



[Audience]
[November 2014]

The EU Air Policy Review & Package Summary and State of Play

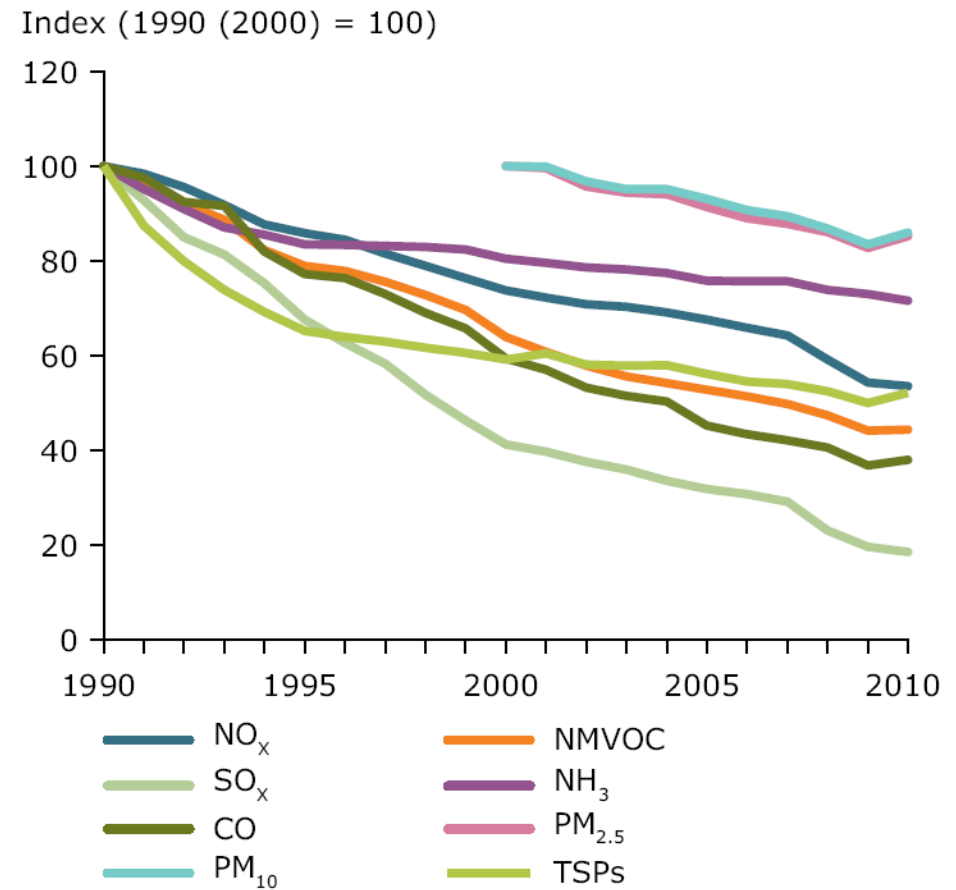
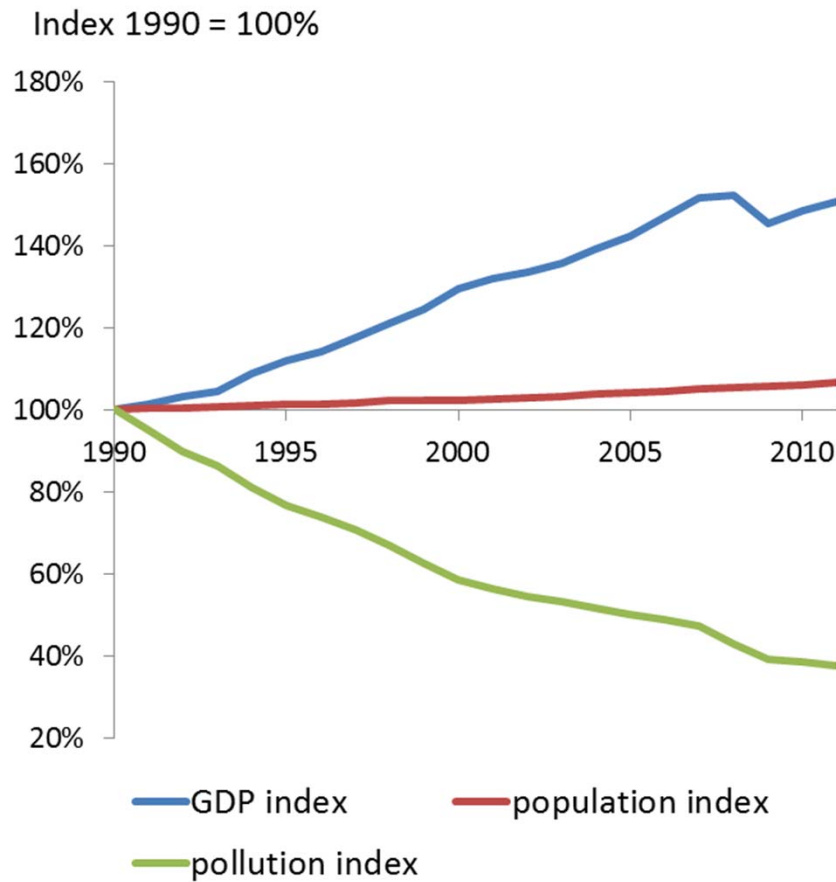
[Name]
European Commission
DG ENV.C.3
Air Quality and Industrial Emissions

