

# The impact of Europe's dependence on coal on the health of European citizens

COP24, Coal and the Polish Presidency of the next UN climate negotiations - Outdated outlook or modern vision - what would Poland really gain from more ambitious climate action in Europe

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Health & Environment Alliance : [www.env-health.org](http://www.env-health.org)



# HEAL's member network

>80 organizations  
in 28 countries

Doctors associations

Patient groups

Nurses associations

Public health institutes

Research institutes

Not-for-profit health insurers

Women's groups

Youth groups

Environmental groups

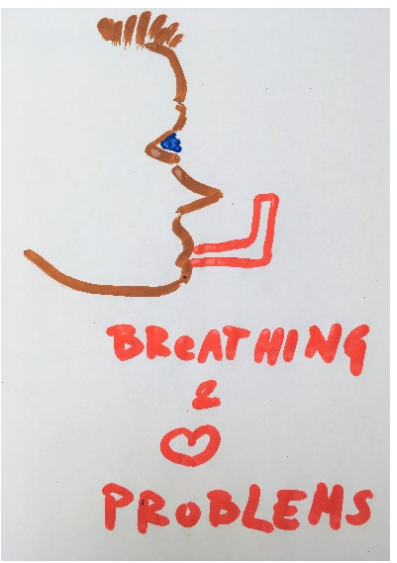
*Promoting environmental policy  
that contributes to good health*



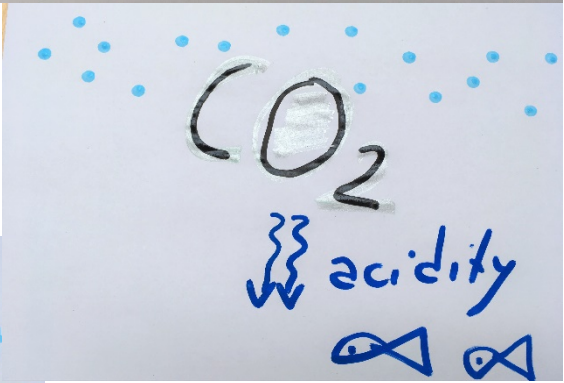
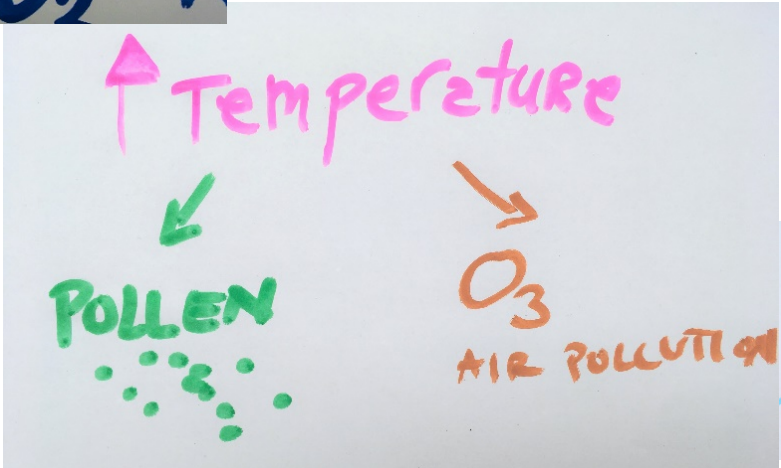
# Coal and health

