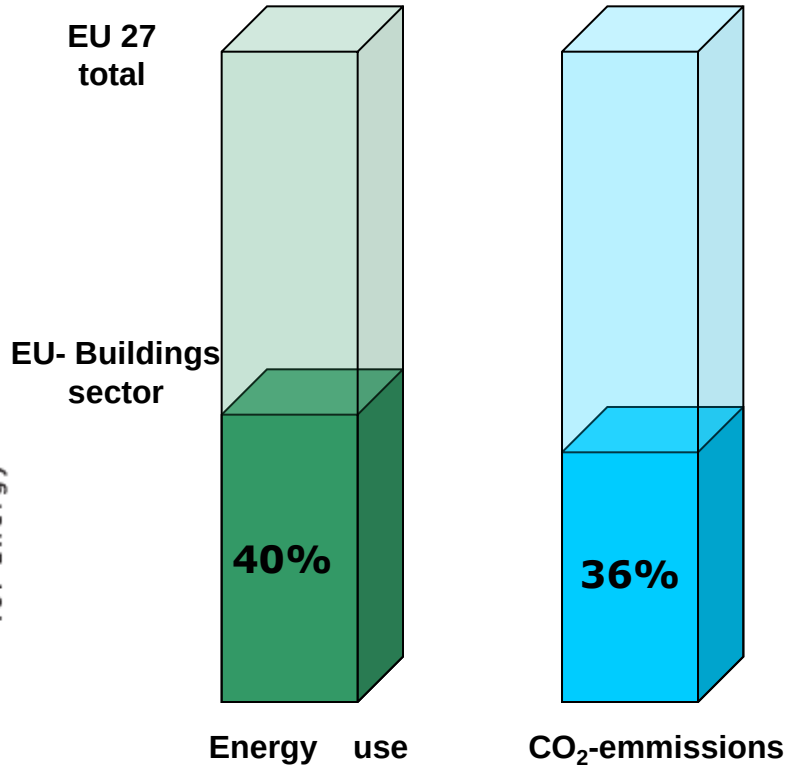
European Commission

Increasing the Efficiency of Europe's buildings – What role for heating?

Directorate-General for Energy
Directorate Renewables, Research and Innovation, Energy Efficiency

Energy

Energy efficiency – EU buildings sector



Buildings responsible for:

~40 % of EU-Energy use
~36 % CO_2-emissions

~ 70% of energy used in buildings is for heating

- ***9% of EU 27 GDP***
- ***8% of EU-employees***
- ***€2 trillion annual turnover***

Directorate-General for Energy

EUROPEAN COMMISSION

Basic European framework to tackle energy efficiency in buildings

- *Energy Performance of Buildings Directive (EPBD)*
  - **Minimum energy performance requirements, certification and Inspections**
  - **Nearly-zero energy buildings**
  - **Public buildings' exemplary road**
- *Energy Efficiency Directive (EED)*
  - **Long-term building renovation strategies**
  - **Refurbishment target of central government buildings**
  - **Comprehensive Assessment of CHP, District Heating & Cooling and other efficient heating systems potentials**

