



Rijksinstituut voor Volksgezondheid  
en Milieu  
*Ministerie van Volksgezondheid,  
Welzijn en Sport*

# The Clean Air Agreement in the Netherlands

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Centre for Environmental Quality



## The Clean Air Agreement (het Schone Lucht Akkoord) in the Netherlands:

- Collaboration National, Regional, Local governments (100+)
- Joint objective: 50% reduction of life expectancy loss 2030  
Bring WHO AQ guidelines (2005) within reach



# Multi-level governance

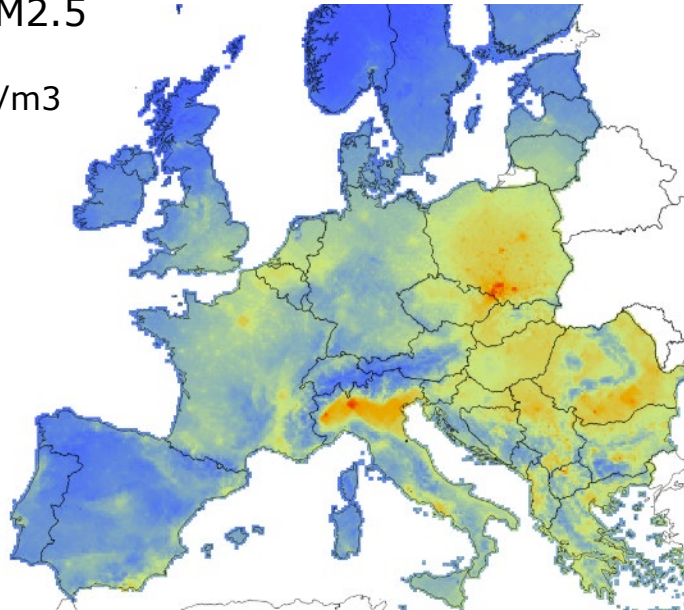
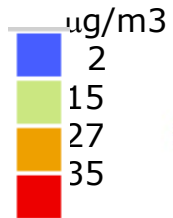
**contribution**

**50%**

**30%**

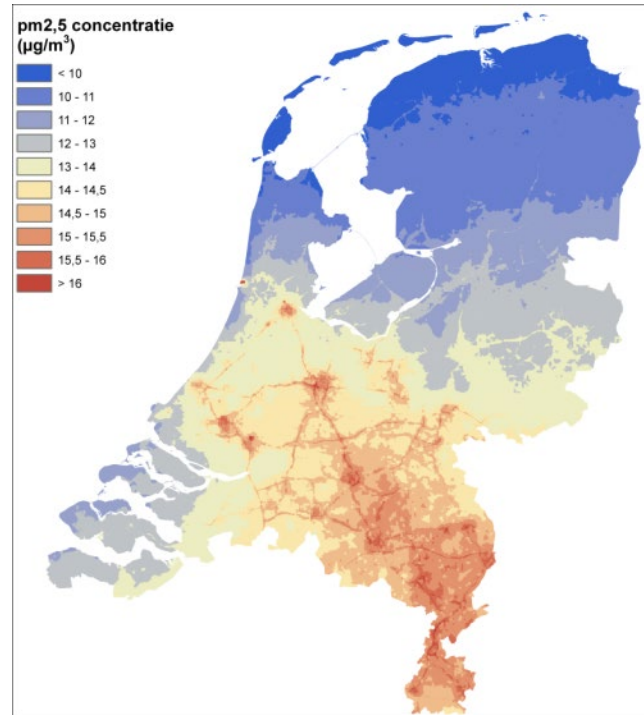
**20%**

PM2.5



## National policies

- Taxes, subsidies
- Energy, road transport



## EU-policies

- NECD
- Emission standards
- CAP
- 0-pollution action plan (-55% premature deaths in 2030)
- Climate & Energy: "fit for 55"