The AQ Package

- ❑ Communication on the new European Clean Air Programme ("Strategy") for the period up to 2030
- ❑ **Proposal for a revised Directive on National Emission Reduction Commitments ("NEC")**
- ❑ Proposal for a Directive on controlling emissions from Medium Combustion Plants ("MCP")
- ❑ Proposal for a Council Decision on ratification of the Gothenburg Protocol amendment ("GPRI")
- ❑ **Accompanying Impact Assessment ("IA")**

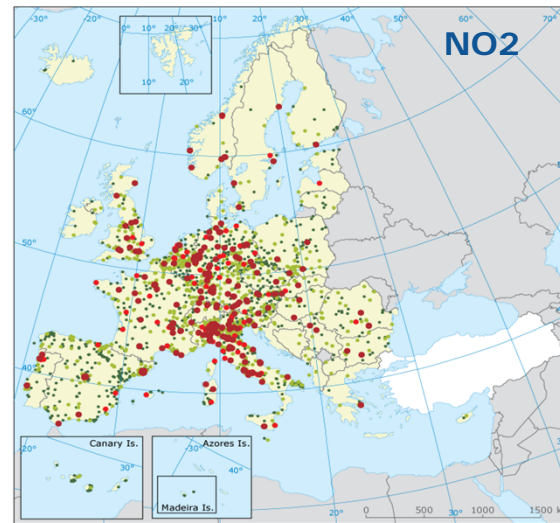
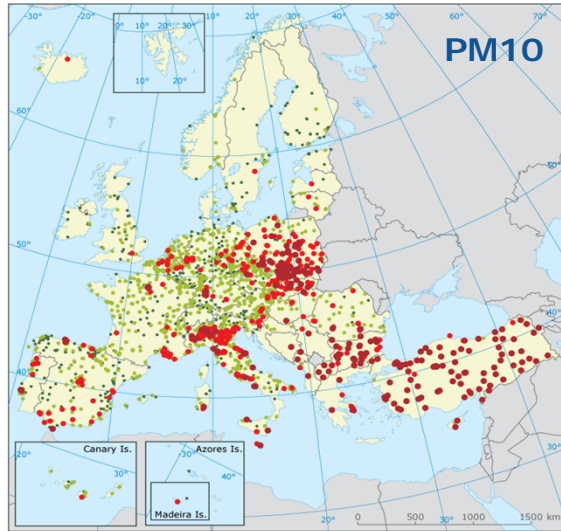
The EU Air Policy Evaluation

