



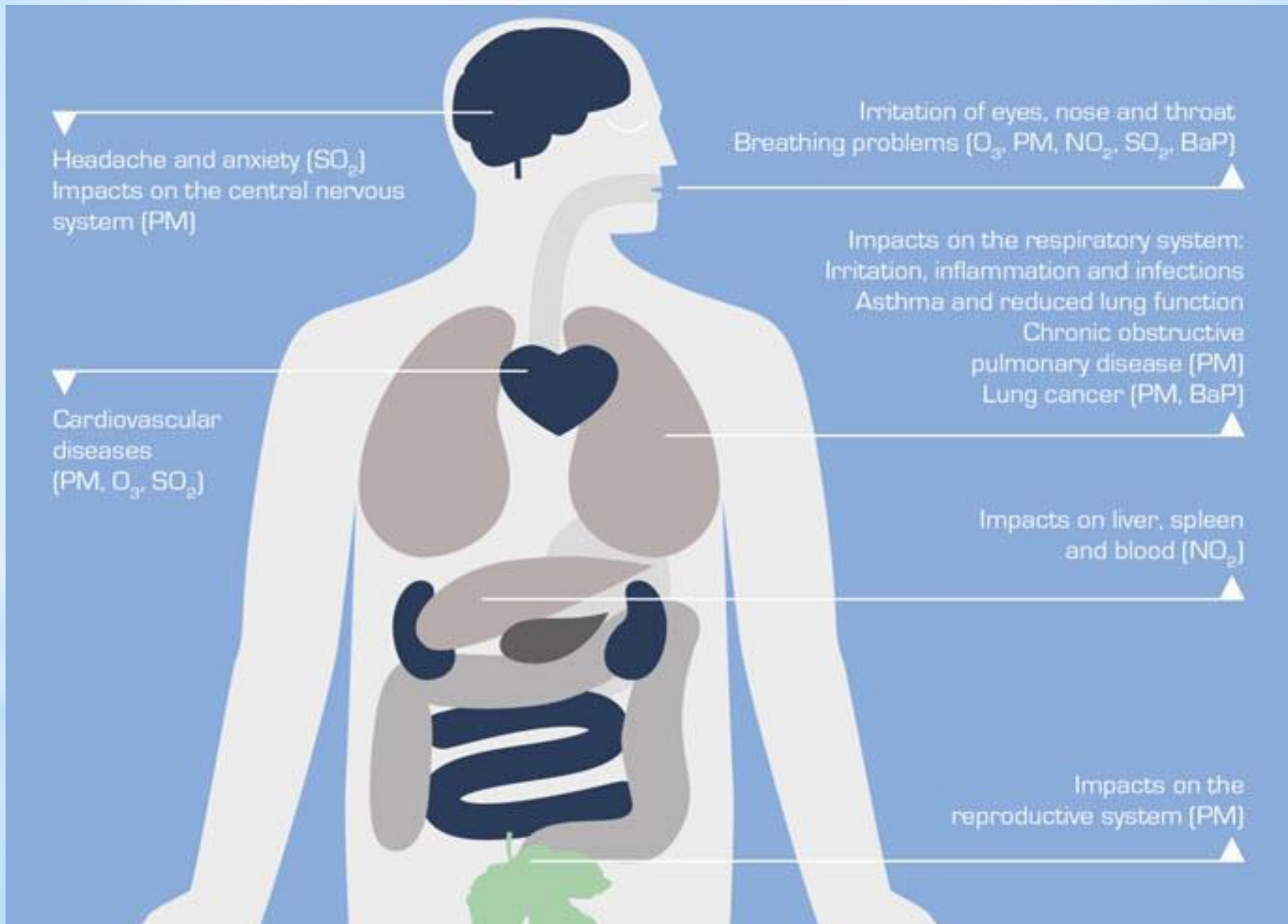
# EU AIR PROTECTION EFFORT: SIGNIFICANCE OF AIR QUALITY PLANS in EU MS

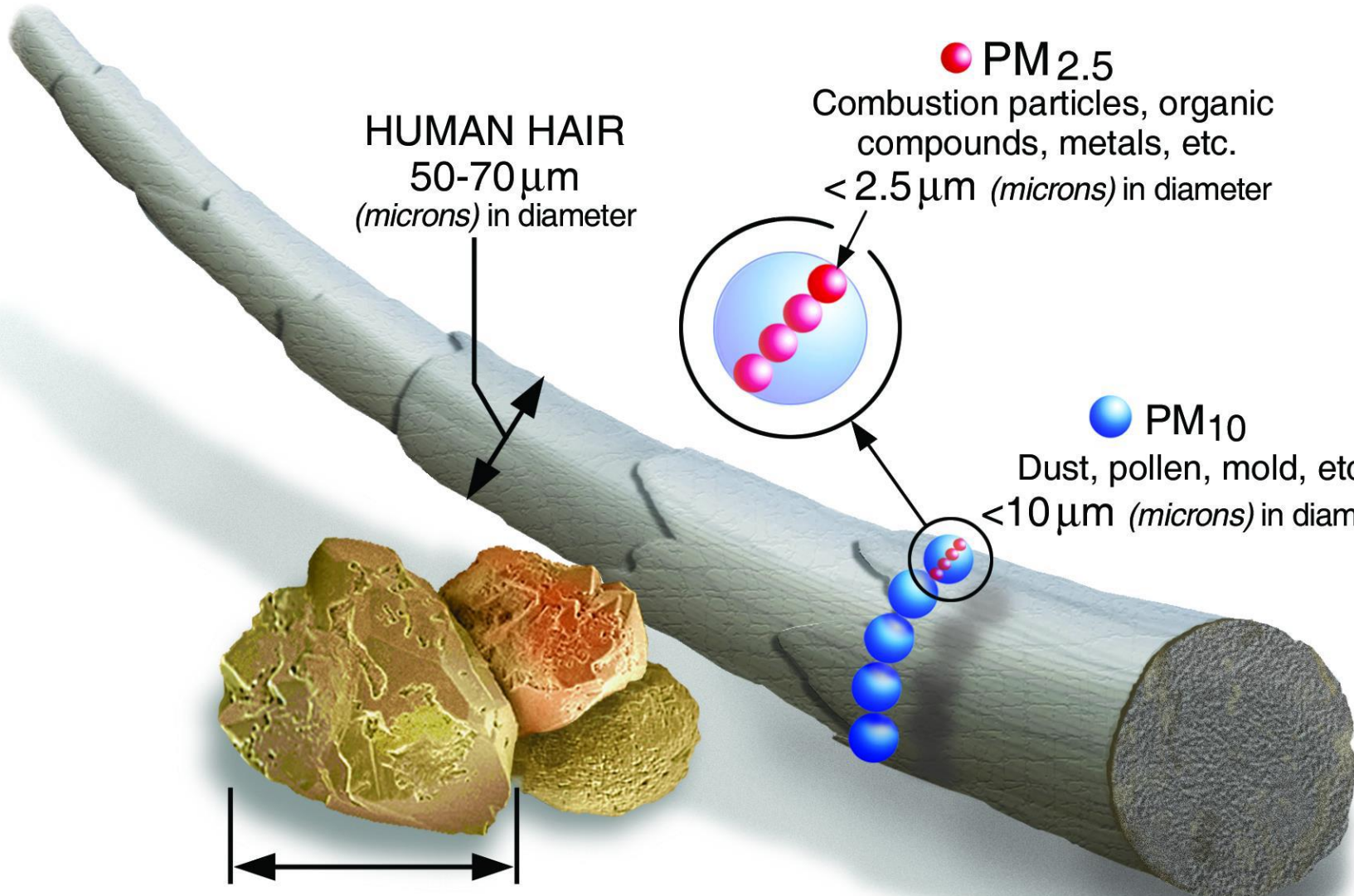
*Ilona Jancarova*

- \* sulphur dioxide (SO<sub>2</sub>)
- \* nitrogen oxides (NO<sub>x</sub>)
- \* volatile organic compounds (VOC)
- \* ammonia (NH<sub>3</sub>)
- \* particulate matter (PM 10, PM 2,5)