## Local policies

- Licences
- LEZ
- Infrastructure/ local planning



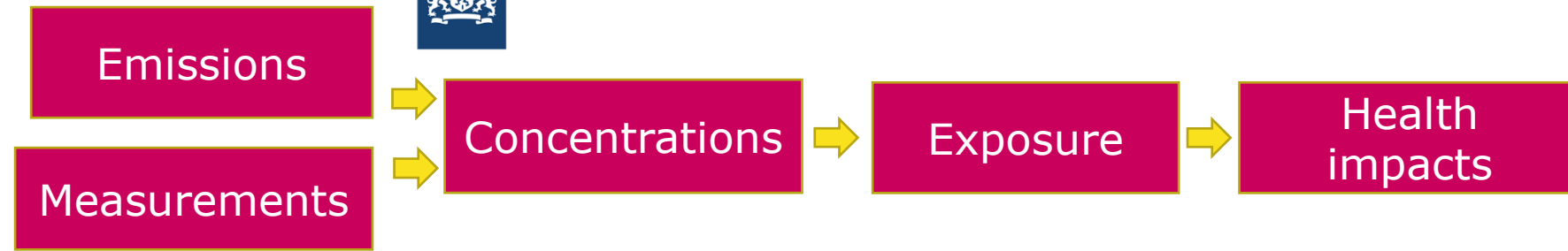
"hot-spots"



# Clean Air Agreement

- > Generic measures:
  - include health objectives in (regional) transport and mobility plans
  - assess health impacts of building infrastructure (e.g. roads), in the planning phase
  - Phase out diesel vehicles; stimulate cleaner alternatives
- > More specific national/regional/local plans
  - E.g. local plans (Omgevingswet, 1 January 2024):
    - LEZ
    - Woodburning ban
    - Additional measures to clean- and emission free construction (SEB)
- > Communication/exchange of information: thematic working groups
- > Evaluation, (bi-) annual monitoring, **RIVM Health Impact Assessment Tool**

# Methodology



- > **Emissions:** *NL PRTR, 1\*1 km and (large) point sources*
- > **Concentrations:** *OPS Lagrangian concentration and deposition model for NO<sub>2</sub> and PM2.5 (EMEP model for OC) at 350,000 locations*
- > **Health Impacts:** *Elapse study & COMEAP 2018*
  - *Combined exposure of PM2.5 and NO<sub>2</sub>*
  - *2030 compared to 2016*
  - *Life Expectancy Loss; Years of Life Lost (CBA)*



# Aim Health Impact Assessment

Assess whether ambition level of Clean Air Agreement, based on policies of national, regional and local governments in the Netherlands, can be achieved

- **Health Effects:** 50% health benefits
- **Limit values:** towards WHO (2005) AQ guideline values
- **Emission reductions:** continue negative trend



# Health benefits: 2030 compared to 2016

Sector	2030 compared to 2016			
	KEV	VES	ILL	NPLG
Health damage from national sources	<b>-42%</b>	<b>-46%</b>	<b>-49%</b>	<b>-50%</b>

