

# Introduction

## Context

Reliable data on historic emissions are key to the political process and to decisions on abatement technology promotion. However, future emission paths also do have the power to shed a new light on these discussions. Therefore, greenhouse gases (GHG) and air pollutants are inventoried and projected in the same database system using the same structure of detailed time series.

For the National Air Pollution Control Programme, a new database within this system was created in 2018 that is basically a copy of the German inventory database. In addition, multiple scenarios are taken into account, sketching development of activity data and emission factors up to 2040 and beyond. The system features integrated assessment for both greenhouse gases (GHG) and air pollutants. In particular, existing projections for GHG can be applied to air pollution contexts. The database used also allow for the flexible combination of distinct scenarios for specific sectors and source categories to add up to a complete projection of the inventory. Furthermore, reduction potentials of mitigation measures can be modelled in detail and quantified directly in the database. The projection database is fully operational and used as the common basis for reporting on emission projections under NEC directive and CLRTAP reporting obligations.

## Policies

For the past few years, climate change and greenhouse gas (GHG) emissions have been an important issue in society and politics. GHG emission inventories have seen a lot of attention as a consequence. However, there have also been a couple of air pollution related headlines, including “diesel gate” and particulate matter concentrations caused by residential wood burning. In Germany, these discussions have led to a number of legislative projects and new regulations which have the power to significantly change emission levels. Thus, projections generally show a further decline in emissions. Some main policy drivers are listed and contextualized below:

- Energy
  - Phase-out of coal use for energy production until 2038 with significant reductions before 2030
  - increasing prices in the Emissions Trading System (ETS)
  - introduction of a national Emissions Trading System (n-ETS) for heat supply and transport sector in 2021
  - increased capacity and production of renewable energy
  - new regulations with stricter emission limit values for some installation types
- Transport
  - new vehicle regulations, including updated Euro norms
  - more electric vehicles, more public transport
- Agriculture
  - Amendments of the “Düngeverordnung” (fertiliser ordinance) in 2017 and 2020 as well as other legislative and incentive measures to reduce fertiliser use and increase the nitrogen use efficiency