# \* MAJOR AIR POLLUTANTS

# Impacts of air pollution on health



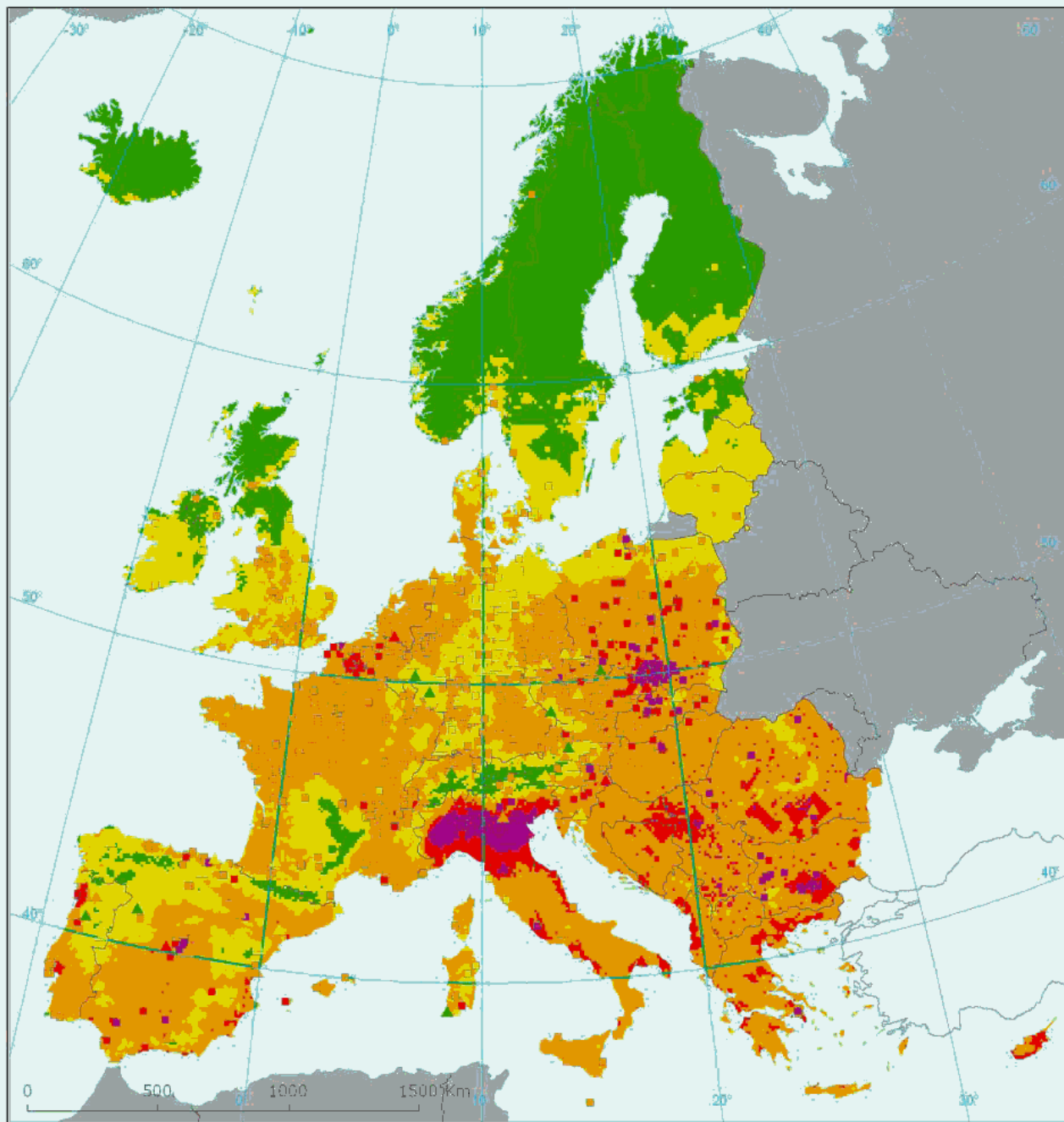


**HUMAN HAIR**  
50-70  $\mu\text{m}$   
(microns) in diameter

90  $\mu\text{m}$  (microns) in diameter  
**FINE BEACH SAND**

**PM<sub>2.5</sub>**  
Combustion particles, organic  
compounds, metals, etc.  
< 2.5  $\mu\text{m}$  (microns) in diameter

