

Für Mensch & Umwelt

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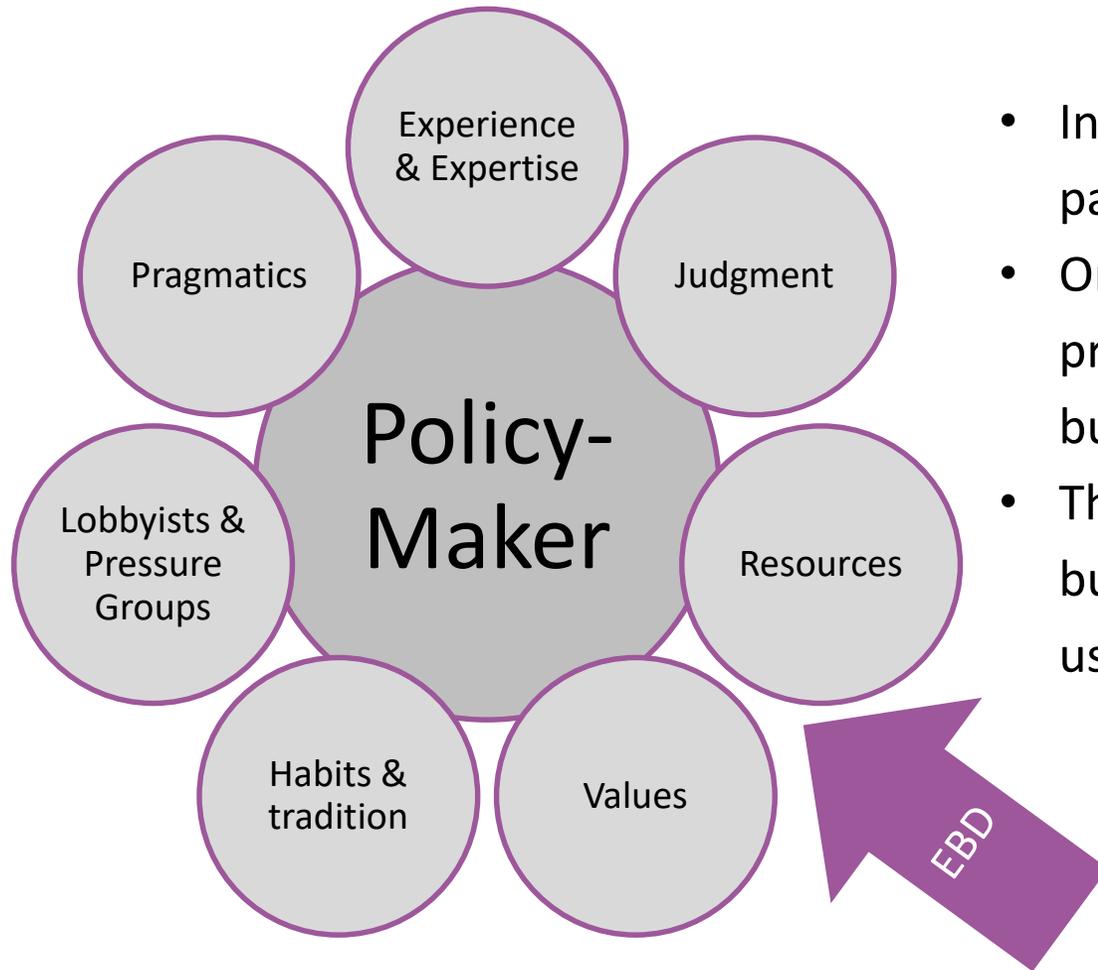
International burden of disease conference, Belgrade, 15-16 September 2022

Environmental burden of disease estimates and their use for scientific policy consulting

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Burden of disease and policy consulting



- In Germany, scientific policy consulting is an integral part of the political system
- One public health method developed with the aim of providing scientific policy advice is the environmental burden of disease (EBD) method
- The theoretical and scientific applications are diverse, but the knowledge gained with this method is hardly used in scientific policy advice

Research Question

What are the opportunities and limitations of the EBD method for scientific policy advice from a scientific point of view?



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Umweltbedingte Krankheitslasten

- Fragen und Antworten -

Kann man berechnen, wie stark die Umwelt unsere Gesundheit beeinträchtigt? Ein wissenschaftlicher Ansatz, der hierfür genutzt werden kann, ist die Methode zur Berechnung der umweltbedingten Krankheitslast. Im Folgenden werden 15 häufig gestellte Fragen rund um dieses Thema beantwortet.

1 Was verbirgt sich hinter dem Begriff Krankheitslast (burden of disease)?

Das Konzept der Krankheitslast (*burden of disease*) wurde in den 90er Jahren von der Weltgesundheitsorganisation (WHO) in Zusammenarbeit mit der *Harvard School of Public Health*

Results

Opportunities	Limitations
<ul style="list-style-type: none">• Quantification of health in terms of one or more indicators• The method is flexible, can be used for different research questions• It is possible to compare the burden of disease of different risk factors• It is an established method which is developed further	<ul style="list-style-type: none">• The assessment is resources and time consuming• Health is dichotomized• The burden of disease tend to be higher for good researched risk factors• The communication of the results in terms of summary measures of population health is challenging

Communication is essential

- The results need to be interpreted relatively and application-oriented
- DALYs, YLLs and YLDs are summary measures of population health
- The numbers cannot be validated by measurements or monitoring
- It is a negative estimate, which quantifies a loss in life time

Our task as scientist is to:

- Show different measure (YLL, YLD, PAF, DALY, DALY rates, standardised) and explain them
- Interpretation of the results if possible in the context to other results
- Show and explain uncertainties in an understandable way
- Translate if needed
- The communication of the results should be well planned and possibly be part of the scientific process

Burden of disease and policy consulting II

- In Germany, scientific policy consulting is an integral part of the political system
 - But EBD estimates are not used
- The German Environment Agency is the responsible institution for policy consulting in the area of environmental health
 - Supporting EBD projects financially
 - Publication of results for Germany
 - Cooperating with national (Robert Koch-Institute) and international partners (COST network, GBD)
- On European level EBD estimates have a bigger impact
 - Annex III of the Environmental Noise Directive will describe the methods for calculating the burden of disease caused by exposure to specific noise levels. A revised Annex III is currently under development following the latest scientific review of the health effects of noise that is being performed by the WHO.

The Association of German
Engineers - standard

Fact Sheet to air pollution from the European Commission

Did you know?



17 % of lung cancer deaths are attributable to air pollution



400 000 premature deaths in the EU every year are linked to air pollution



About **130 cities** across Europe do not meet EU air quality standards



Air pollution costs **€4 billion in healthcare** and €16 billion in lost workdays each year



72 % of Europeans want **public action** to improve air quality

#CleanAirEU

<https://op.europa.eu/fr/publication-detail/-/publication/7a4bde0d-0a82-11ea-8c1f-01aa75ed71a1>

Year 2009



$$\begin{array}{ccccccc} \text{YLL} & + & \text{YLD} & = & \text{DALY} & & \\ \text{⚰} & & \text{🛏️} & & & & \\ 649,300 & + & 8,900 & \approx & 658,200 & & \end{array}$$

Any Questions?

5:42 / 8:39



Environmental burden of disease approach

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Thanks for your attention!

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Sources

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