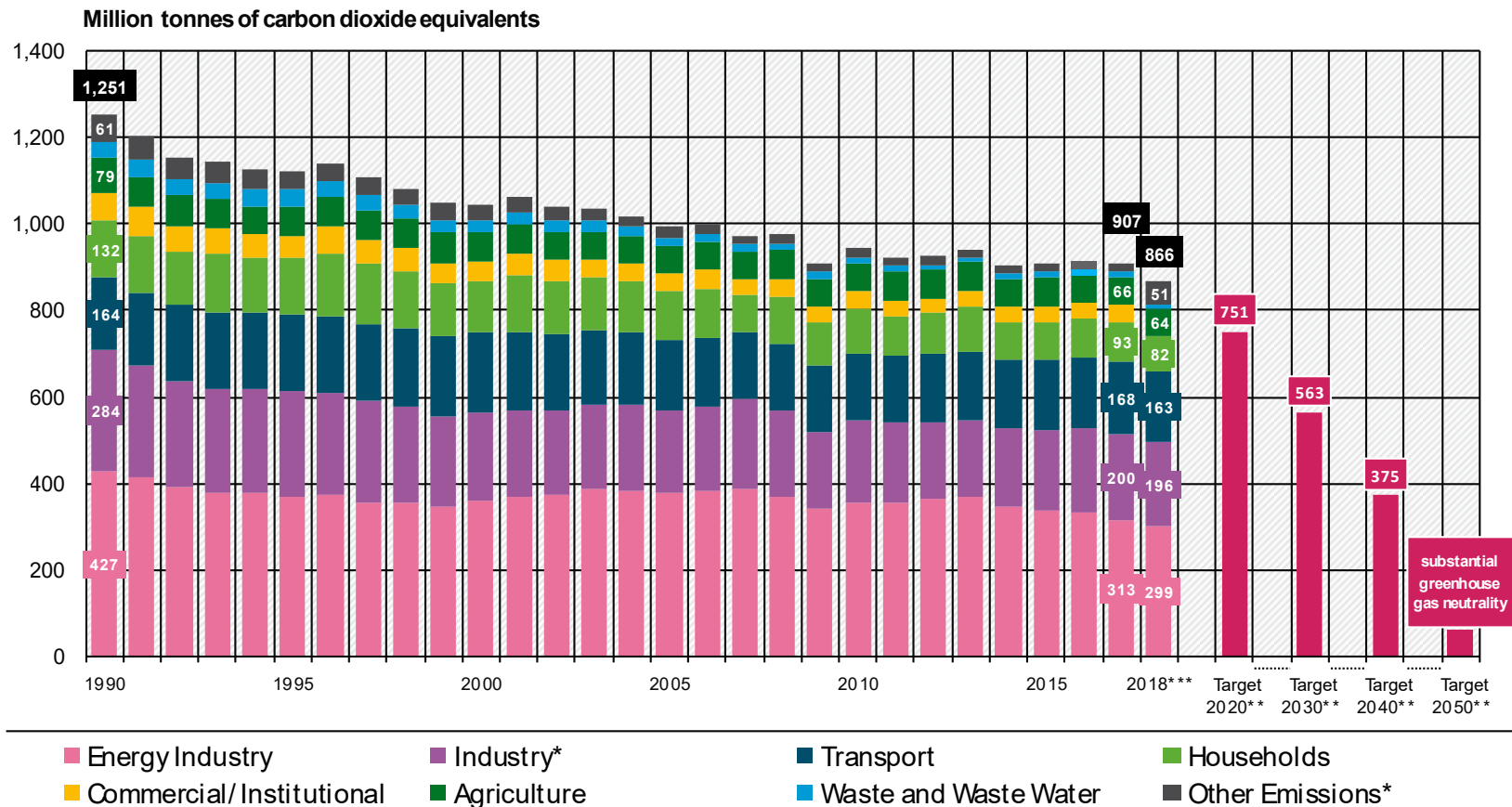
„Pollution Abatement and Energy Saving in Transport“