AIR POLLUTION

PM OZONE SO<sub>2</sub>



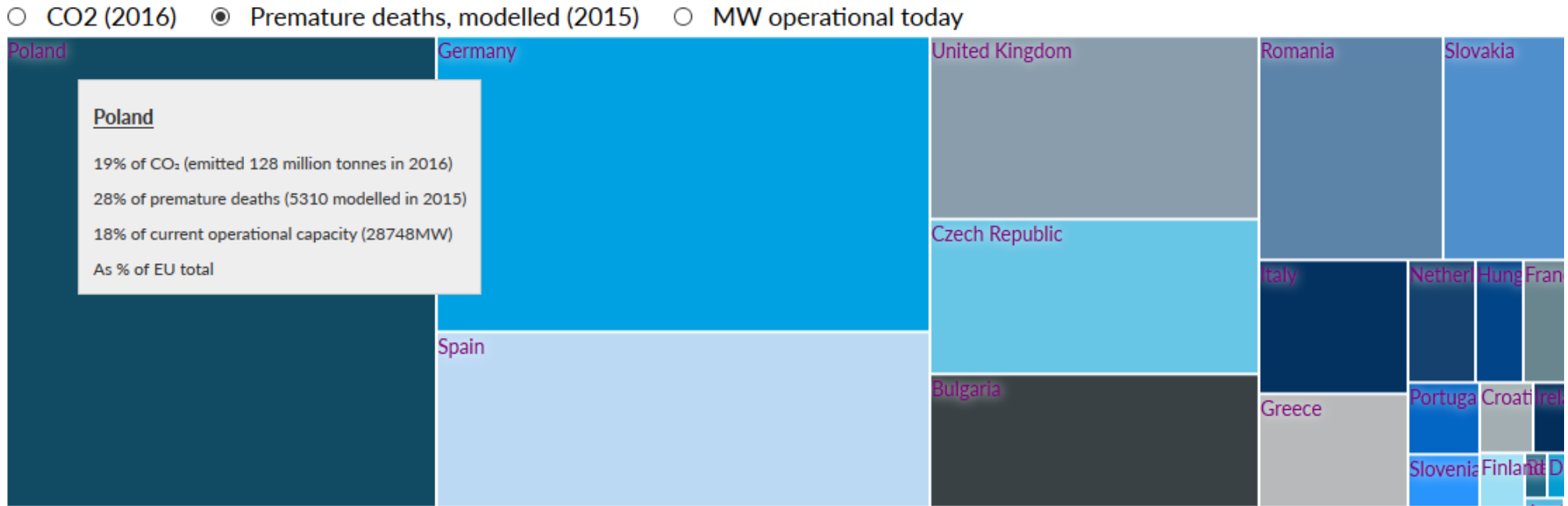
CLIMATE





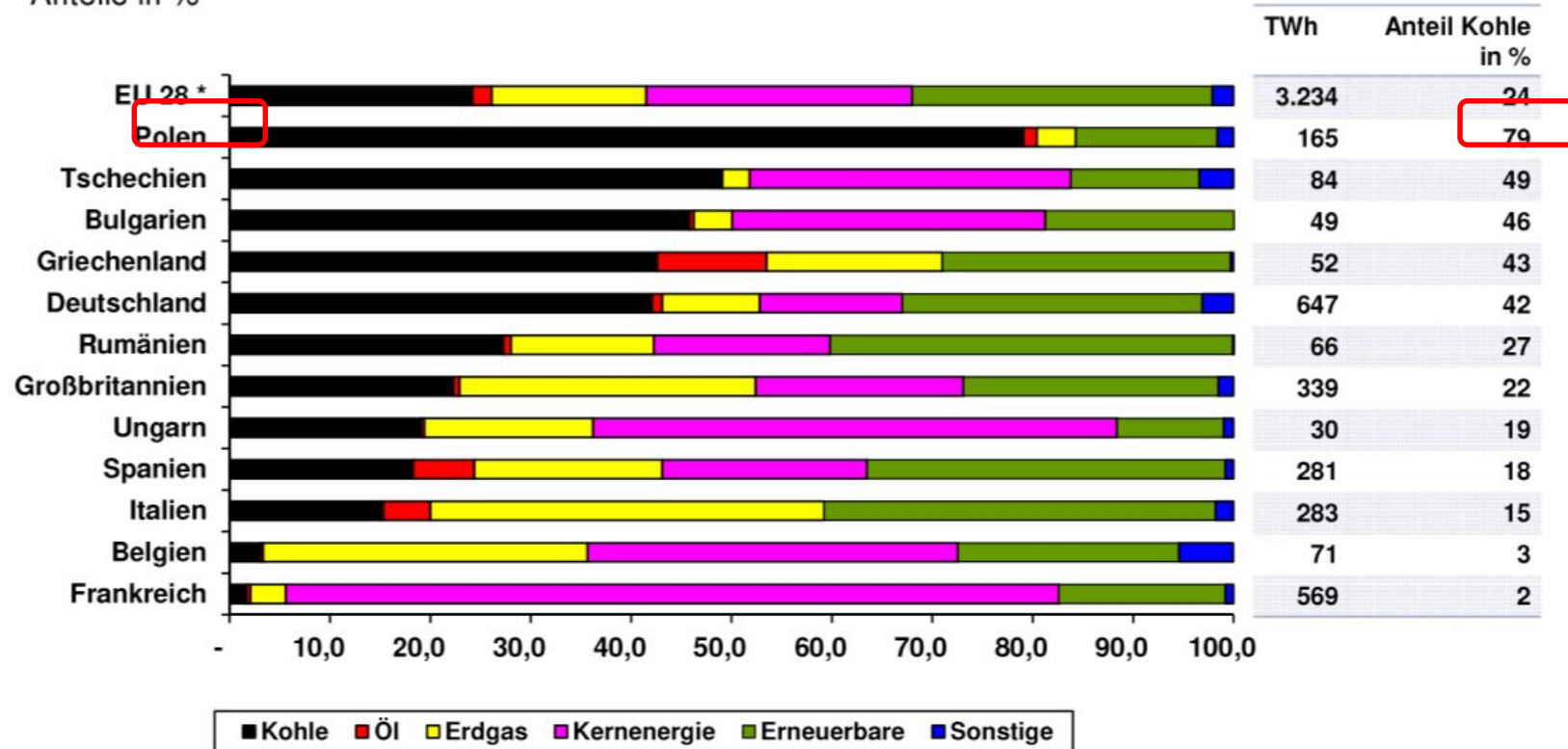
# Why consider COAL in Europe?