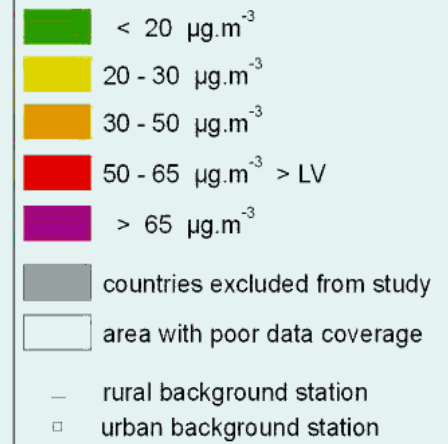
**PM<sub>10</sub>**  
Dust, pollen, mold, etc.  
< 10  $\mu\text{m}$  (microns) in diameter



## PM<sub>10</sub> - 36<sup>th</sup> Highest Daily Value

Reference Year: 2007

Combined Rural and Urban Map



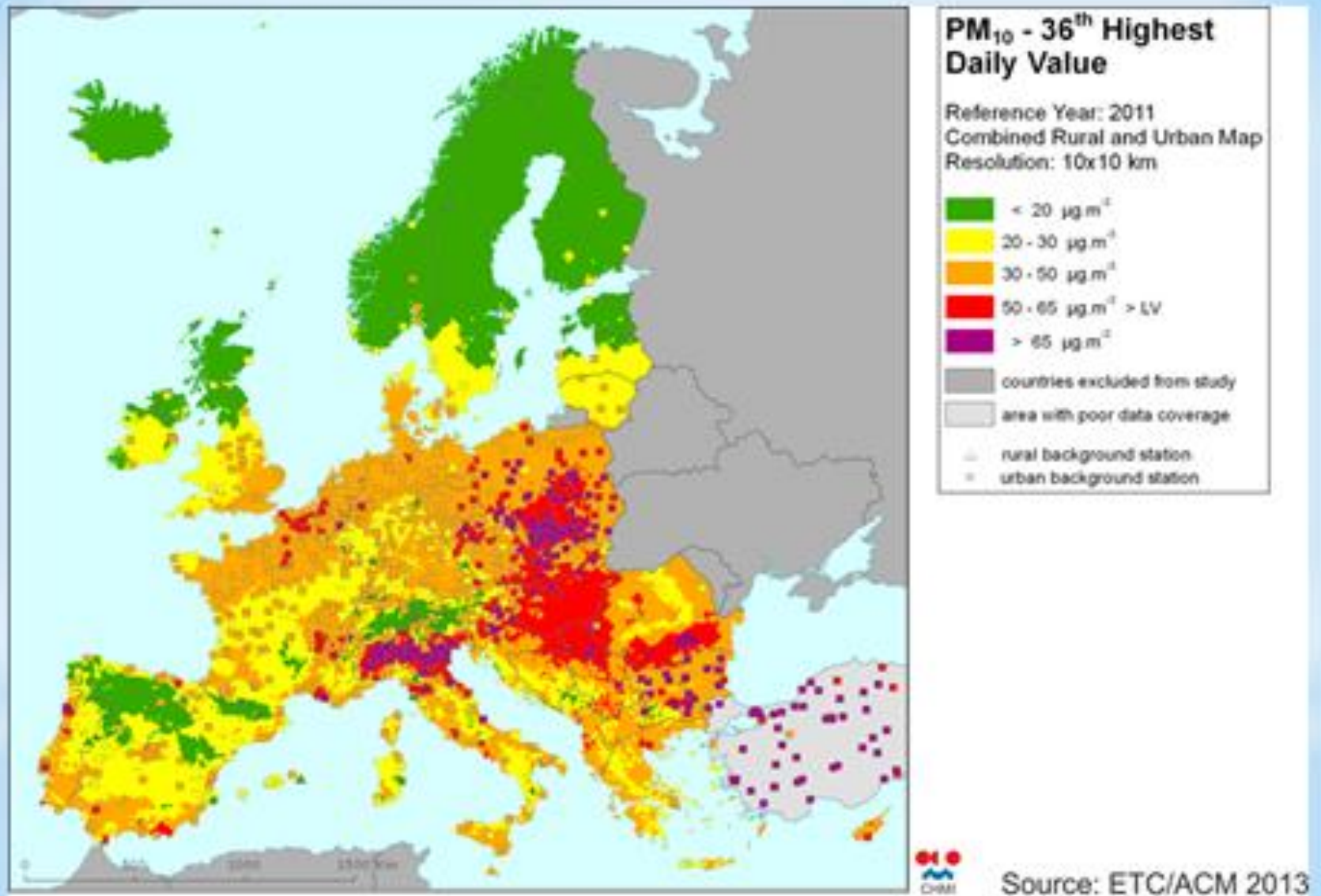
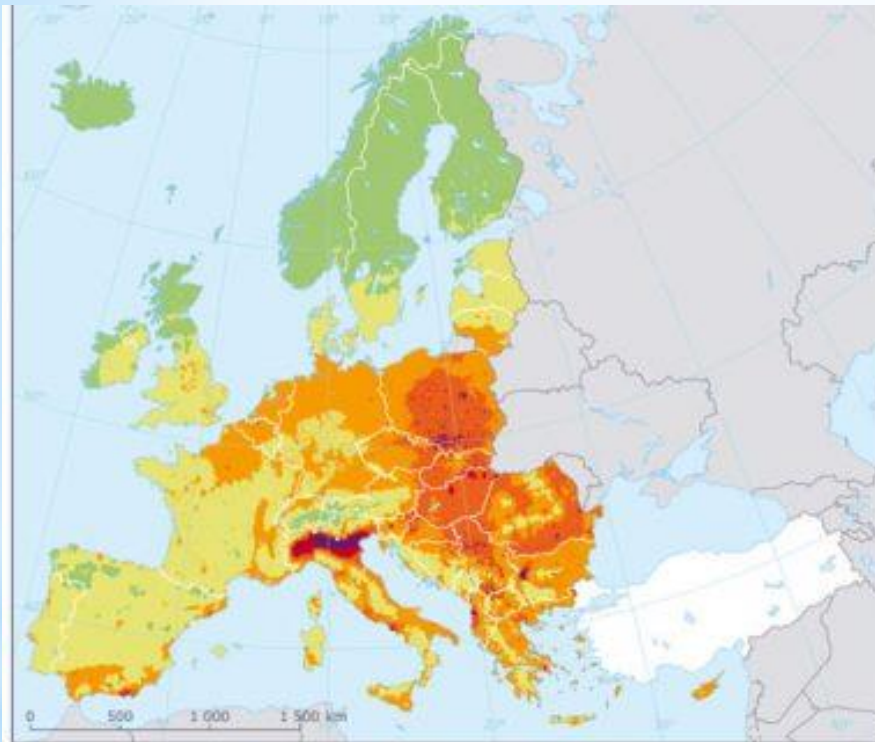