Outline

- 1 TOTAL GHG EMISSIONS IN GERMANY**
- 2 GHG EMISSIONS IN THE TRANSPORT SECTOR IN GERMANY**
- 3 SHARES OF POLLUTANT EMISSIONS IN GERMANY**
- 4 GERMAN GOVERNMENT'S CLIMATE ACTION PROGRAMME 2020**
- 5 RESEARCH PROJECTS „EMISSION MEASUREMENTS“ AT UBA.DE**

Total GHG Emissions in Germany

Emission of greenhouse gases covered by the UN Framework Convention on Climate



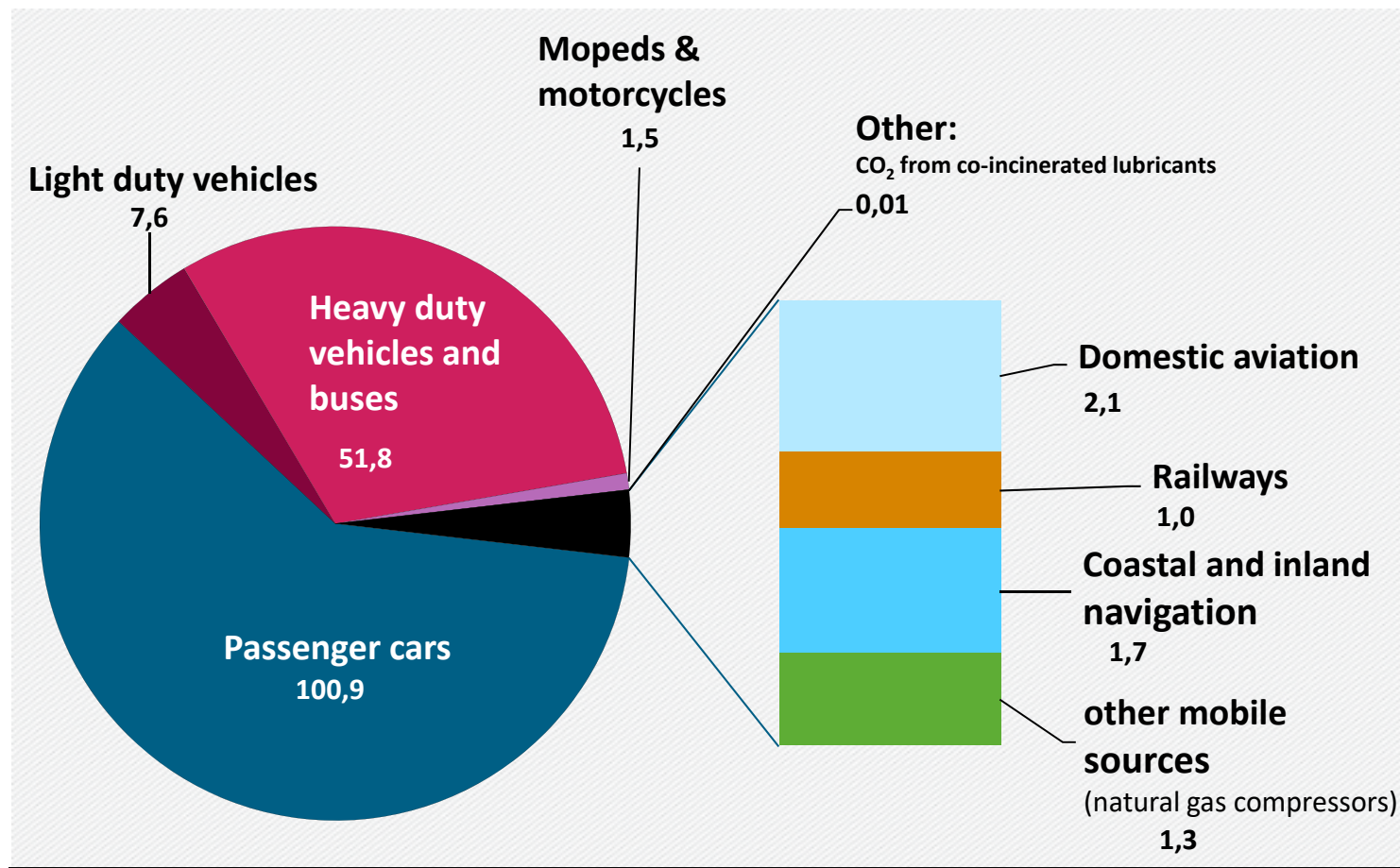
Emissions by UN reporting category, without land use, land use change and forestry
 * Industry: Energy and process-related emissions from industry (1.A.2 & 2);
 Other Emissions: Other combustion (rest of CRF 1.A.4, 1.A.5 military) & fugitive emissions from fuels (1.B)
 ** Targets 2020 to 2050: Energy Concept of the German Federal Government (2010)
 *** Short-term forecast for 2018, emissions from commerce, trade & services contained in Other Emissions