## Scenario's:

KEV = With measures

VES = With additional measures, including additional local CAA policies

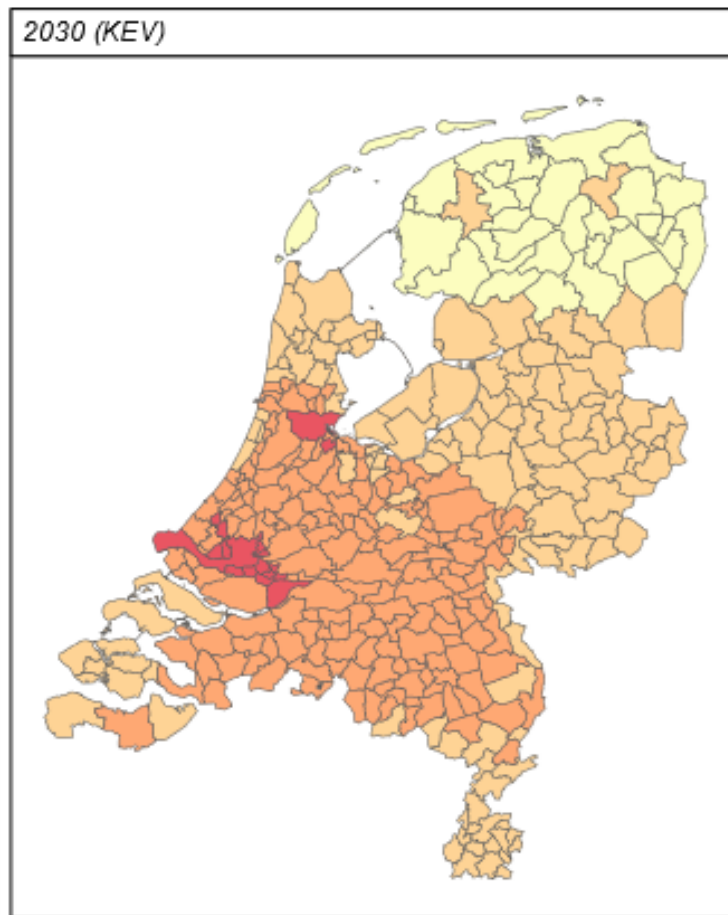
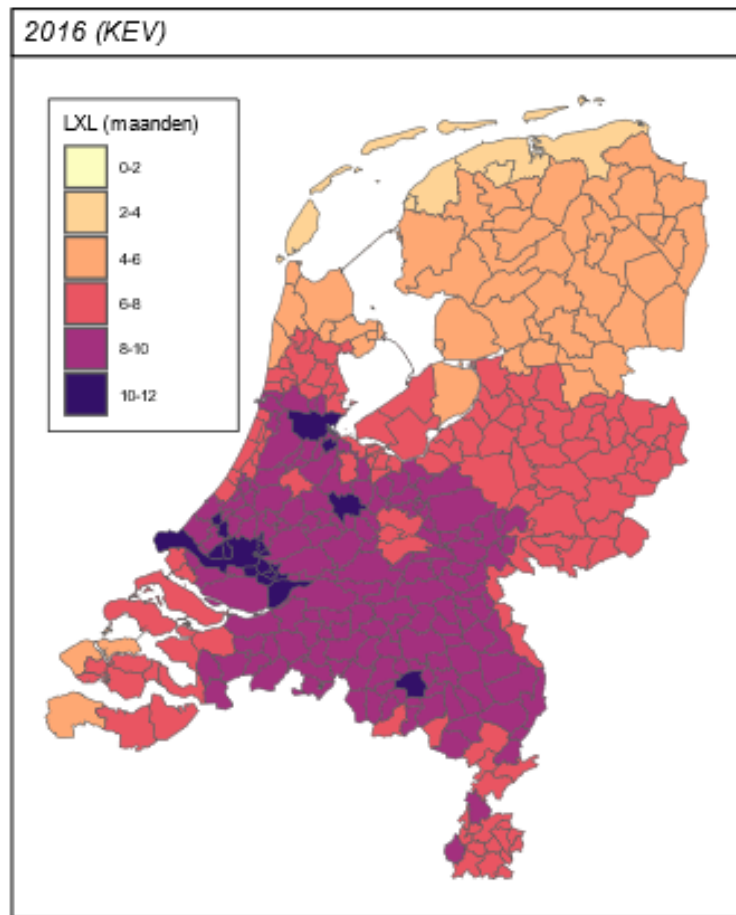
ILL = With additional climate policies (aim: achieving EU GHG objectives 2030)

NPLG = With additional nitrogen policies (aim: protect nature, in line with EU polices)

