

The Unpaid Health Bill – How coal power plants in Western Balkans make us sick

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The Economic Consequences of Outdoor Air Pollution



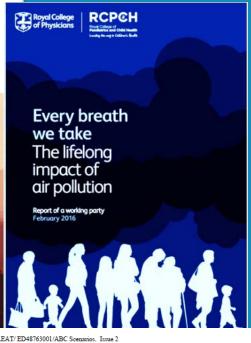




Cost-benefit Analysis of Final Policy Scenarios for the EU Clean Air Package

Version 2 Corresponding to IIASA TSAP Report #11, Version 2a

October 2014



Cost-Benefit Analysis of Policy **Option Scenarios for the Clean** Air for Europe programme















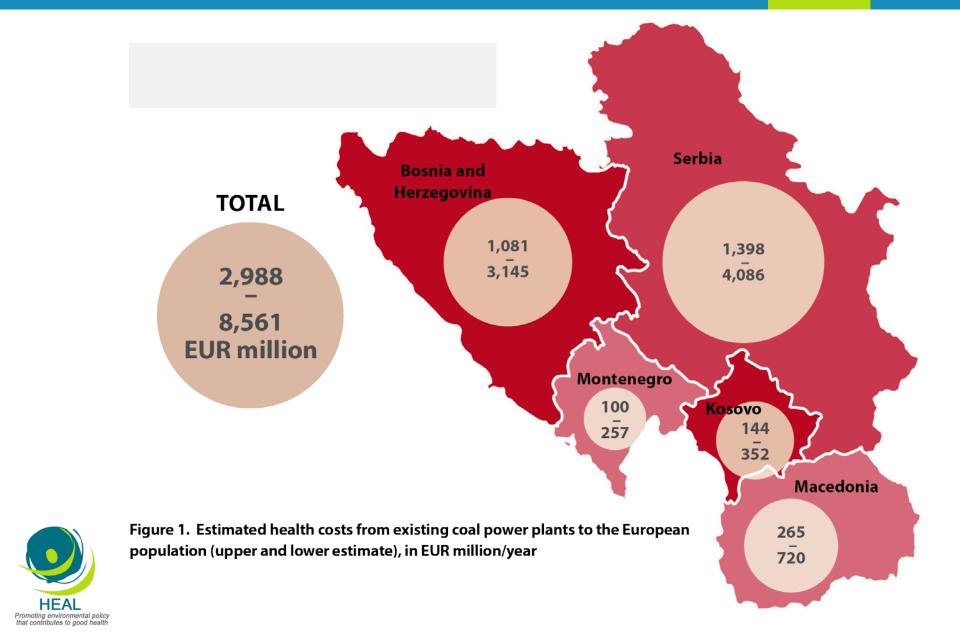
Study objectives

- 1. How big are **emissions** from Western Balkan **coal power plants**?
- 2. How big are **health impacts** and their **monetary equivalent**?





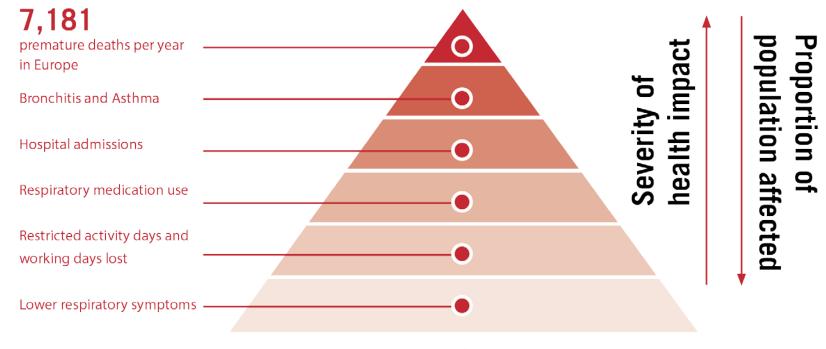
Existing coal power plants create up to **8.5 EUR** billion per year in health costs



What are the unpaid health costs?

'Unpaid health bill' represents: a combination of <u>lost productivity</u>, added <u>burden on</u> <u>healthcare systems</u> and <u>lost utility for individuals</u> suffering ill health or dying early.

Health impacts and costs from coal power generation





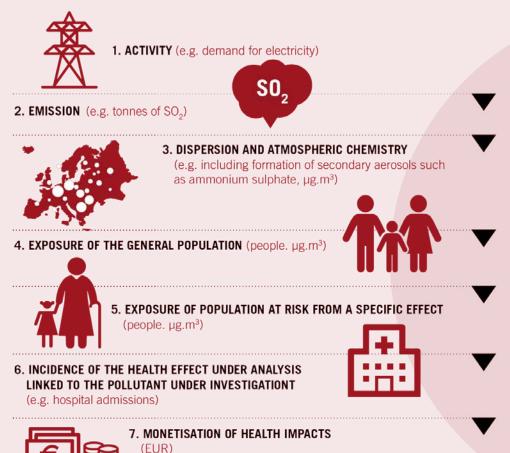
2.9 - 8.5 EUR billion per year

Total health costs

Figure 2. Factors contributing to total damages caused by coal power plants in Western Balkans

Methodology at a glance

Calculation and monetisation of health costs



The analysis is based on the consideration of long-range dispersion of air pollutants, using results from the Unified EMEP model, which is the dispersion and atmospheric chemistry model that underpins most European air quality analysis. For the current operation of an existing plant, emissions are typically measured and reported by the plant operator. For new plants, annual emissions are calculated on the assumption that these plants would comply with the EU's Industrial Emissions Directive (IED).