Financing MFF 2014-2020, Horizon 2020, EE programs

- **Cohesion funding - €23 billion; Horizon 2020 - €5.4 billion**

A Clean Air Programme for Europe

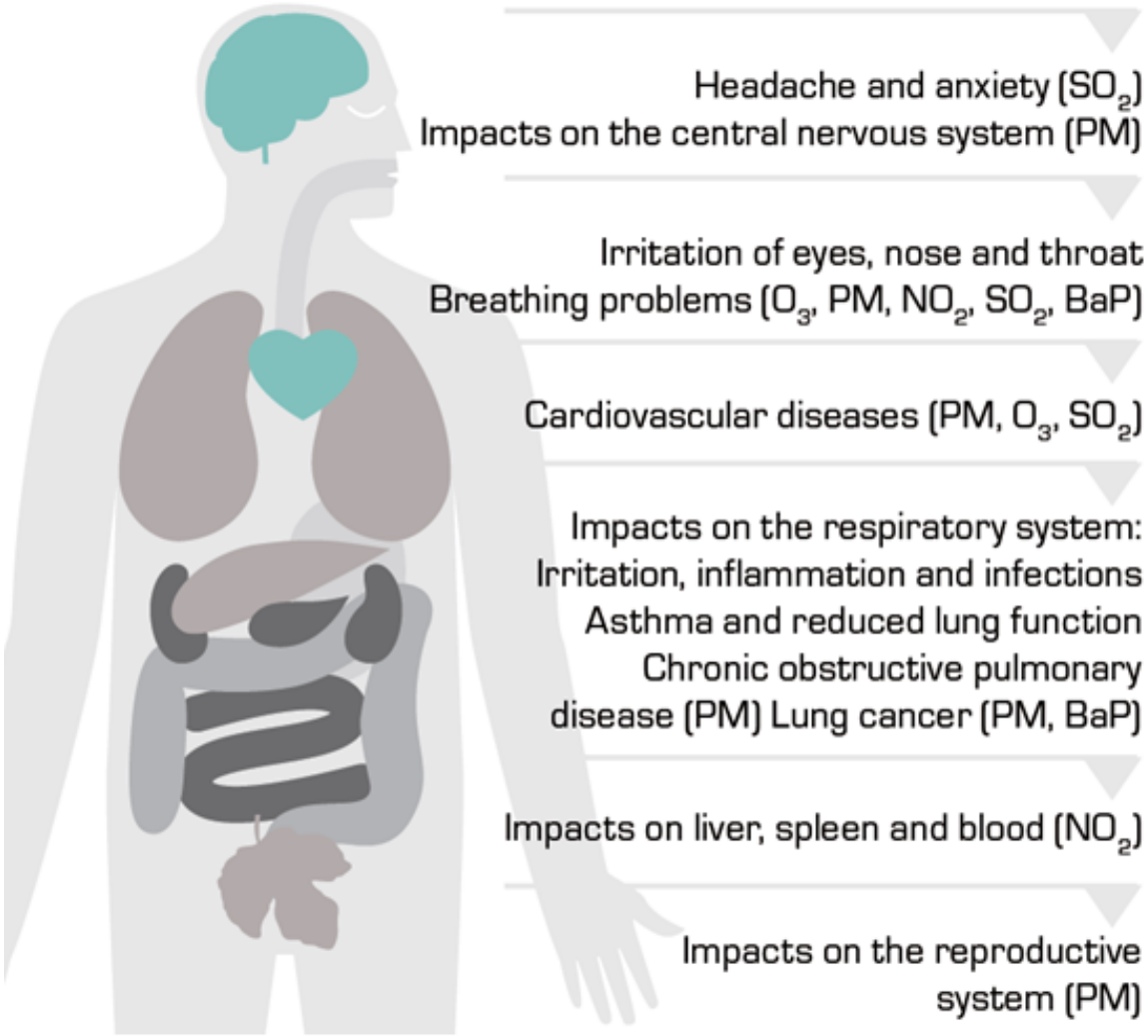
Manuela Musella

European Commission
DG ENV.C.3
Air & Industrial Emissions

Main elements of the AQ package

- Communication on the new European Clean Air Programme ("Strategy")
- 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 Air Pollution –a pressing health problem



Air Pollution and World Health Organization

Report from the International Agency for Research on Cancer published in 2013

AIR POLLUTION AND CANCER

IARC scientific publication no. 161

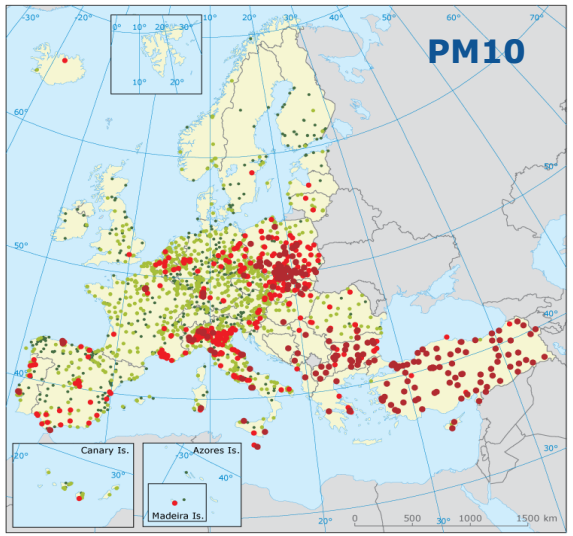
http://www.iarc.fr/en/publications/books/sp161/index.php