EU inventories show air policy greatly reduced emissions of major air pollutants

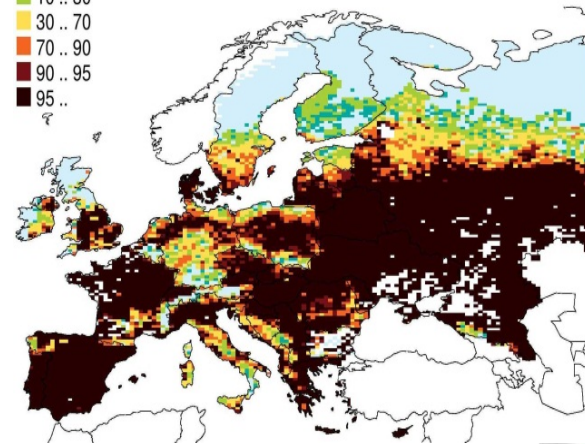
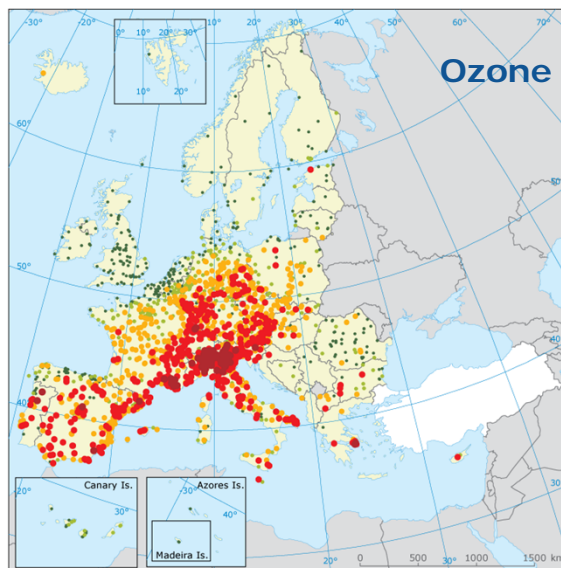


The EU Air Policy Evaluation

Still significant exposure to poor air quality



See also EEA Reports



The EU Air Policy Evaluation

Air quality continues to cause significant impacts

Health & Environment Impacts

- > 400.000 premature deaths each year
(10 times the amount of people dying prematurely in traffic)
- > 60% of the EU area exposed to eutrophication
(including > 70% of Natura 2000 ecosystems)

Socio-Economic Impacts

- External costs: €300-900 billion
- 436 million restricted activity days, incl. 121 million lost workdays
- Direct economic costs and productivity losses: €23 billion
(€15bn lost workdays, €4bn healthcare costs, €3bn crop yield loss and €1bn damage to buildings).

The EU Air Policy Evaluation

Persisting problems beyond 2020 even at full implementation

Health & Environment Headline Indicators	2010	2020	2025	2030
Premature deaths from PM and ozone exposure	406.000	340.000	330.000	327.000
Percentage area with excess eutrophication	62	55	53	52

External costs –low estimate (€ billion)	330	243	224	212
External costs –high estimate (€ billion)	940	775	749	740

The EU Air Policy Evaluation

Compliance obstacles (and pre-2020 solutions)

❑ **Transport**

- Diesel vehicles (Euro V/RDE for HDV; Euro 6 + 2014 RDE implementing act for diesel passenger cars)
- Synergies with sustainable mobility plans (incl. LEZ, green taxes)

❑ **Small and medium scale combustion**

- Ecodesign Directive (< 1MW)
- Targetted fuels switching programmes (PL, CZ, SK, BG,...)
- Synergies with sustainable energy plans

❑ **Background pollution** (within MS, intra-EU, global)

- Implementation of existing legislation (IED, Marine Fuels,...)
- Implementation of GP emission reduction commitments (2020)