- EU ③ largest GHG emitter worldwide (of around 10% of total global emissions; ① China 20%, ② USA 15%)
- Thus, EU-28 is one of the most important contribution to CLIMATE CHANGE
- EU wants to be leader on climate mitigation, yet coal still major energy source (Poland, Germany, ...) and new plants in the pipeline



## Stromerzeugungsstrukturen ausgewählter Staaten Europas 2015

Anteile in %



\* Torf und Ölschiefer in der Position „Sonstige“ enthalten

Stand: 04/2017

Quelle: Eurostat

# HEALTH IMPACTS from coal power in EU-28, for year 2015

- 19,500 premature deaths
- 10,000 cases of chronic bronchitis
- 5.9 million lost working days
- 12,600 hospital admissions
- 458,000 asthma attack in children

Not included: health costs from Hg, life cycle of coal, water pollution

## Health damage from coal power plant emissions How inhalation of particulate matter (PM) may affect our health

### Lungs

- Inflammation
- Oxidative stress
- Accelerated progression and exacerbation of COPD
- Increased respiratory symptoms
- Effected pulmonary reflexes
- Reduced lung function
- Higher lung cancer risk

### Blood

- Altered rheology
- Increased coagulability
- Translocated particles
- Peripheral thrombosis
- Reduced oxygen saturation

### FURTHER IMPACTS

- Reduced birth weight
- Pre-term birth
- Skin, bladder cancer
- Diabetes

### Brain

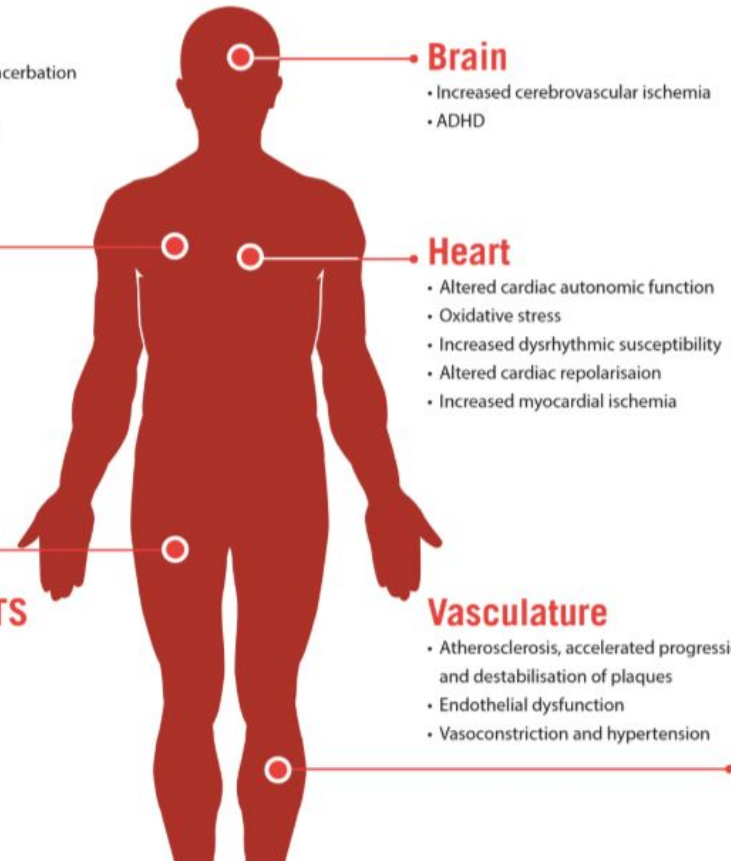
- Increased cerebrovascular ischemia
- ADHD