Fig. VIII.3 36<sup>th</sup> highest value of maximum daily average of PM<sub>10</sub> concentration, 2011

# Annual PM<sub>2,5</sub> and PM<sub>10</sub> concentrations in 2015

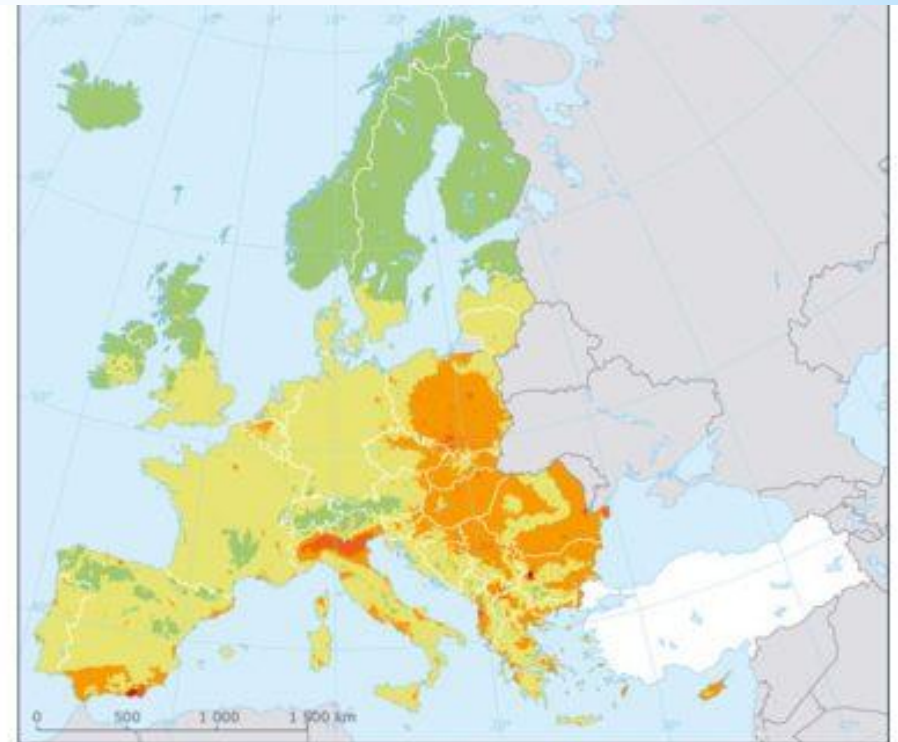


**PM<sub>2,5</sub> annual mean in 2015**

µg/m<sup>3</sup>

≤ 5   5-10   10-15   15-20   20-25   > 25   No available data

Countries/regions not included in the data exchange process



**PM<sub>10</sub> annual mean in 2015**

µg/m<sup>3</sup>

≤ 10   10-20   20-30   30-40   40-50   > 50   No available data

Countries/regions not included in the data exchange process

# Air quality in Europe — 2019 report

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- \* What is the main concern of
  - industry?
  - people living in this city?
  - government?
  - EU

- A/ Regulation of national emissions → NEC  
B/ Regulation of sources of pollution → ELV,  
C/ Regulation of air quality → AQLV



\* EU LEGISLATIVE APPROACH  
TO AIR POLLUTION

# A/ Regulation of national emissions

\* Directive 2016/2284/EU on the reduction of national emissions of certain atmospheric pollutants

\* *Directive 2001/81/EC, on National Emission Ceilings (NECD) repealed*

<https://ec.europa.eu/environment/air/reduction/NAPCP.htm>



\* National emission ceilings  
National emission reduction commitments  
**National air pollution control programmes**

## The objective:

- \* to limit emissions of acidifying and eutrophying pollutants and ozone precursors in order to improve the protection of the environment and human health in the EU

Directive sets national reduction commitments for five pollutants:

- \* SO<sub>2</sub>
- \* NO<sub>x</sub>
- \* VOC
- \* NH<sub>3</sub> (ammonia)
- \* PM<sub>2,5</sub>



\* **DIRECTIVE 2016/2284**  
on the reduction of national emissions  
of certain atmospheric pollutants

# Pollutants covered by EU National Emission Ceilings legislation and 2030 targets



MS must produce National Air Pollution Control Programme by March 2019

Member State	NH <sub>3</sub> reduction compared with 2005		PM <sub>2,5</sub> reduction compared with 2005	
	For any year from 2020 to 2029	For any year from 2030	For any year from 2020 to 2029	For any year from 2030
Belgium	2 %	13 %	20 %	39 %
Bulgaria	3 %	12 %	20 %	41 %
Czech Republic	7 %	22 %	17 %	60 %
Denmark	24 %	24 %	33 %	55 %
Germany	5 %	29 %	26 %	43 %
Estonia	1 %	1 %	15 %	41 %
Greece	7 %	10 %	35 %	50 %
Spain	3 %	16 %	15 %	50 %
France	4 %	13 %	27 %	57 %
Croatia	1 %	25 %	18 %	55 %
Ireland	1 %	5 %	18 %	41 %
Italy	5 %	16 %	10 %	40 %
Cyprus	10 %	20 %	46 %	70 %
Latvia	1 %	1 %	16 %	43 %
Lithuania	10 %	10 %	20 %	36 %