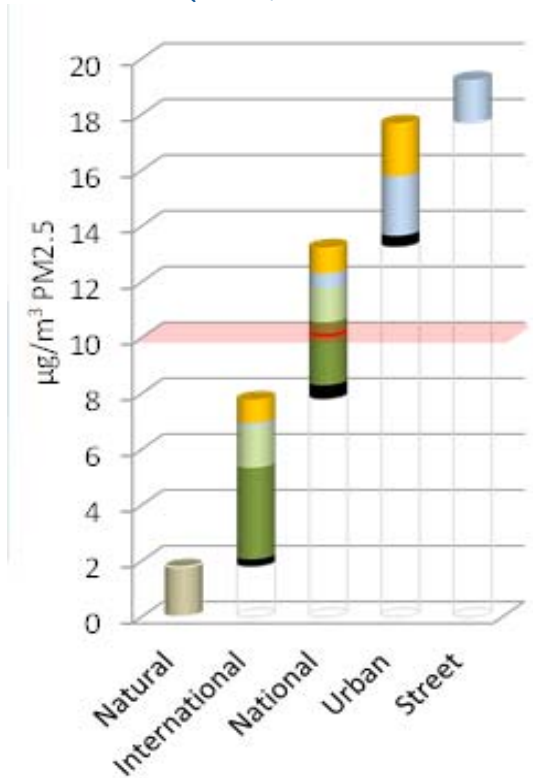
❑ **Governance**

- Enhanced intra and inter MS coordination (national- local)
- Enhanced assessment and management capacity
- Enhanced integration of AQ into other policies (incl CC)

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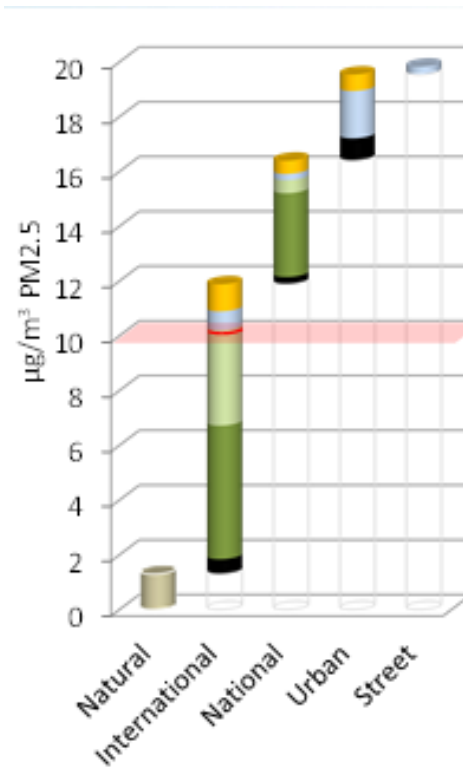
Poor governance hampers urban air quality management (PM)

Austria (2009, 19 Urban stations)

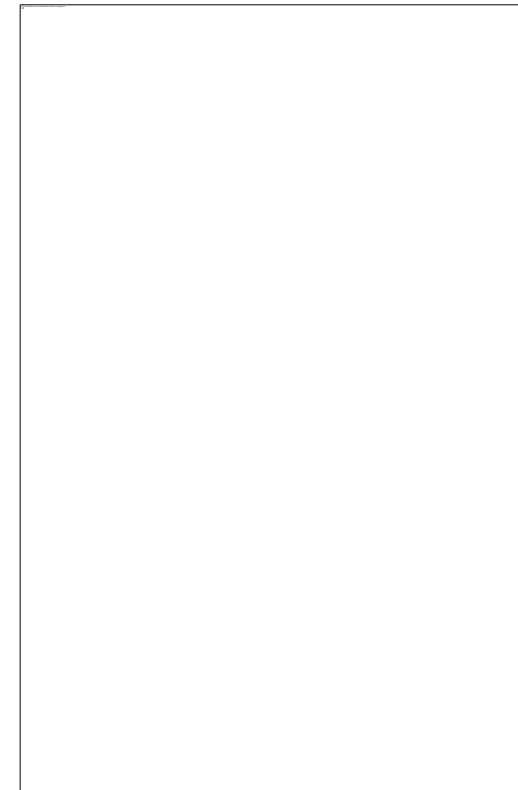


- Primary PM: Households & Commercial
- Primary PM: Transport
- Primary PM: Industry
- Secondary PM: Transport (NH3+SOx/NOx/...)
- Secondary PM: Industry (NH3+SOx/NOx/...)

Belgium (2009, 4 Urban stations)