### Heart

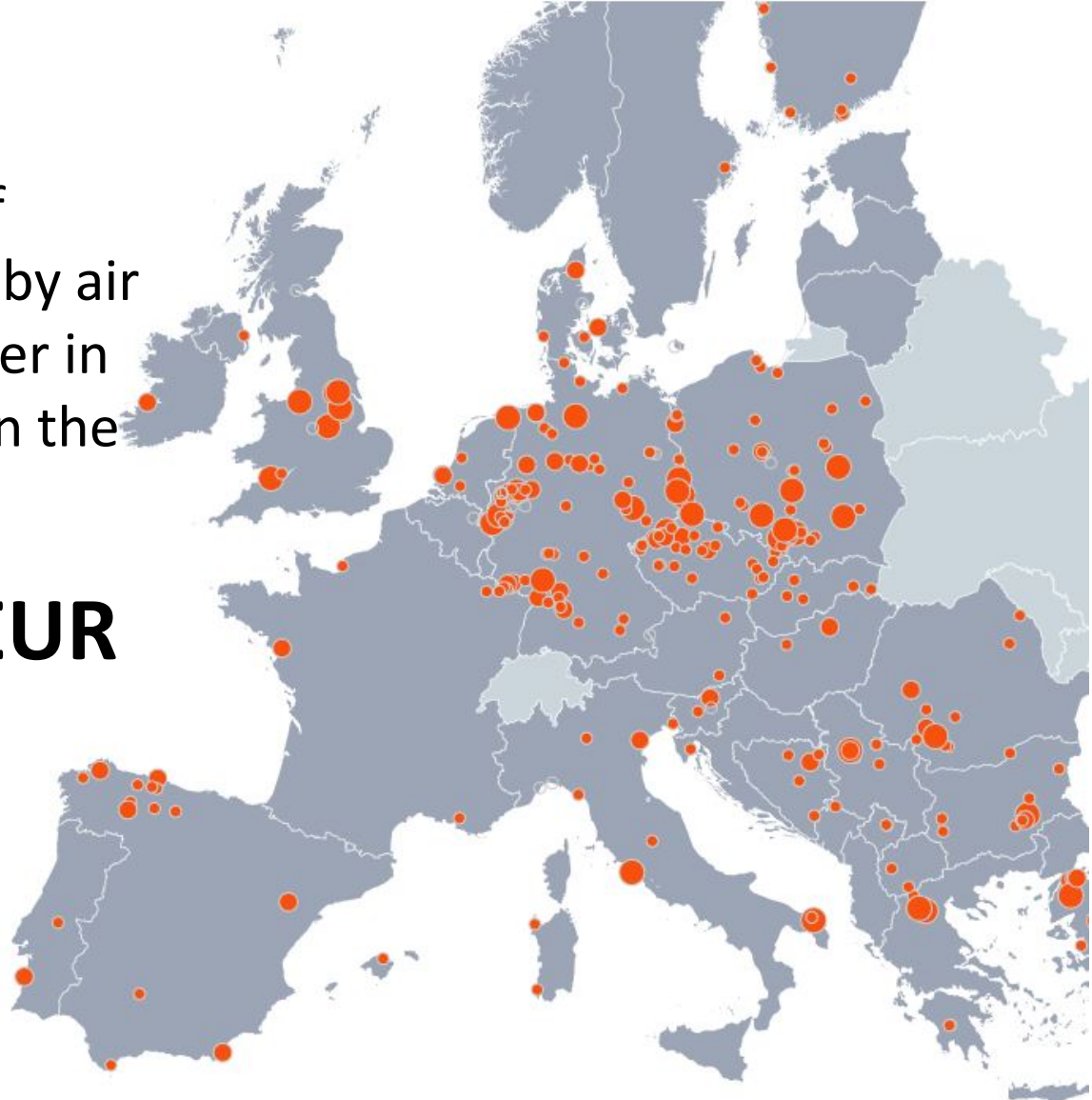
- Altered cardiac autonomic function
- Oxidative stress
- Increased dysrhythmic susceptibility
- Altered cardiac repolarisation
- Increased myocardial ischemia

