

Major air pollutant sources

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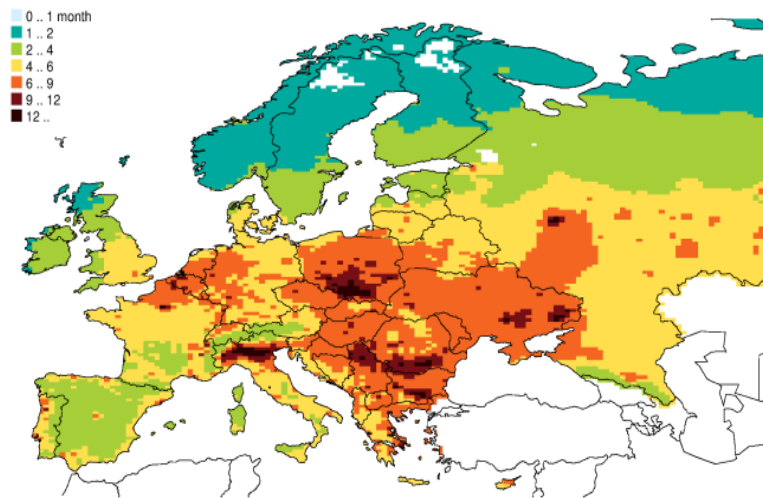
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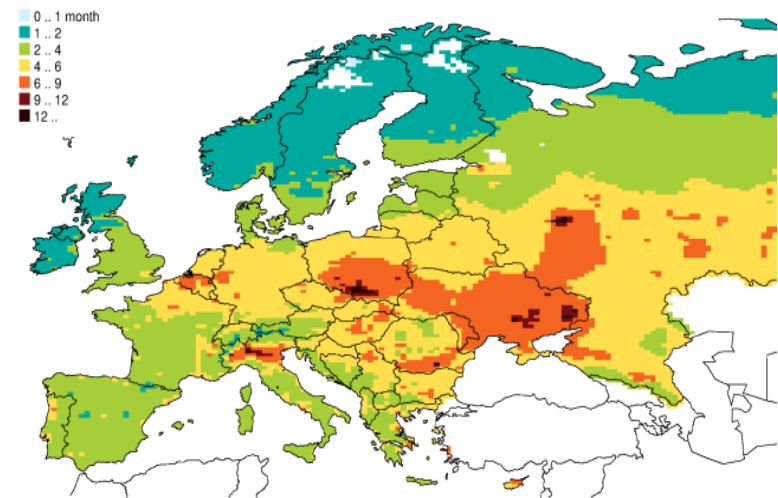
● In 2005, excessive levels of PM were estimated to cause 455,000 premature deaths/year in EU27.

● Under the Baseline scenario, by 2030 PM pollution would still cause more than 300,000 premature deaths/year.

2010



2030 Baseline

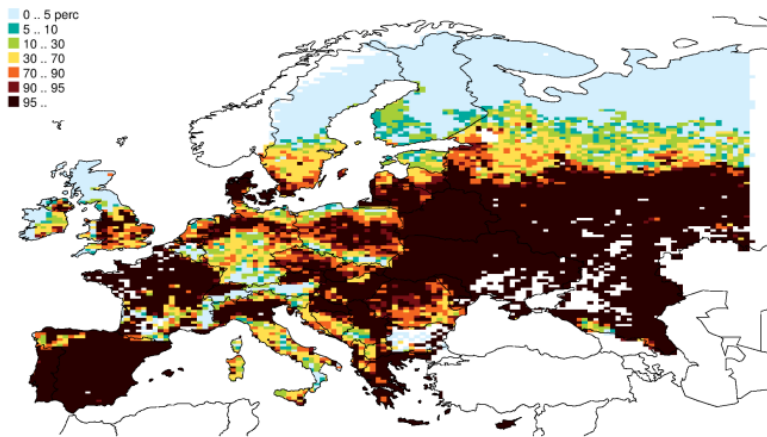
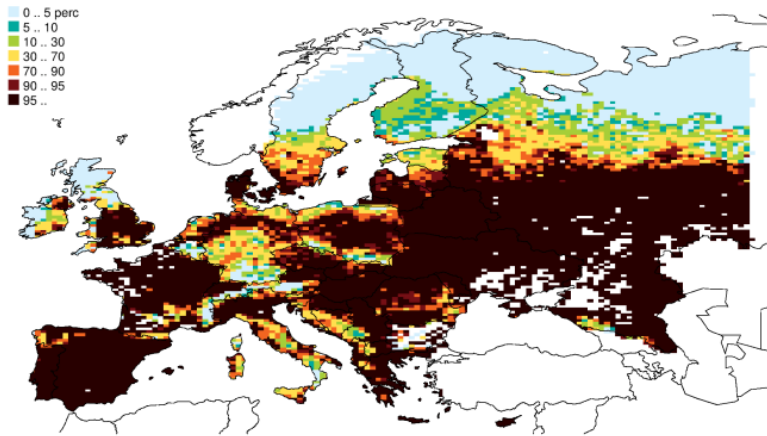