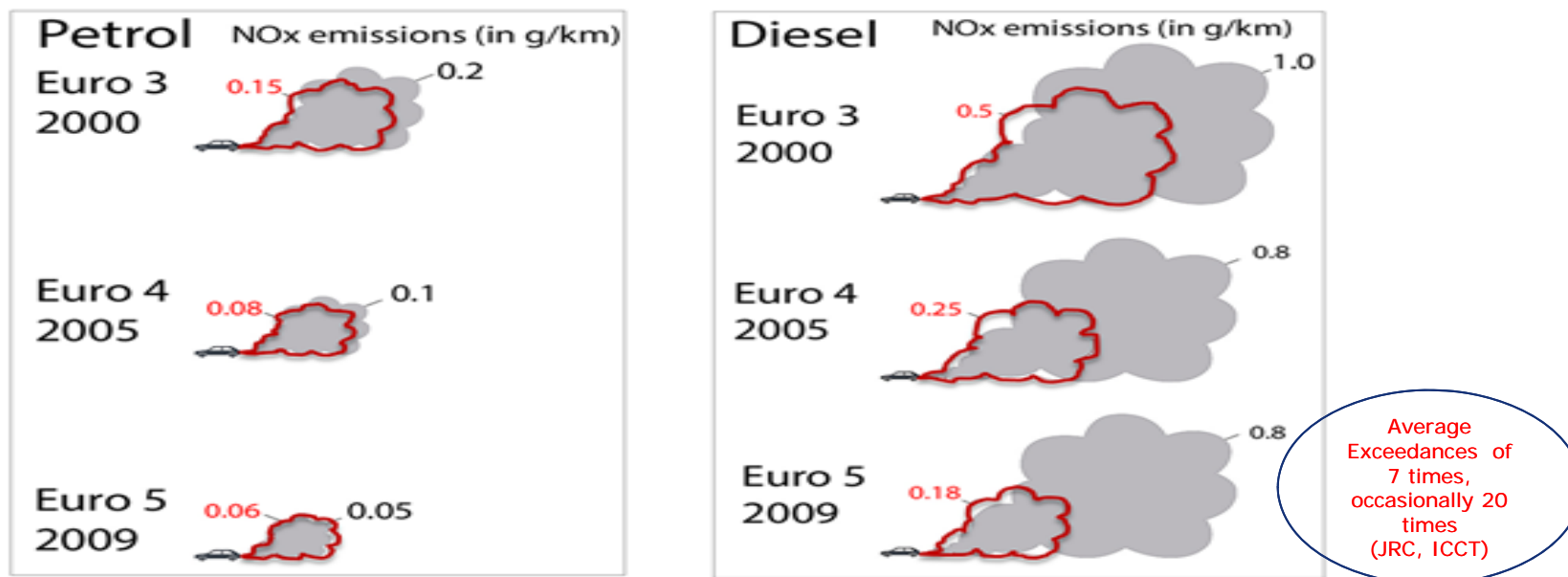
Bulgaria (2009, 14 Urban stations)



The EU Air Policy Evaluation

NO2 non-compliance directly linked to diesel passenger cars

The problem: gasoline vs diesel "Real World Emissions" for NOx



The solution (Regulation 715/2007, CARS 2020)

- ❑ Euro 6 + recording and reporting of RWE (from 9/2014)
- ❑ Euro 6 + 'conformity factors' / margin of tolerance of 50% instead of 700% (from 2017)
- ❑ TCMV Committee (ENTR) vote on new "RWE" tests [Jun.] [Dec.] 2014 Jan. 2015
- ❑ Compliance investigation for extreme cases (switching off NOx abatement systems) ?