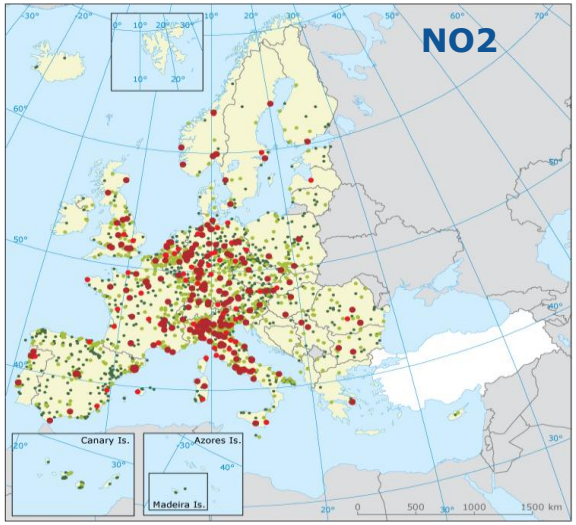
- Chapter 6. Household use of biomass fuels
- Chapter 9. Household air pollution

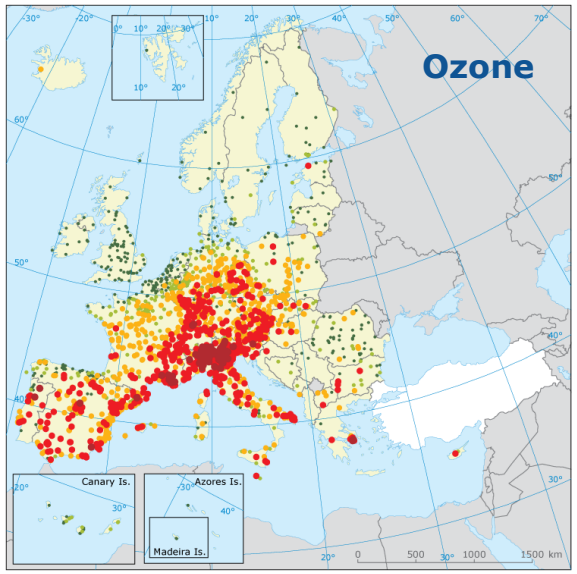
On household use of solid fuels for cooking and heating:

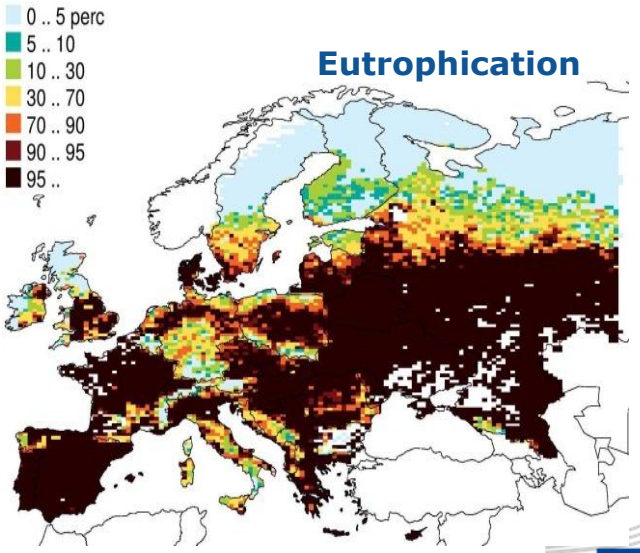
IARC has classified coal use as Group 1 (carcinogenic) and biomass as Group 2A (probably carcinogenic).