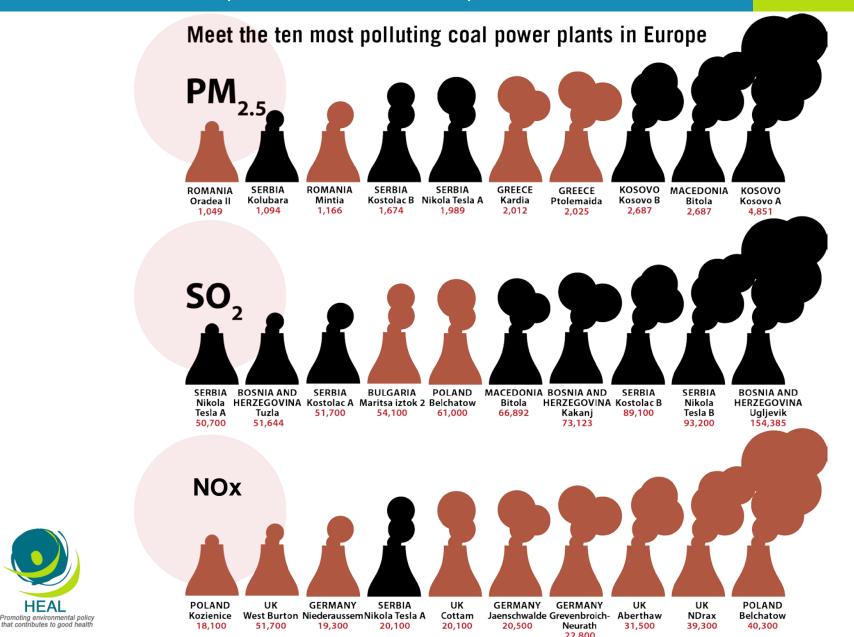


Figure 3. The impact pathway approach (ExternE)

Data source for emissions from coal-fired plants

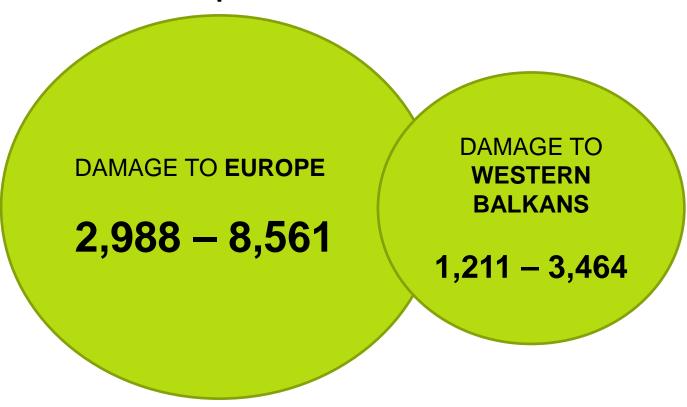
Data	Country	Source
Emissions	Bosnia & Herzegovina	Study by Center for Ecology and Energy: "Health impacts of coal fired power generation in Tuzla", p.11 Report on the environment by electricity company, Republic Hydro-Meteorological Service, Banja Luka
	Kosovo	Study World Bank "Kosovo Country Environmental analysis", p.55
	Macedonia	Ministry of environment and physical planning (data submitted by ELEM)
	Montenegro	National strategy for air quality by Ministry of sustainable development and tourism, p.128
	Serbia	E-PRTR database year 2013
Pollutant dispersion	All	EMEP / Norwegian Meteorological Institute
Response functions	All	WHO-Europe HRAPIE study
Valuation	All	European Commission and OECD

Are the Western Balkan coal plants major contributors of pollution in Europe?



Trans-boundary problem

 How Europe is damaged by coal power plants in the Western Balkans: 60% of costs to other European countries —a trans-boundary problem





in EUR million/year, lower to upper bound

Healthy energy choices as the way forward

The way forward: healthy energy choices

POLICY RECOMMENDATIONS



- Support the **rapid phase out of coal**: Close all old coal-fired plants and do not build new ones
- Take into account health protection and opt for renewables and energy savings
- Fulfil the obligations and fully implement standards agreed in international treaties, such as the Energy Community, Kyoto protocol and Paris Treaty 2015



Thank you for your attention!

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