The EU Air Policy Development

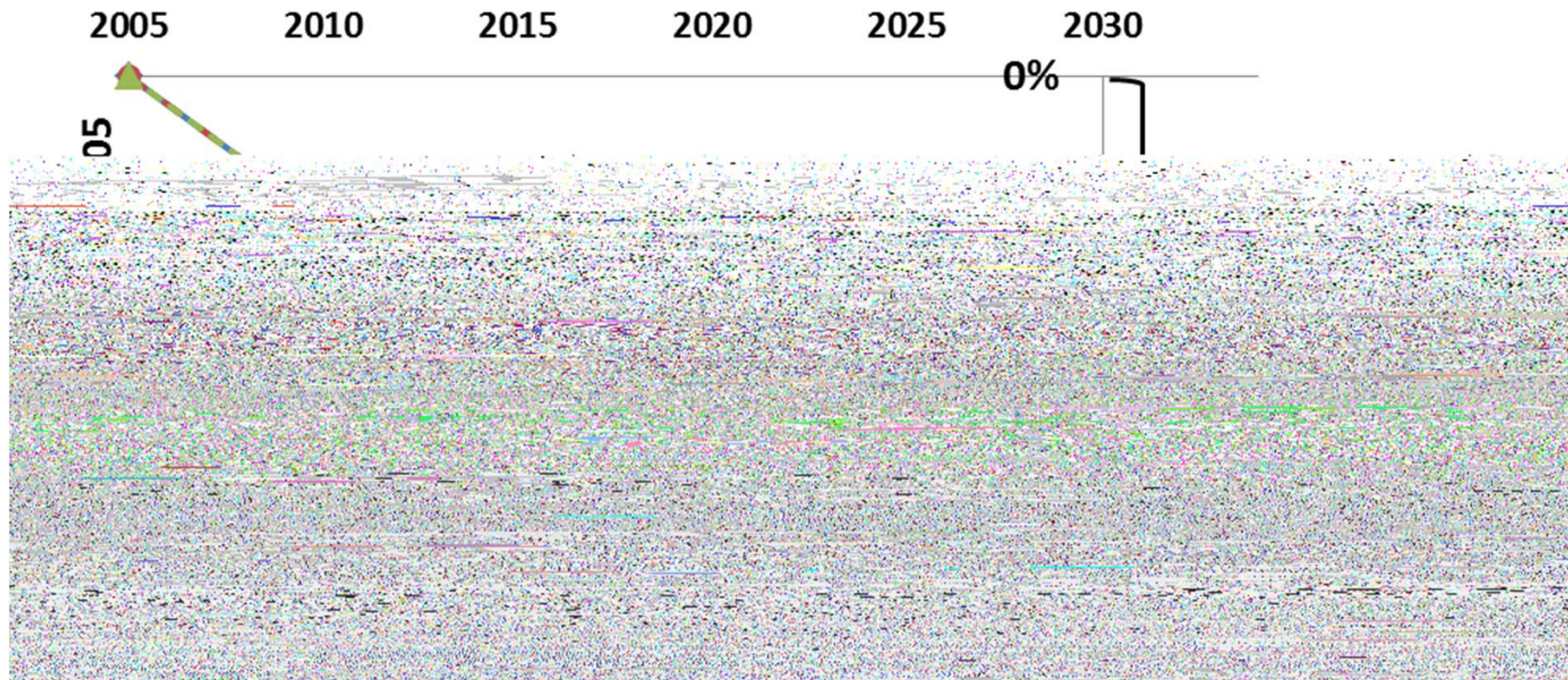
Policy options selected to achieve compliance by 2020 (summary)

- ❑ **Full implementation of existing EU source measures** (in particular Euro 6/RDE, ScFD, IED/BREF, 2009CEP, ...)
- ❑ Full implementation of **(enhanced) local air quality plans** supported by **national air pollution control programmes**
- ❑ **Reinforced EU support** to enhance national and local air quality management capabilities and actions (LIFE, EU funds, European Clean Air Forum)
- ❑ **Early implementation of national emission ceilings for 2020 (Gothenburg Protocol as amended in 2012)**, also in EU neighbourhood countries
- ❑ Reinforced research and innovation agenda in Horizon 2020 (clean air research and innovation agenda)

The EU Air Policy Development

The "gap closure" approach

Health impact in 2030



The EU Air Policy Development

Selected Policy Option for 2030 (delivered via new NECD)

- 2030 impact reduction targets
 - Health: 52% (PM, O₃, precursors)
 - Eutrophication: 35% (NO_x, NH₃)
 - Acidification: 85% (SO_x, NH₃)
- Associated emission reduction needs for six principal pollutants by (2020) 2030 vs 2005 (per MS)
 - SO₂: (59%) 81%
 - NO_x: (42%) 69%
 - NMVOC: (28%) 50%
 - NH₃: (6%) 27%
 - PM_{2.5} (22%) 51%
 - CH₄ (--%) 33%
- Additional Flexibilities
 - Marine off-setting
 - Emission inventory adjustments (new methods, sectors)
 - Joint Implementation (CH₄)

The EU Air Policy Development

Monetised benefits and costs for 2030

External cost reductions (health only): €44 -140 bn/year

Direct cost savings (health only): €3 bn/year

- Higher productivity of the work force: €1850 m
- Lower health care costs: €650 m
- Higher crop yields due to lower ozone levels: €220 m
- Less damage to buildings: €120 m