The Directive sets

- \* emission reduction commitments per pollutant for each EU MS to be attained by 2020 and 2030
- \* new stricter reductions from 2030 onwards
- \* Each EU MS is required to establish **national air pollution control programmes** from 1 April 2019

**\* DIRECTIVE 2016/2284**  
**on the reduction of national**  
**emissions of certain**  
**atmospheric pollutants**

# B/Regulation of sources of pollution

The national emission ceilings/commitments are to be attained through reductions of the emissions of various sources:

- \* industrial plants (e.g. energy generation, waste incineration)
  - Directive 2010/75 on industrial emissions (IED)
- \* medium sized combustion plants
  - Directive 2015/2193
- \* mobile sources (cars, boats, aircrafts)
- \* agricultural sources



**\* Emission limit values**  
**Best available technology**



# Emission limit values for new medium combustion plants

*Table 1*

Emission limit values (mg/Nm) for new medium combustion plants other than engines and gas turbines

Pollutant	Solid biomass	Other solid fuels	Gas oil	Liquid fuels other than gas oil	Natural gas	Gaseous fuels other than natural gas
SO <sub>2</sub>	200 <sup>(19)</sup>	400	—	350 <sup>(20)</sup>	—	35 <sup>(21)</sup> <sup>(22)</sup>
NO <sub>x</sub>	300 <sup>(23)</sup>	300 <sup>(23)</sup>	200	300 <sup>(24)</sup>	100	200
Dust	20 <sup>(25)</sup>	20 <sup>(25)</sup>	—	20 <sup>(26)</sup>	—	—

Large sources of pollution → IPPC permits (IED directive)

Medium combustion plants → Directive 2015/2193:


- \* Flexibility for MSs to permit and register or only register
- \* New MCP: to be permitted or registered before operation
- \* Existing MCP: to be permitted or registered
  - > 5 MW: by 1 January 2024
  - ≤ 5 MW: by 1 January 2029
- \* Authorities in Member States shall hold a register with information on each MCP (publicly available)

\* Permits and  
registration

- \* Periodic measurements (by operator) of emissions of polluting substances.
- \* Continuous measurements may be required.
- \* Alternatives allowed in some cases.

**\* Emission monitoring  
and reporting (E-PRTR)  
in source of pollution**

# C/ Regulation of the ambient air quality

- 
- \* Directive 2008/50/EC on ambient air quality and cleaner air for Europe (SO<sub>2</sub>, NO<sub>2</sub>, benzene, carbon monoxide, lead, PM<sub>10</sub> and PM<sub>2,5</sub>)
  - \* Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air

\* **Air Quality limit values**  
**Air quality plans**  
**Short term action plans**

## Limit values

- \* Concentration level fixed on the basis of scientific knowledge to be attained within deadline and not to be exceeded once attained.
- \* If exceedance, compliance must be achieved in the shortest time possible.

## Target values

- Concentration level to be attained where possible.
- If exceedance, authorities shall take all necessary measures not entailing disproportionate costs

\* Objectives  
for air quality

# Air Quality limit values

## Pollutant:

### Nitrogen dioxide (NO<sub>2</sub>)

Hourly limit value of 200 µg/m<sup>3</sup> 1 hour

Annual mean limit value of 40 µg/m<sup>3</sup>

### Particulate matter (PM<sub>10</sub>)

Daily limit value of 50 µg/m<sup>3</sup> 24 hours

Annual mean limit value of 40 µg/m<sup>3</sup>

### Fine particle (PM<sub>2.5</sub>)

Annual mean limit value of 25 µg/m<sup>3</sup>



- \* Air quality plans are regarded to SO<sub>2</sub>, NO<sub>2</sub>, benzene, carbon monoxide, lead, PM<sub>10</sub>, (limit values) and PM<sub>2,5</sub> (target value).
- \* Consistency with other plans must be ensured.
- \* Information to be included in AQPs are delimited in section A of the **Annex XV** of the Directive.
- \* Air quality plans must set out **appropriate measures, so that the exceedance period can be kept as short as possible.** (Art. 23.1)

## \* Requirements on content of AQP



- \* Identification of possible measures to improve air quality,
- \* detailed description of measures adopted in the plan,
- \* timetable for implementation of each measure,
- \* assessment of the estimated impact of each measure and of the whole plan including the identification of the expected compliance date