The air quality problem in the EU









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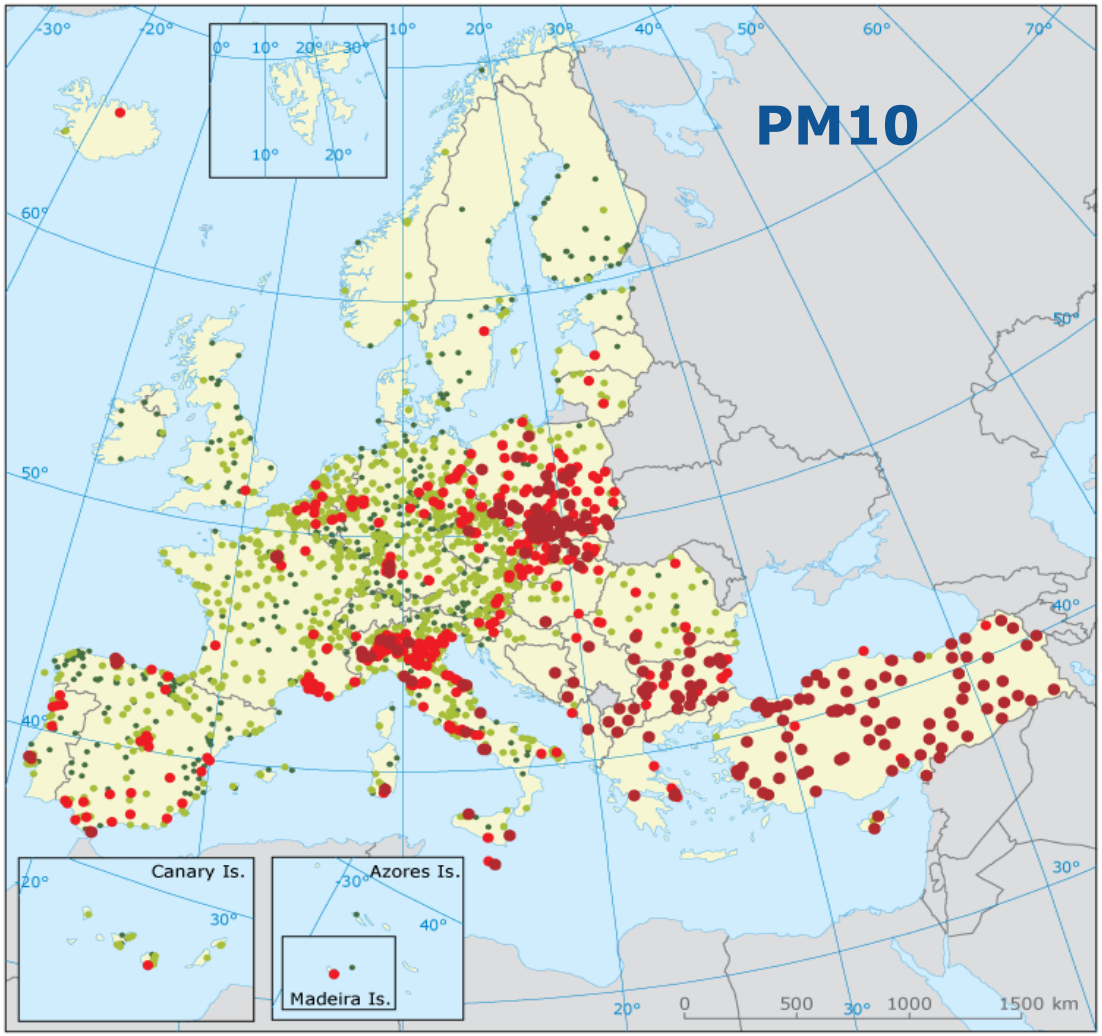
The air quality problem in the EU



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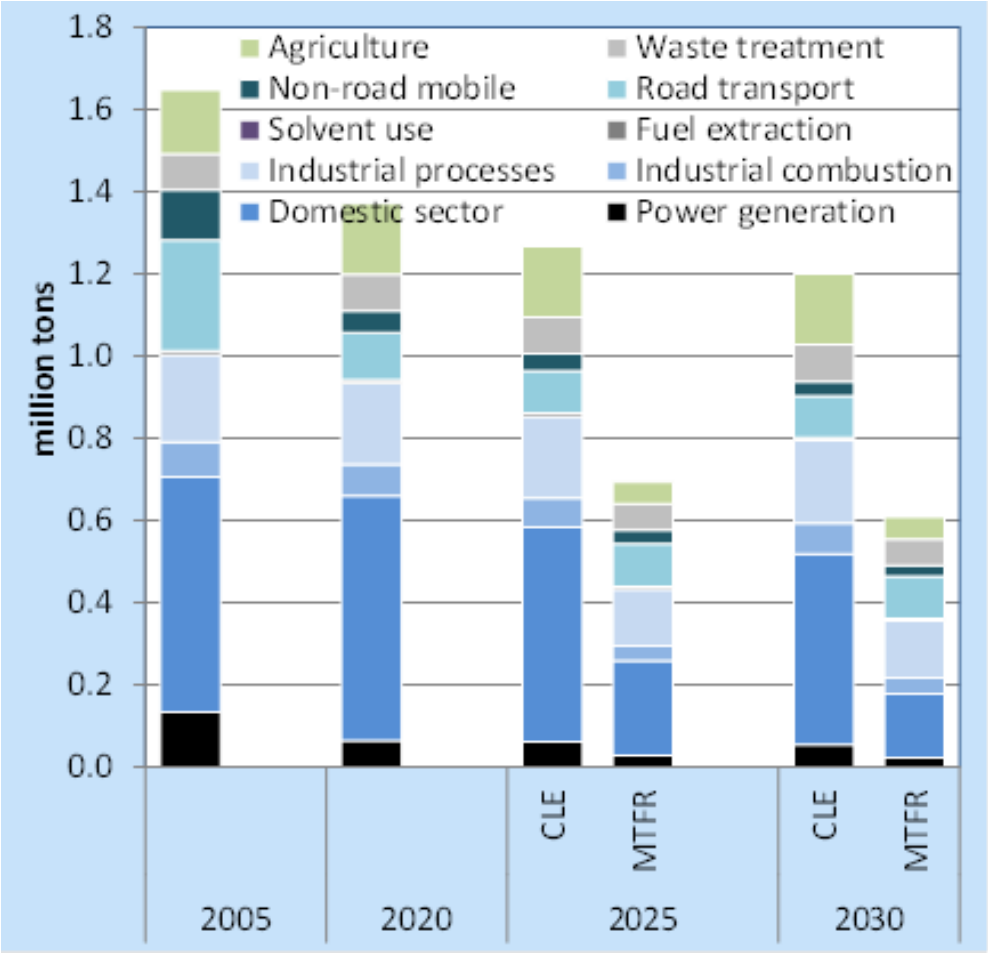
PM2.5 emissions of the TSAP-2013 Baseline scenario, by SNAP sector, EU-28 (kilotons)