Implementation costs: € 3.3 bn per year

- Around €[1] bn cheaper if 2030 CEP is implemented
- Positive overall impact on GDP growth
- Positive overall impact on employment

Selected Policy Option for 2030

(Proposal on Medium Combustion Plants supporting MS to achieve new 2030 NEC and move air quality towards WHO levels)

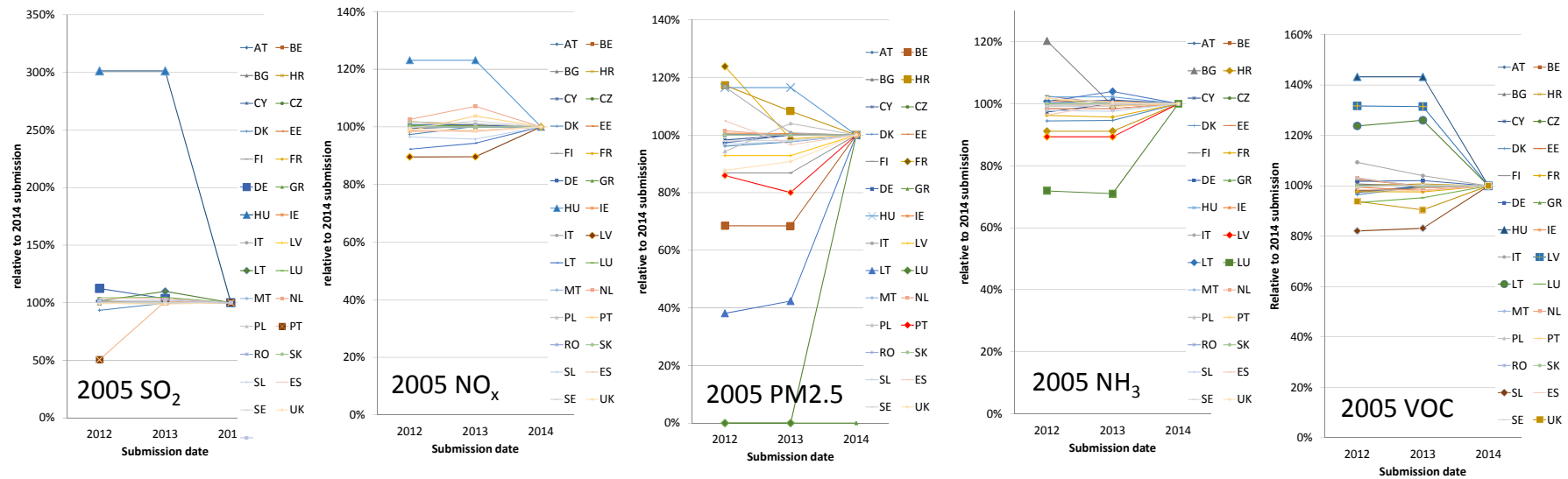
- Addresses main gap in policy framework (1-50 MWt)
- Delivers emission reductions for SO₂, NO_x and PM
 - ❑ Up to 20% of the reductions needed for overall policy
- Sets fuel-specific emission limit values for:
 - ❑ new and existing plants (with staged implementation)
 - ❑ engines, turbines and others
- Keeps admin burden low (registration not permitting)
- Contains benchmark values that can be used in zones not complying with AQ standards