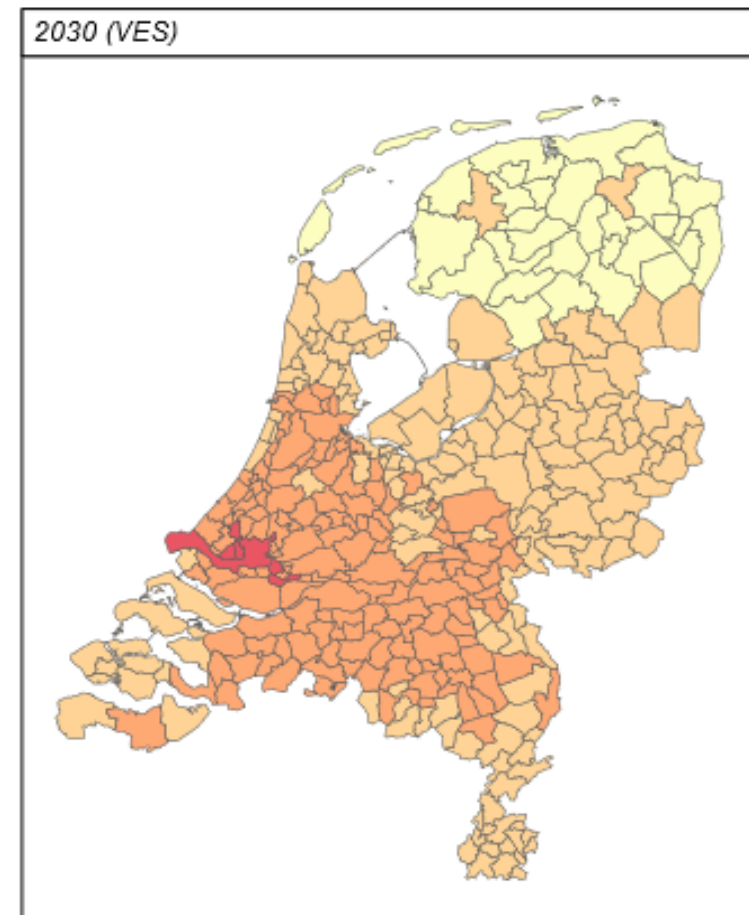


# Health damage maps

Gemiddeld levensduurverlies (LXL) per gemeente



eente



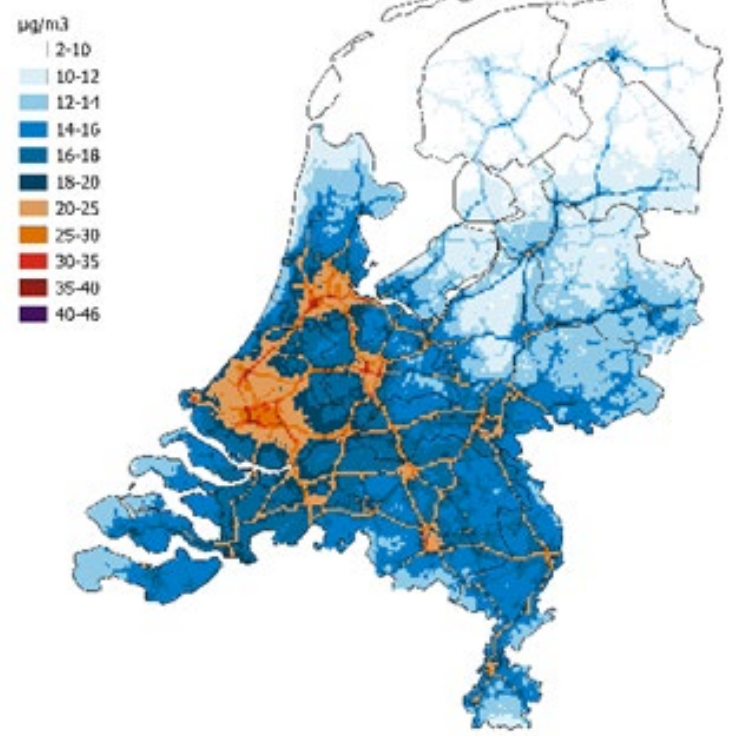


# Concentrations (WHO 2005 & revised AAQD)

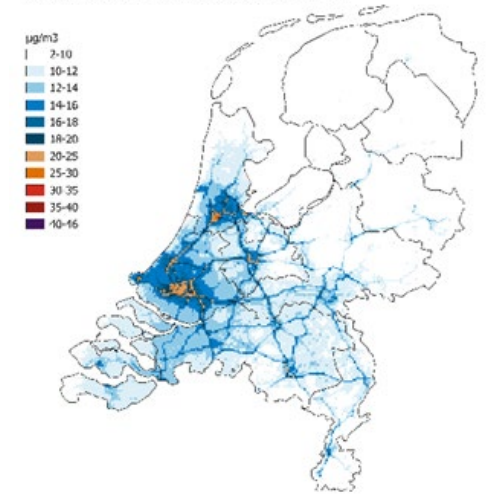
de huidige en herziene EU-grenswaarden en de WHO (2021)-advieswaarde

In $\mu\text{g}/\text{m}^3$	Huidige grenswaarde	Herziening AAQD	WHO advieswaarde
PM <sub>2,5</sub>	25	10	5
PM <sub>10</sub>	40	20	15
NO <sub>2</sub>	40	20	10