## \* Minimum Requirements for AQP (Annex XV)

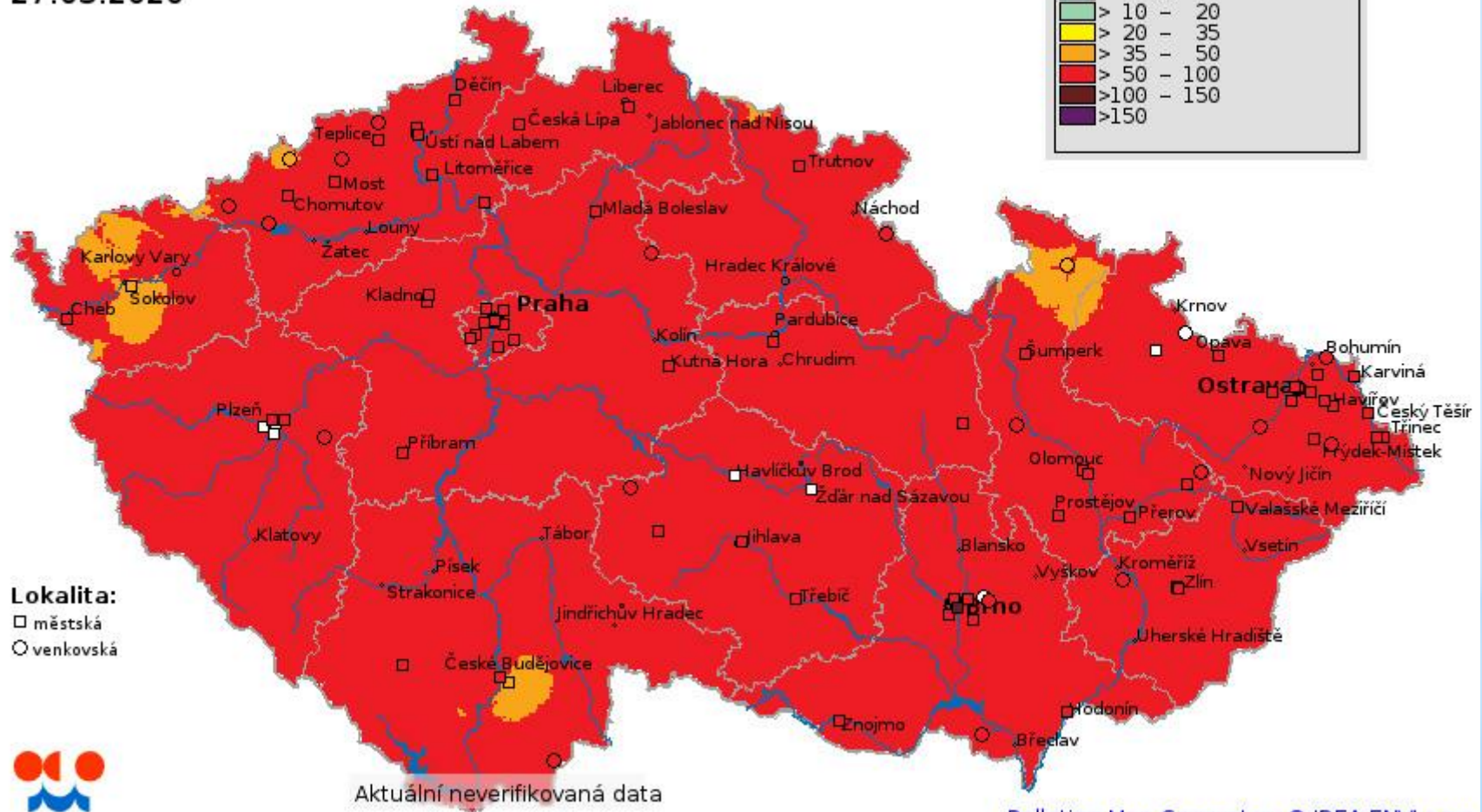
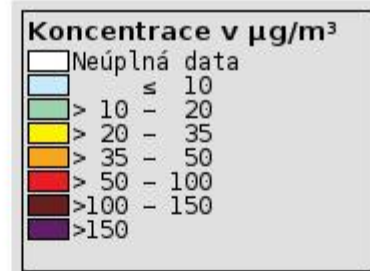
- \* How to implement the Art. 23.1?
- \* What measures are „*appropriate*“ ?
- \* What time period is “*as short as possible*”?
- \* What are the criteria to assess planned measures?
- \* What is the relation of AQPs to other regulatory instruments?
- \* What is the relation of Art. 23.1 to Art. 13.1?



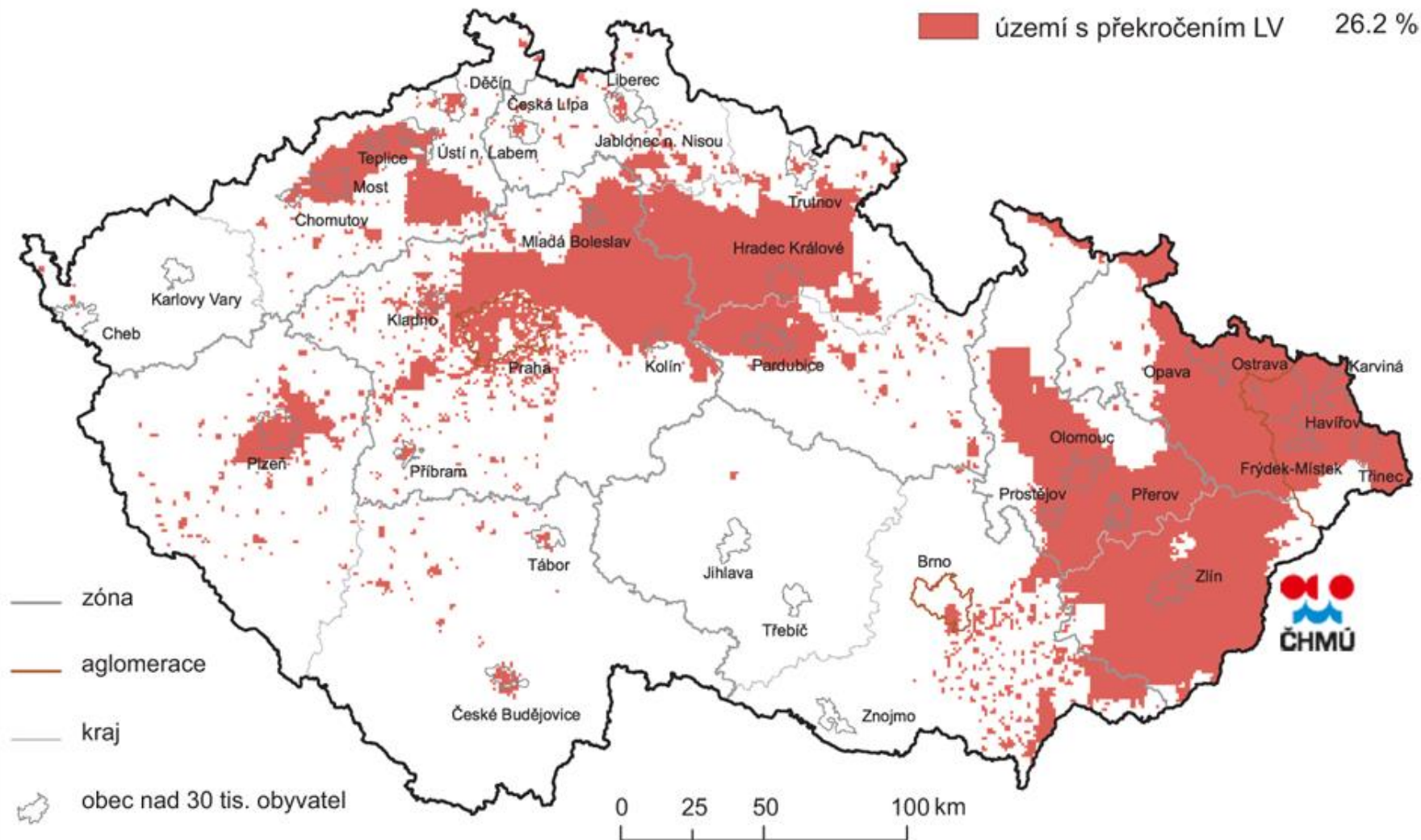
- \* C- 28/09 Commission v. Austria
- \* C- 488/15 Commission v. Bulgaria
- \* C- 336/16 Commission v. Poland and many others