	2005	2010	2015	2020	2025		2030	
					CLE	*MTFR*	*CLE*	*MTFR*
Power generation	132	92	70	63	60	28	53	21
Domestic sector	573	695	653	597	523	230	465	156
Industrial combust.	85	72	73	75	71	36	75	37
Industrial processes	213	190	196	199	199	138	201	139
Fuel extraction	9	8	8	7	7	7	6	6
Solvent use	0	0	0	0	0	0	0	0
Road transport	270	217	149	115	104	104	102	102
Non-road mobile	123	99	74	53	41	33	35	27
Waste treatment	88	88	89	89	90	64	90	64
Agriculture	155	155	164	171	172	53	172	54
Sum	1647	1616	1477	1370	1266	693	1200	607

SNAP: Selected Nomenclature for Air Pollutants; Sector aggregation used in the CORINAIR emission inventory system

PM2.5 emissions of the TSAP-2013 Baseline; Current legislation (CLE) and Maximum Technically Feasible Reductions (MTFR), EU-28



European Commission

PM2.5 emissions of the scenarios for 2030 by sector (kilotons and change to 2005)

	2005	CLE 2030		B7 2030		MTFR 2030	
Power gen.	132	53	*-59%*	28	*-79%*	21	*-84%*
Domestic	573	465	*-19%*	317	*-45%*	156	*-73%*
Ind. comb.	85	75	*-12%*	46	*-46%*	37	*-56%*
Ind. process	213	201	*-5%*	150	*-30%*	139	*-34%*
Fuel extract.	9	6	*-33%*	6	*-33%*	6	*-33%*
Solvent use	0	0		0		0	
Road transp.	270	102	*-62%*	102	*-62%*	102	*-62%*
Non-road	123	35	*-72%*	32	*-74%*	27	*-78%*
Waste	88	90	*3%*	64	*-27%*	64	*-27%*
Agriculture	155	172	*11%*	58	*-63%*	54	*-65%*
Sum	1647	1200	*-27%*	804	*-51%*	607	*-63%*

Ecodesign: published

- **Commission Regulation (EU) No 813/2013** of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for **space heaters and combination heaters**

- **Commission Regulation (EU) No 814/2013** of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for **water heaters and hot water storage tanks**

Requirements on
energy efficiency, NOx emissions, sound power level
For new products as of 2015

Ecodesign: to be published

- **Commission Regulation (EU)** with regard to ecodesign requirements for **local space** heaters (using gas, liquid fuels or electricity).

Requirements on
energy efficiency, NOx emissions.
For new products as of 2018

Ecodesign: under discussion

Regulations for solid fuel small combustion installations (<1 MW)

Commission prepared drafts with PM, OGC, CO and NOx requirements for 2018

Discussed by Member State experts:

- **Apply to <0.5 MW; review for 0.5-1 MW**
- **More time for EU harmonisation: 2022**
- **Somewhat modified requirements**
- **Final discussion and vote later this year**

Thank you for your attention

"Our dream is to live long enough to see the end of our renovation."

European Commission