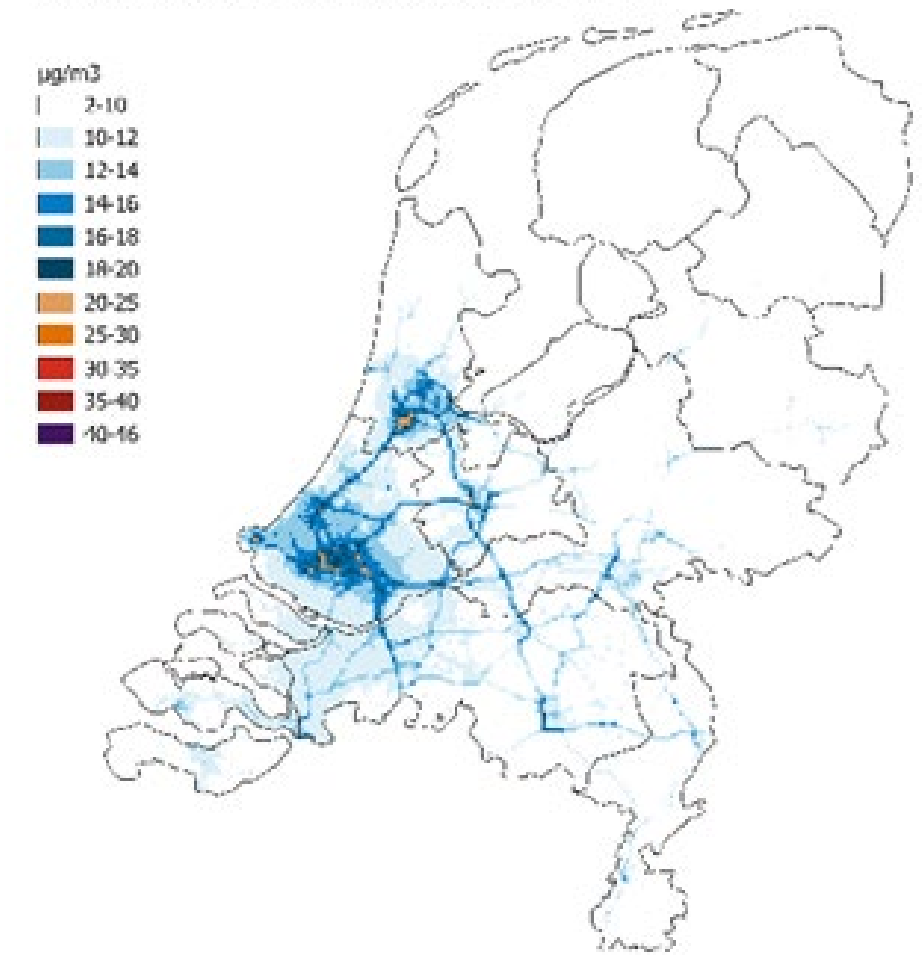
Jaargemiddelde NO<sub>2</sub> concentratie 2016 (KEV)



Jaargemiddelde NO<sub>2</sub> concentratie 2025 (VES)



Jaargemiddelde NO<sub>2</sub> concentratie 2030 (VES)



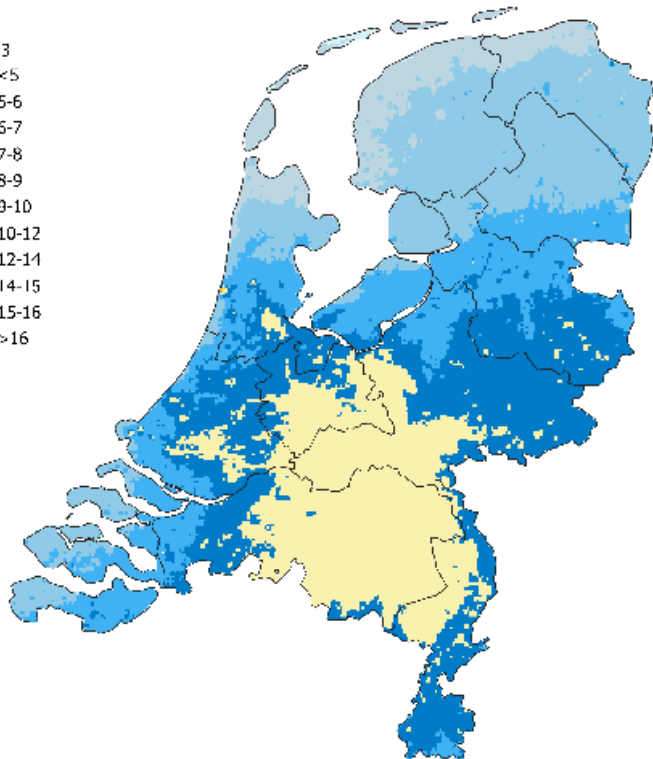
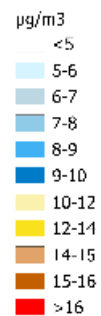