Maps: Loss of statistical life expectancy from PM exposure (months)

Sources: IIASA (Nov 2012); EMRC (Nov 2012); EEA (June 2009)

Eutrophication

2010: 62% (1,000,000 km²)

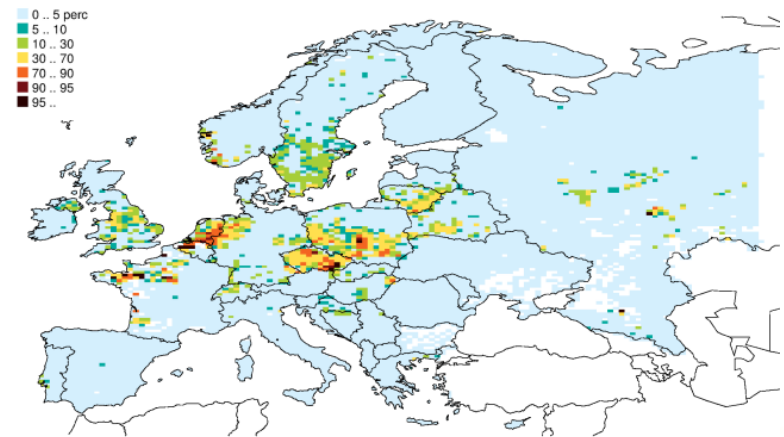
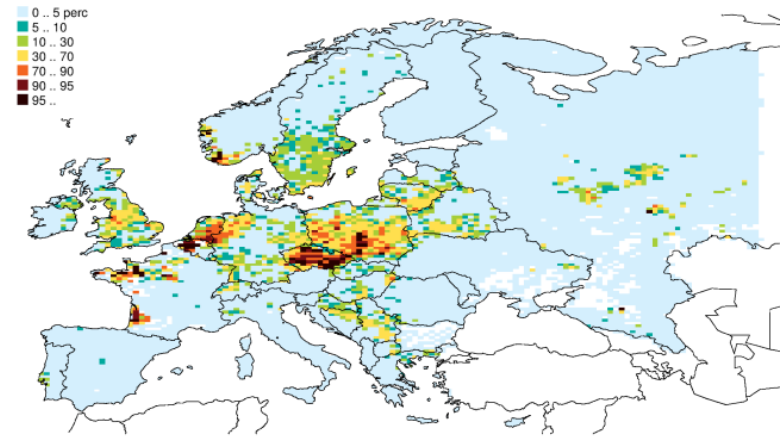


2030 Baseline: 54% (890,000 km²)

Source: IIASA (Nov 2012)

Acidification

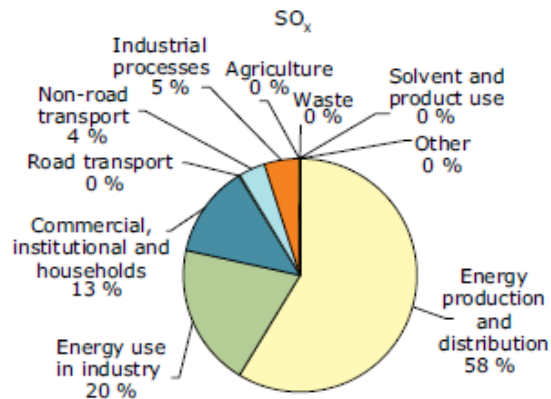
2010: 7.5% (96,000 km²)