Source: German Environment Agency, National Inventory Reports for the German Greenhouse Gas Inventory 1990 to 2017 (as of 01/2019) and estimate for 2018 from UBA Press Release 09/2019 (corrected)

GHG Emissions in the Transport Sector in Germany

Greenhouse gas emissions from the CRF category Transport in Germany

for 2017, by sub-category (in Mio. t CO₂-equivalent)

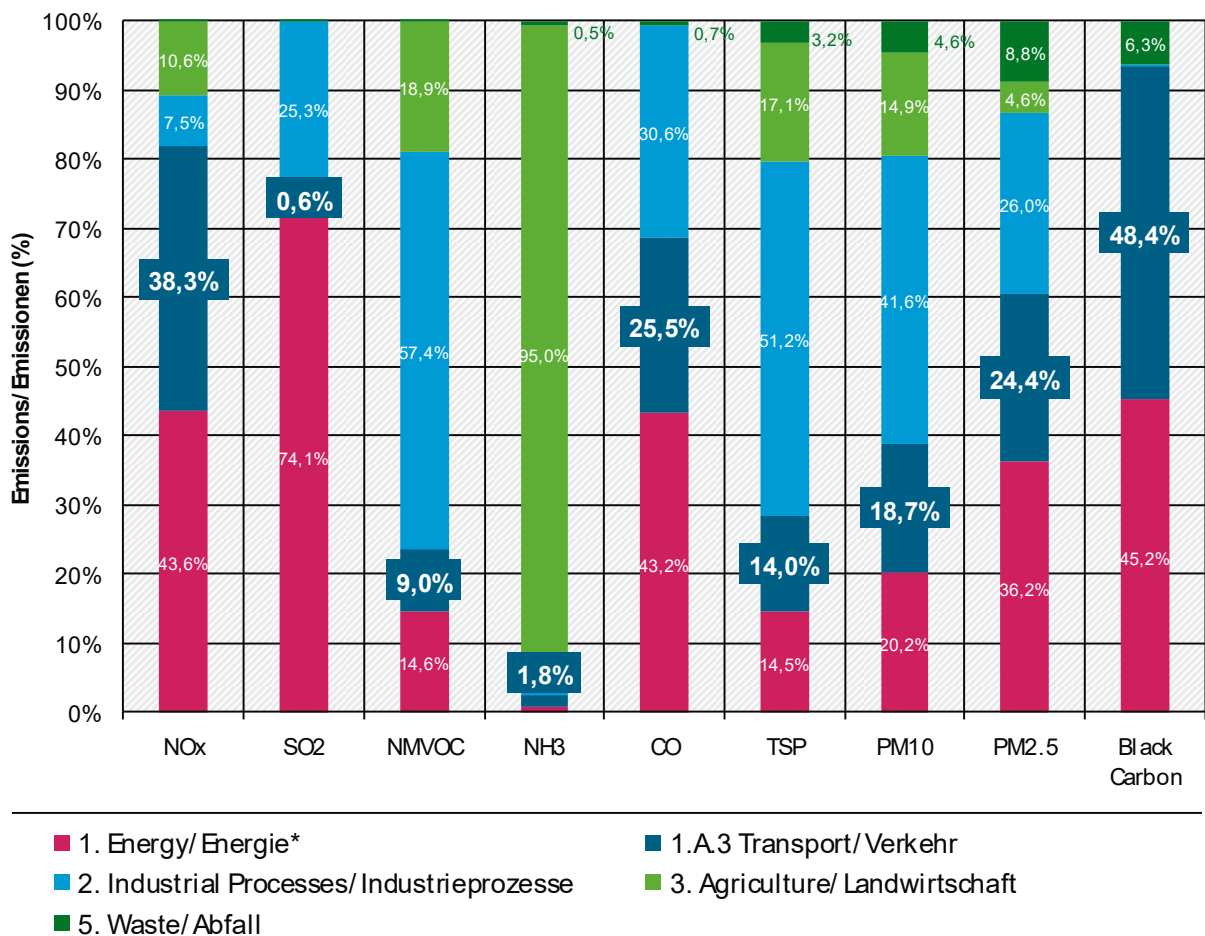


Source: German Environment Agency: National Greenhouse Gas Inventory 1990-2017

Shares of Pollutant Emissions in Germany

Contribution of NFR categories to the emissions/ Anteile der NFR-Kategorien an den Emissionen

2017 percentages per air pollutant / Anteile pro Luftschadstoff für 2017



* w/o Transport / ohne Verkehr (1.A.3)

Quelle: German Emission Inventory (15.02.2019)

German Government's Climate Action Programme 2020

→ **MAKING FREIGHT TRANSPORT CLIMATE-FRIENDLY**

- HDV toll and basing it on energy efficiency classes
- Funding program for (i) energy-efficient commercial vehicles, (ii) combined transport
- rail freight transport: systematic upgrade of rail infrastructure, lowering track access charges, upgrading the rail network to accommodate the use of 740-metre freight trains, electrification of additional routes, and digitalisation and automation to increase the productivity and quality
- inland waterway transport: grants for inland shipping enterprises for sustainable modernisation of inland vessels with the focus on lower emission diesel engines

→ **MAKING PASSENGER TRANSPORT CLIMATE-FRIENDLY**

- Strengthening public transport (funding of 8.2 billion euros)
- Promotion of alternative drives systems in local public transport (electric, hybrid and fuel cell drives)
- Strengthening cycling and walking providing money to creating a safe, appropriate cycling infrastructure by building cycle paths on trunk roads and upgrading tow paths along federal waterways to make them suitable for cycling)