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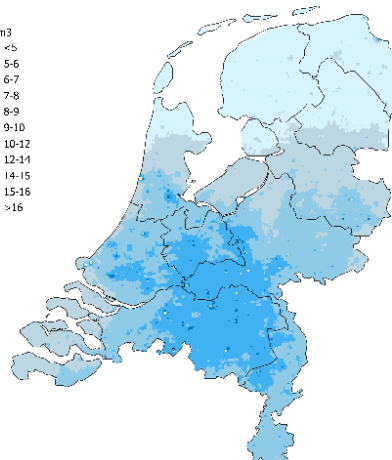
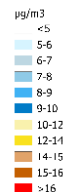
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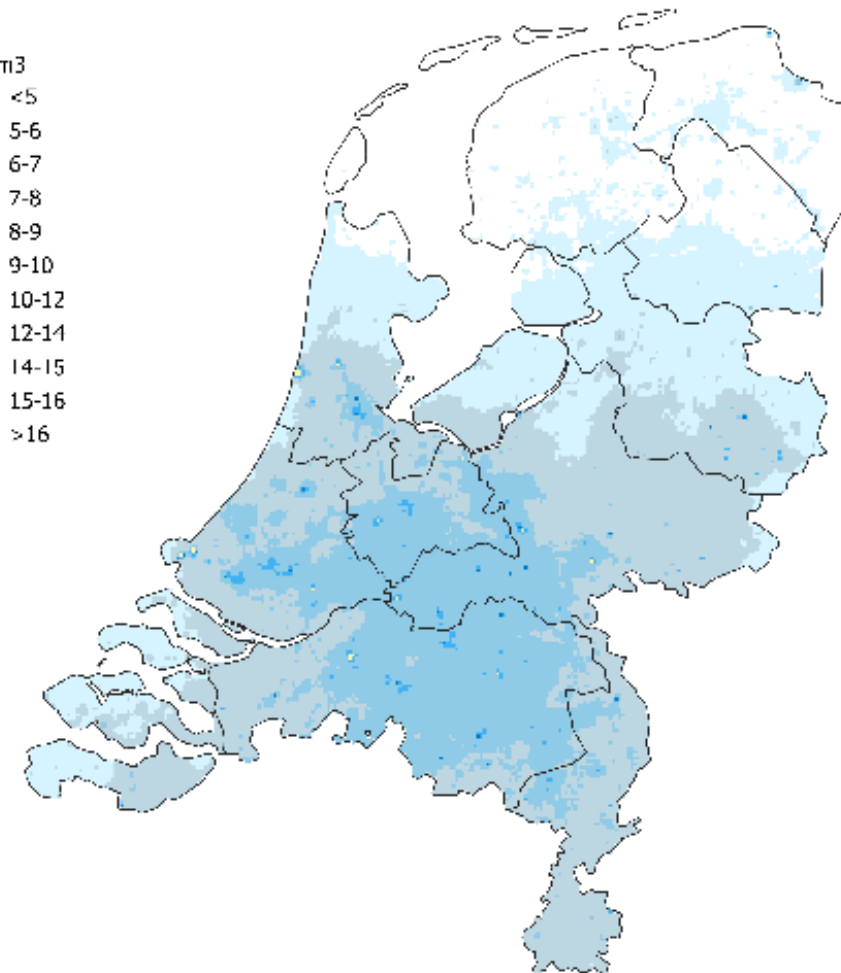
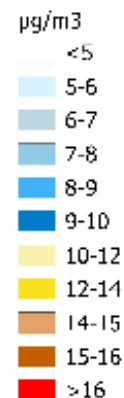
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Jaargemiddelde PM<sub>2.5</sub> concentratie 2025 (VES)