# PM10 - 24 hour average in Czechia

PM<sub>10</sub> - částice PM10  
24hodinový průměr  
27.03.2020



# Vyznačení oblastí s překročenými imisními limity pro ochranu zdraví bez zahrnutí přízemního ozonu, 2017



„The European Commission is asking the Czech Republic to comply with EU legislation requiring Member States to limit citizens' exposure to fine dust particles (PM10) by defining specific limit values to be observed. These tiny particles originate in emissions from industry, traffic and domestic heating, and they can cause asthma, cardiovascular problems, lung cancer and premature death. The latest figures from the Czech Republic show that the maximum daily limits for these particles is being exceeded in Praha, Střední Čechy, Severozápad, Severovýchod (except for 2008), Brno, Střední Morava, Moravskoslezsko and Ostrava/Karviná/Frýdek-Místek, with yearly limits also being exceeded in Moravskoslezsko and Místek.

***The Commission considers that the Czech Republic has failed to take measures that should have been in place since 2005 to protect citizens' health, and is asking it to take forward - looking, speedy and effective action to keep the period of non-compliance as short as possible. Today's reasoned opinion follows an additional letter of formal notice sent on 22 February 2013. If the Czech Republic fails to act, the Commission may take the matter to the EU Court of Justice.***”

- \* industrial plants
- \* car transportation (producers, operators, municipalities)?
- \* weather (bad dispersion conditions)
- \* transboundary pollution
- \* local heating systems (households)
- \* the way of monitoring
- \* authorities permitting the polluting activities?

**\* WHO IS RESPONSIBLE?**

# Implementation of the Air Quality Directive - example

Prague:

Limit values for

- PM10
- PM2,5
- NOx

are exceeded.



\* Development Project in Prague  
- new bank building with a large  
parking lot

# \* AIR QUALITY PLAN (Prague Agglomeration)



\* Measures to reduce the impact of the traffic on the air quality → **discrepancy with projected activity**

\* **Is it possible to permit a new building with a large parking lot?**



- \* Air Protection Authorities (APAs) **are bound** by the **limit values** for the concentration of main pollutants (SO<sub>2</sub>, NO<sub>x</sub>, CO, benzene, PM<sub>10</sub>, PM<sub>2,5</sub> and lead) in the ambient air in their decision-making.
- \* APAs are entitled to depart from this rule only if adequate **compensatory measures** are proposed in the project.
- \* APAs must not permit the operation of the source of pollution prior to realization of projected compensatory measures.

## \* DECIDING ON THE DEVELOPMENT PROJECT IN CZECHIA

- \* Regional emission ceilings must be incorporated into the AQPs; APAs have to **respect emission ceilings** set for the given region/agglomeration in their decision-making.
- \* APAs are entitled to set **conditions** in the permit to carry out the activity.
- \* Air Protection Authorities (APAs) are obligated to **come out of Air Quality Plans (AQPs)** and of **concentrations of polluting substances in ambient air**

# \* DECIDING ON THE DEVELOPMENT PROJECT IN CZECHIA

- \* APAs are bound by the AQ limit values
- \* To „*come out of AQP*“  $\neq$  AQP measures are binding
- \* The building with the parking lot may be permitted on condition that compensatory measures will be carried out to minimize the pollution.



- \* no increments to existing pollution,
- \* reduction of pollution - gradual (AQP are taken into account) - consideration of other interests.

\* **DECIDING ON THE  
PROJECT IN CZECHIA**

- \* In exercising discretion the Member States should, in addition to the aim of minimizing the exceedance, also take into account the **balance which must be maintained between that objective and the various opposing public and private interests** (C-237/07 Dieter Janecek (46))
- \* The air quality plans under Article 23(1) of Directive 2008/50 can also be adopted only on the basis of a **balance of interests**. (Commission v. Bulgaria, Juliane Kokott, 2016)

## \* AIR QUALITY PLANS REQUIREMENTS

## The Municipal Court in Prague, Case 11A 84/2016:

- \* 2 NGOs and Mr. B. took the MOE of the CR to the Court
- \* AQP for Ostrava-Karviná agglomeration *does not include air pollution reduction measures capable to achieve EU AQLV* so that the exceedance period can be kept as short as possible.