- Car-Sharing Act (1 September 2017, creates the conditions for municipalities to put in place appropriate preferential arrangement)

German Government's Climate Action Programme 2020

→ **INCREASING THE USE OF ELECTRIC DRIVES**

- Tax incentives for electric mobility since 2016 (for private and public transport sector)
- A purchase bonus for electric vehicles – including fuel cell and plug-in hybrid vehicles (4,000 euros for FEV, 3,000 euros PHEV)
- Funding for the further expansion of charging infrastructure

→ **INTRODUCING CROSS-CUTTING MEASURES IN THE TRANSPORT SECTOR**

- tax concessions for CNG/LNG & LPG vehicles beyond 2018

→ **PUTTING MITIGATION MEASURES IN PLACE IN AIR TRANSPORT**

- Single European Sky (SES)
- CO₂ standard for aircraft
- Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

→ **SUPPORTING CLIMATE ACTION IN INTERNATIONAL MARITIME TRAFFIC**

- Monitoring and reporting

Research Projects „Emission Measurements“ at UBA.DE

➤ REMOTE SENSING

- 36 month term (2018 – 2021)
- Two different measurement technologies (EDAR – top-down; OPUS – cross-road)
- 20 days of measurement per instrument in one city starting autumn 2019
 - ➡ Evaluation of all aspects to use data for HBEFA
 - ➡ Feasibility study for local authorities
 - ➡ Comparing RS data with associated air quality measurements

➤ EMISSION MEASURING PROGRAM

- 4 years term (2017-2021), to be renewed
- Measuring pollutants and CO₂ on PC, LDV and HDV with PEMS and Chassis dynamometer
- Assignments on demand (at most 5 vehicles per category),
 - ➡ Emission data collection for annual emission reporting – HBEFA, e.g. software update impact

Thank you for your attention

Dr. Christiane Vitzthum von Eckstädt

Christiane.VitzthumVonEckstaedt@uba.de

www.umweltbundesamt.de