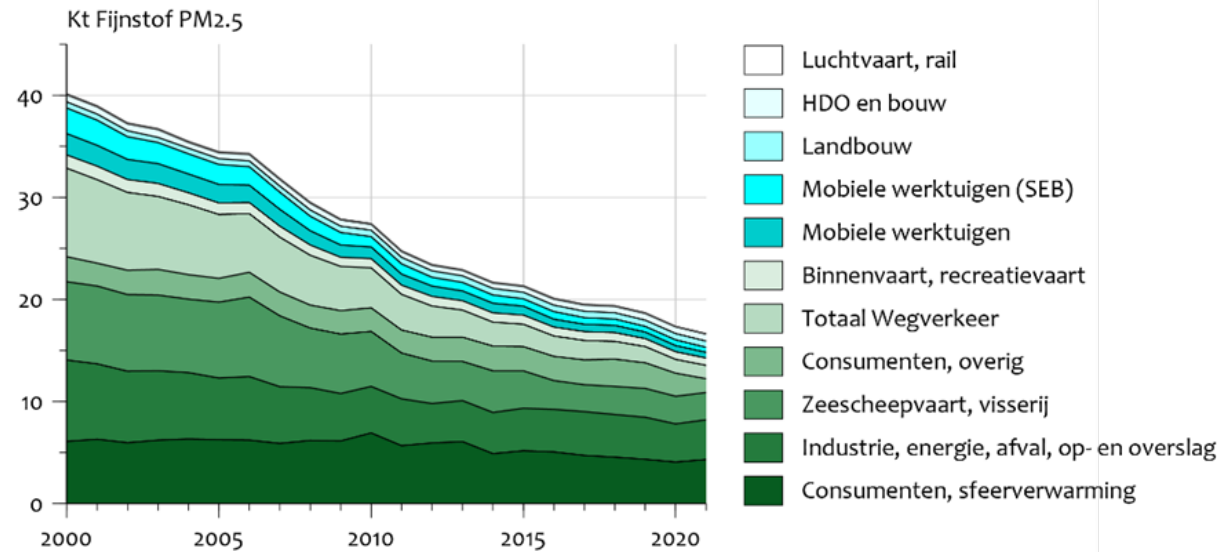
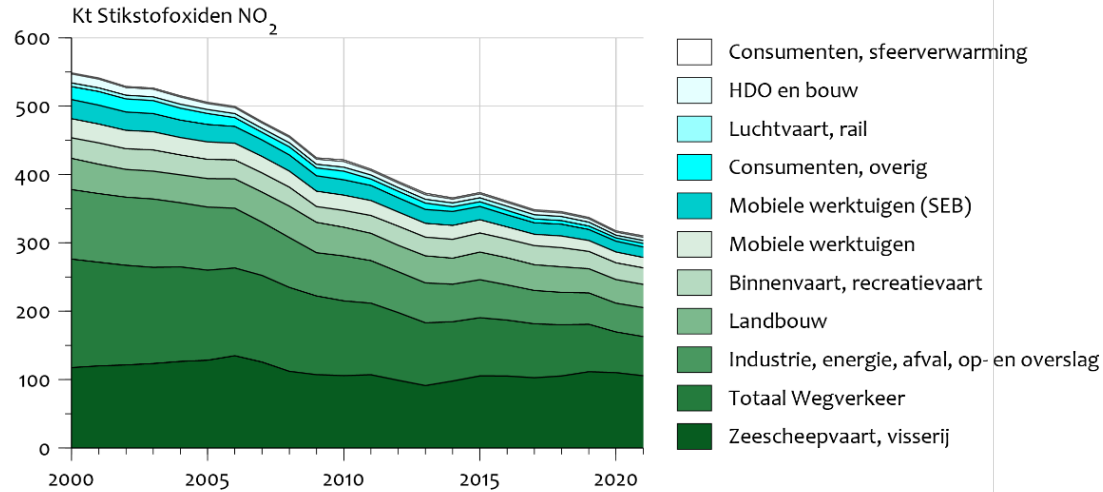


Jaargemiddelde PM<sub>2.5</sub> concentratie 2030 (VES)





# Emissions: continuous reduction





# Conclusions

- › The new AAQD requires further action especially for NO<sub>2</sub>
- › The impact of local measures is limited
- › Cooperation between local and national government is required
- › Actual implementation of climate and nitrogen policies has substantial effect