European
Commission

Developments in Council *And Parliament*

Council 1: Emission inventories for 2005 and related projections

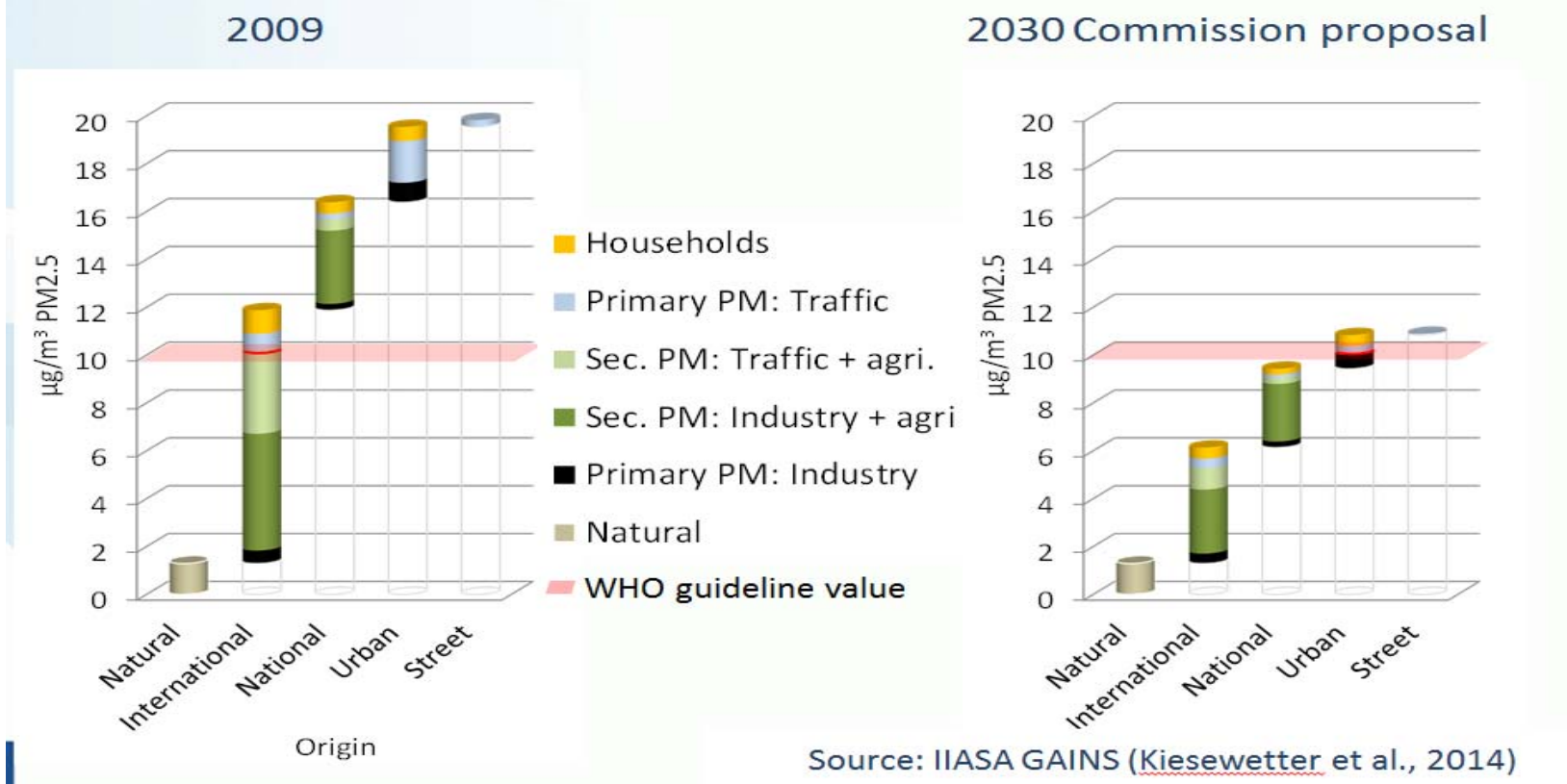


While GAINS has been adjusted to 2012 submissions based on consultations with 14 Members States, many submissions have substantially changed thereafter. Recalculation ongoing for baseline and MTRF projections, incl. targets (but keeping YOLL same)

Council 2: Ambition Level 2030

Origin of PM2.5 in Belgium

Average of 4 urban AIRBASE stations modelled in GAINS



Source: IIASA GAINS (Kiesewetter et al., 2014)

Council 3: Alternative flexibility based on 'PM equivalence'

New CO₂-equivalent concept:

- The sum of the emissions of the five pollutants, each weighted by the respective PM equivalent factor, must remain below the weighted sum of the five NECs*
- The sum of the percentage exceedences in each ceiling cannot be greater than 10.*

For consideration by MS as an additional and/or alternative for already proposed flexibilities

Pollutant	Weight k_x
PM2.5	1.0
SO ₂	0.298
NO _x	0.067
NH ₃	0.194
VOC	0.009

Further info

http://ec.europa.eu/environment/air/clean_air_policy.htm

Thank You