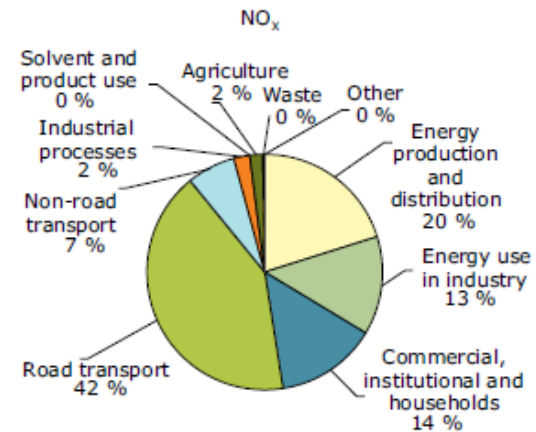
2030 Baseline: 3.7% (47,000 km²)

Emissions by sector in 2010

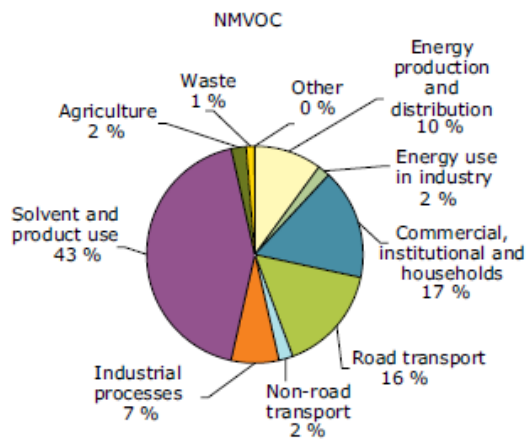
SO₂



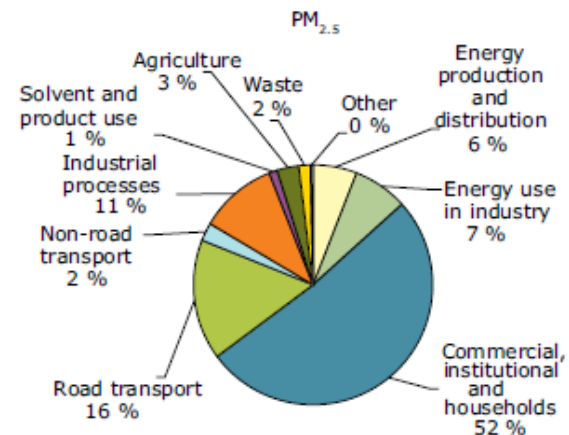
NO_x



VOCs

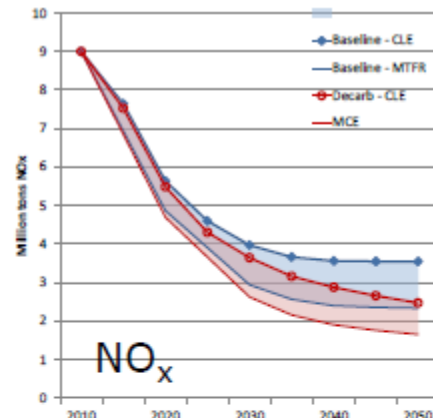
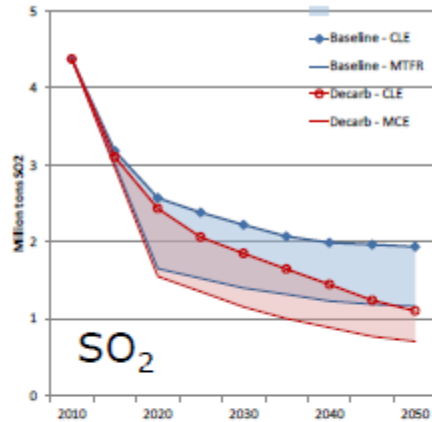