### Vasculature

- Atherosclerosis, accelerated progression and destabilisation of plaques
- Endothelial dysfunction
- Vasoconstriction and hypertension



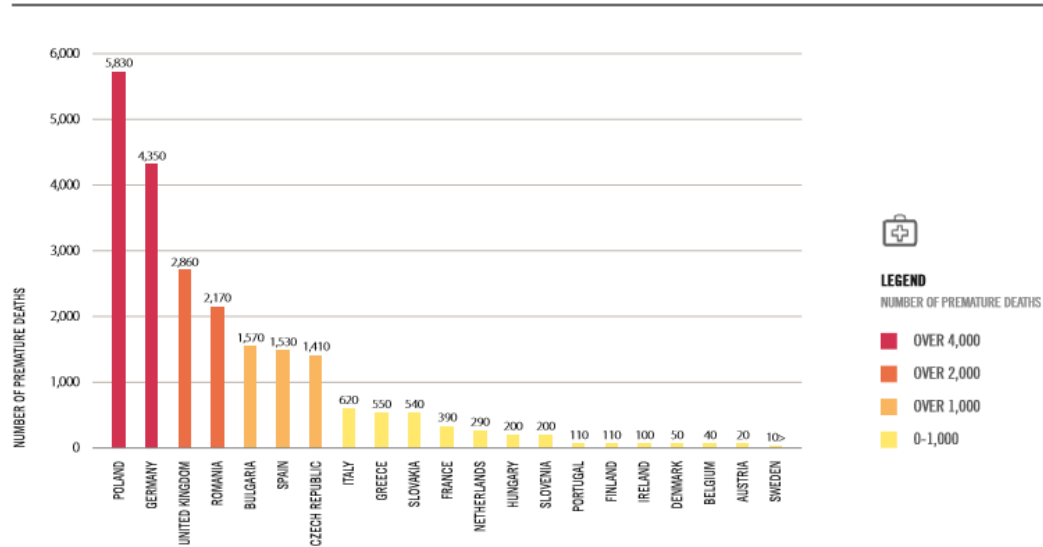
- The **economic impact** of **health** damages caused by air pollution from **coal** power in EU-28, for year 2015 is in the range of
- **€29-54 billion EUR**



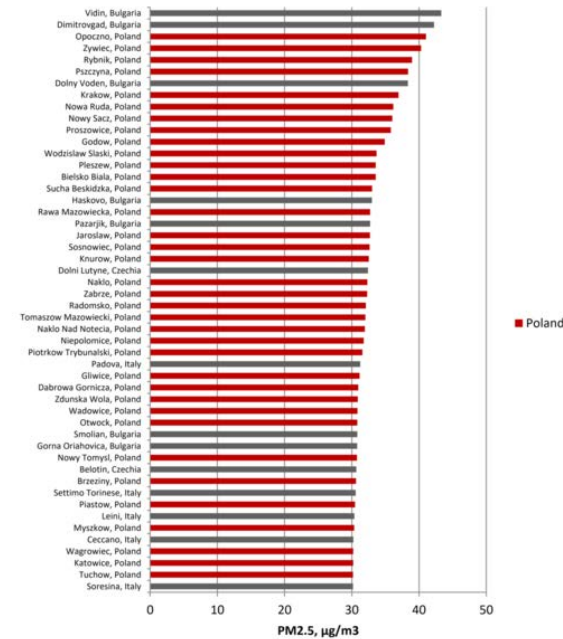
# Coal power in Poland

## PREMATURE DEATHS FROM COAL-FIRED POWER PLANTS

ACCORDING TO COUNTRY IN WHICH THE COAL PLANTS RESPONSIBLE ARE SITUATED (2013)