- \* declared that AQP is a programme document which was subject to SEA,
- \* denied to review expert findings,
- \* dismissed the case, **but other actions successful** and courts annuled AQPs in many consequent cases

**\* Challenging the quality of AQP  
by the public**

## Standing of individuals and NGOs:

\* „the *natural or legal persons* directly concerned by the limit values being exceeded ... must be in a position to require the competent authorities, if necessary by *bringing an action before the courts* having jurisdiction, to establish an air quality plan which complies with the second subparagraph of Art. 23(1) of Directive 2008/50 (para 56)

\* Case 404/13  
*ClientEarth*

# Content of the AQP:

\*“As regards the content of the plan, it follows from the second subparagraph of Article 23(1) of Directive 2008/50 that, while *Member States have a degree of discretion* in deciding which measures to adopt, *those measures must, in any event, ensure that the period during which the limit values are exceeded is as short as possible*” [para57]

\* Case 404/13  
*ClientEarth*

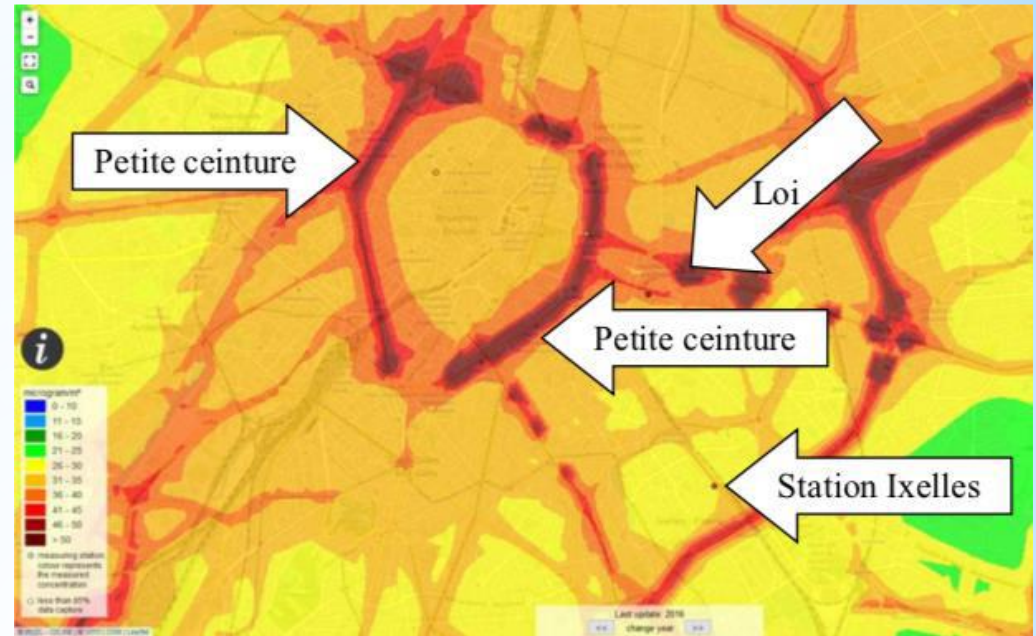
# Role of national courts and remedies:

\* *“where a Member State has failed to comply with the requirements of the second subparagraph of Article 13(1) of Directive 2008/50 [...], it is for the national court having jurisdiction, should a case be brought before it, to take, with regard to the national authority, any necessary measure, such as an order in the appropriate terms, so that the authority establishes the plan required by the directive in accordance with the conditions laid down by the latter” [para58]*

\* **Case 404/13**  
**ClientEarth**



The obligation to establish sampling points in such a way that they provide information on the pollution of the most polluted locations



Standing to challenge location of monitoring stations

\* Case C-723/17  
*Craeynest*

- \* C-68/11 *Commission v Italy*,
- \* C-488/15 *Commission v Bulgaria*
- \* C-336/16 *Commission v Poland*
- \* C-636/18 *Commission v France*



breach of Art. 13.1 and Art.23

\* **Key infringements  
cases**

- \*The AQP must demonstrate **how** conformity with the limit values will be achieved.
- \***The duty not to exceed limit values is based on Art. 13.1.**
- \*To verify the effectiveness of AQPs, Commission **relies on air monitoring data**
- \***AQPs are part of the whole system of legal tools**; their significance should not be exaggerated!

\* AQPs -  
CONCLUSION

- \* Short term action plans - for zones or agglomerations, where is a risk that the levels of pollutants will exceed one or more of the **alert thresholds** specified in Annex XII:
- \* measures to be taken in the short term in order to reduce the risk or duration of such an exceedance
- \* action plans provide for effective measures to control and, where necessary, suspend activities which contribute to the risk of the respective limit values or target values or alert threshold being exceeded
- \* must be made public

## \* Short term action plans

- \* Madrid may be about to become the first European city to scrap a major urban low-emissions zone after regional polls left a rightwing politician who views 3am traffic jams as part of the city's cultural identity on the cusp of power.
- \* Isabel Díaz Ayuso, who is expected to become the new Popular party (PP) president of the Madrid region, believes **night-time congestion makes the city special** and has pledged to reverse a project known as Madrid Central, which has dramatically cut urban pollution.

Within a month of its launch last November, Madrid Central had cut urban traffic by up to 24% and nitrogen oxide (NOx) levels by 38%. CO2 emissions also fell by 14%.

(Arthur Neslen, The Guardian , Fri 31 May 2019 11.53 BST )



\* **Madrid could become first European city to scrap low-emissions zone**

- \* Clean air is essential for our health and that of the environment. To this end, the EU sets standards to avoid the buildup of excessive pollution concentrations.
- \* As part of the European Green Deal, the EU is revising these standards, to align them more closely with the recommendations of the World Health Organization.
- \* It also aims to improve overall EU legislation for clean air, building on the lessons learnt from last year's evaluation ('fitness check') of EU rules in this field.

**\* Air quality - revision of  
EU rules planned for  
third quarter 2022**

- \* JANČÁŘOVÁ, Ilona. Significance of Air Quality Plans - the Czech Experience. In Helle Tegner Anker, Birgitte Egelund Olsen. Sustainable Management of Natural Resources: Legal Instruments and Approaches. Cambridge: Cambridge: Intersentia, 2018. s. 195-210. European Environmental Law Forum Series, Volume 5. ISBN 978-1-78068-759-9. -87488-30-0.
- \* Ugo Taddei: The Air Quality Directive, ERA - Online Summer Course on European Environmental Law, 1 July 2020
- \* JANČÁŘOVÁ, Ilona. Legal Reflections on Problems with Excessive PM10 Concentrations in Ostrava-Karviná Agglomeration, Czech Republic. In Milan Damohorský, Vojtěch Stejskal. Czech Environmental Law Review 2017-2018. Beroun: Czech Society for Environmental Law, 2019. s. 36-57, 21 s. ISBN 978-80

\* LITERATURE

\* *Thank you for your attention*

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