PM_{2.5}



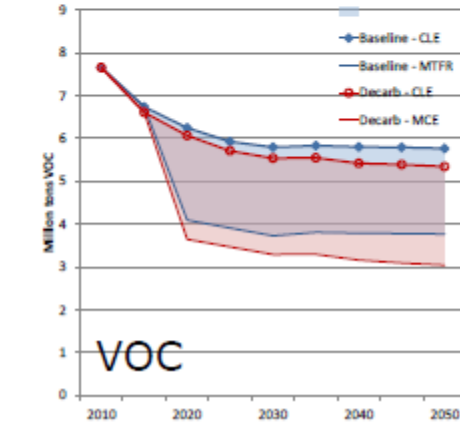
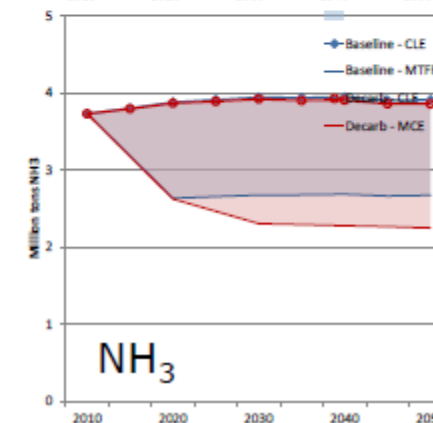
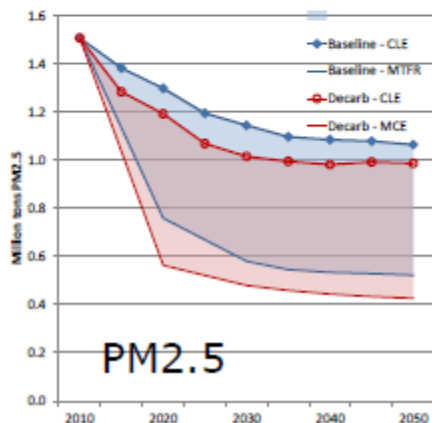
Source: EEA (2012)

Potential for emission reductions 2010-2050



Further emission reductions from:

- Decarbonisation (mainly SO₂ & NO_x)
- Air pollution control measures (could further halve emissions)



Source: IIASA (2013)

Sectoral measures – examples (1)

- **Smaller industrial combustion plants (1 - 50 MW_{th}):**
 - Set binding Emission Limit Values (ELV) and require use of Best Available Techniques (BAT), e.g. through IED-directive
- **Domestic solid fuel combustion (boilers, stoves, etc.):**
 - Set stringent ELVs for new installations in Ecodesign directive;
Phase-out or retrofit existing installations
- **Agriculture:**
 - Nitrogen management; Measures linked to feeding, housing, manure storage & application; Lower meat consumption;
Enforce ban on agricultural waste burning

Sectoral measures – examples (2)

- **Non-Road Mobile Machinery (NRMM):**
 - Stricter ELVs in the NRMM-directive; Retrofit PM-traps
- **Road vehicles:**
 - Ensure real-life compliance; New Euro 7/VII-standards
- **Solvents:**
 - Reduce solvent-content in products
- **International shipping:**
 - SO₂- and NO_x-Emission Control Areas in all European seas; NO_x-control on existing ships; PM/BC-control; Lower speeds

What's needed?

- **Support** – not least from member states – **for a high level of ambition** in EU's air pollution policy:
 - **NECs for 2020/25/30 that achieve EU's environmental objectives;**
 - **Air quality standards in line with WHO's recommendations;**
 - **New/strengthened sector legislation to support the NECs;**
 - **Measures to ensure compliance and enforcement.**
- **Action on ships:** EU and member states must push action in the International Maritime Organisation (IMO) for measures to cut ship emissions.
- **Action on greenhouse gases:** Domestic and international action (in the FCCC) for binding commitments that safeguard a maximum temperature increase of 1.5 degrees.

Conclusions

- Air pollutant emissions and damage are still much too high.
- Further emission reductions bring **significant benefits** to society.
- Revised TSAP and NEC directive should aim to achieve **EU's environmental objectives**.
- Ensuring a high level of ambition in the revised NEC directive requires **new and strengthened sectoral measures**, especially for:
 - Agriculture (NH_3 , PM/BC, CH_4)
 - International shipping (SO_2 , NO_x , PM/BC)
 - Domestic solid-fuel combustion (PM/BC, VOCs)
 - Road and non-road vehicles (NO_x , PM/BC)
 - Small industrial combustion plants (SO_2 , NO_x)
 - Solvents in products (VOCs)
- **Climate policy** has great impact on air pollutant (SO_2 and NO_x) emissions. EU must establish and implement faster and more far-reaching **domestic GHG emission reductions**.

More information?

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