## 50 most polluted cities in the European Union

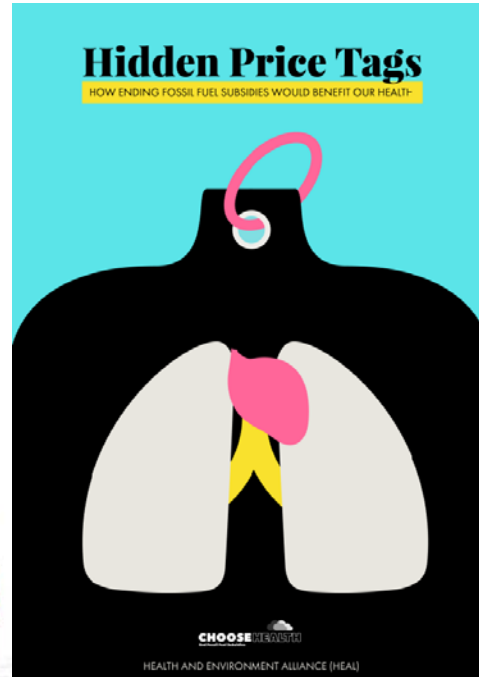
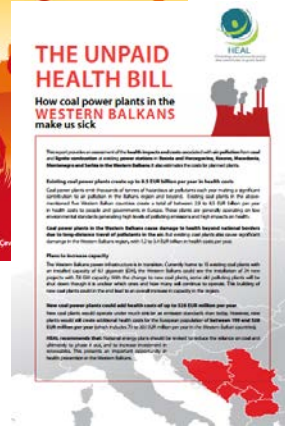
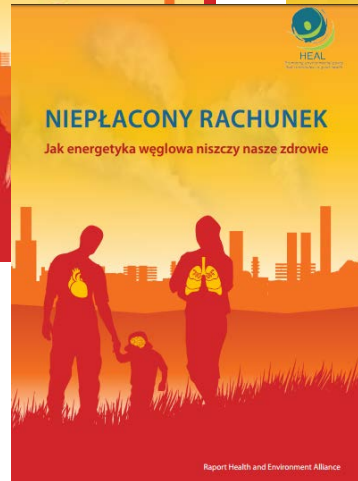


- **Polish energy production causes 5830 premature deaths per year; Bełchatów power plant (the world's largest lignite-fired power station) is responsible for 1270 premature deaths per year;**
- **Poland is the most polluted EU country, with around 50 k premature deaths per year, from all sources;**
- **On the list of 50 most polluted European cities there are 36 from Poland.**

Source: (1) 2016 Can Europe, WWF, HEAL, Sandbag Europe's Dark Cloud, How coal-burning countries are making their neighbours sick; (2) 2018, WHO



# Health impacts and costs of coal power



Available in English, Romanian, German, Polish; for Turkey, and Western Balkans

[www.env-health.org](http://www.env-health.org)



# Policy recommendations

- **A full coal phase-out by 2030.** EU needs to walk the talk on climate action, health protection Accelerate clean energy transition, end subsidizing coal plants with capacity mechanisms, push EU neighbours for healthy energy, climate.
- **Public health protection and climate action top priorities.** Deliver on the Sustainable Development Goals and the Paris Climate Agreement with ambitious National Energy and Climate Plans. Make 'Health in all policies' a reality by involving the health sector in energy, climate deliberations and decisions.
- In the process of a full decarbonisation of its economy, carry out **health impact assessment.** Analyse health implications while steering away from harmful alternatives, such as unsustainable bioenergy, nuclear energy and geoengineering methods to reduce carbon emissions.



# Voices of health experts



"As a Member of the European Parliament, I have been piloting the Petition against a huge open cast mine in the area of Lower Silesia from the beginning, (that is from 2010). I hope that the weight given by a European Complaint as well as the national action of many others struggling with similar problems - governments, NGOs and private persons - will give a chance for our local government to arrange a dialogue with the national government and through that work out a common position that takes into account the needs of Polish energy without forgetting about the rights and health of local communities."

Lidia Gerlinger de Oedenberg,  
Member of the European Parliament, Poland



"Doctors are very concerned about air pollution and are calling on the government to take health into account when taking decisions on energy policy."

Professor Dr. Marija Jevtić,  
Medical faculty University of Novi Sad, Institute of Public Health of Vojvodina



"European doctors know air pollution to be an important risk factor for health, and the CPME has a long-standing interest in this topic. Health professionals are committed to bringing new evidence-based information to the public as well as to decision makers and using their voice to bring about policy changes."

Birgit Beger, Secretary General,  
Standing Committee of European Doctors (CPME)

"The external costs to health from coal power generation are bigger than for any other energy source. The costs of reducing greenhouse gases are partially paid back because of lower health costs."

Professor Paul Wilkinson,  
London School of Hygiene and Tropical Medicine (LSHTM)



# Thank you for your attention!

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