Using Health Impacts Assessment (HIA) to Inform Policy Decisions

Markus Amann

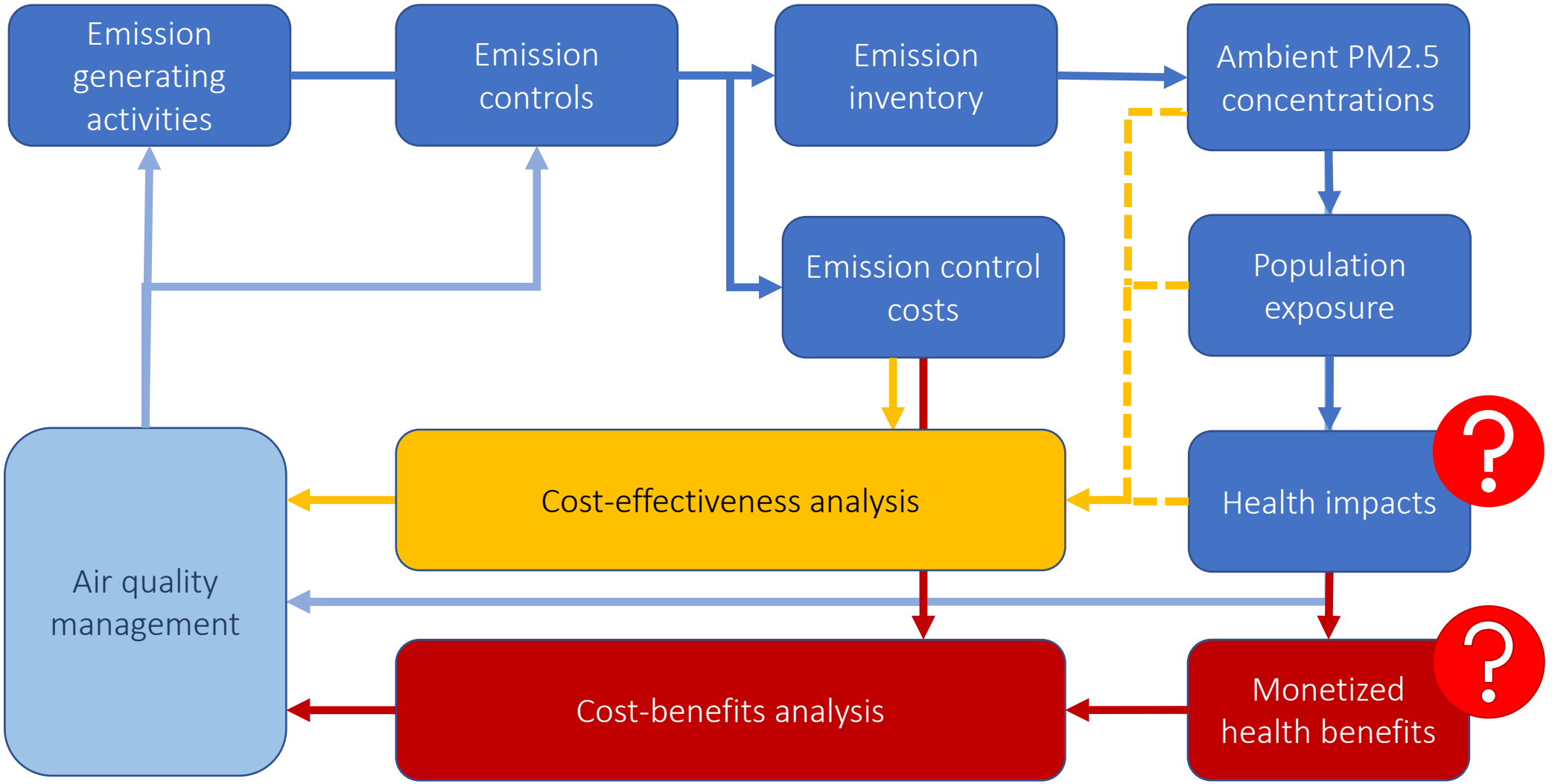
International Institute for Applied Systems Analysis

HIA informs policy decisions by quantifying health benefits from clean air

- HIA motivates action by revealing the current burden of disease from air pollution and the potential gains from policy interventions

- Can HIA help to design more effective policies?

Systematic air quality management (AQM) approaches



HIA reveals the economic inefficiency of AQM approaches driven by uniform air quality standards

Pollution control costs and health benefits of alternative AQM approaches in South Asia:

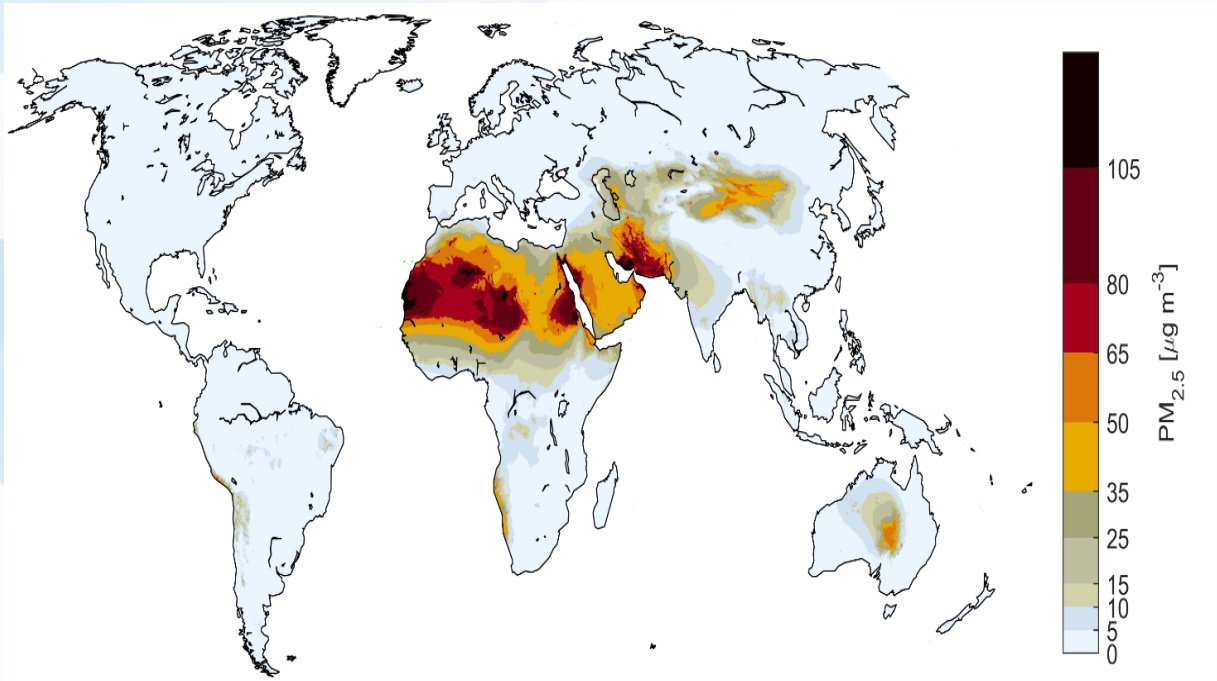
- Ad-hoc selection of measures
- Achieving WHO Interim Target 1 for PM2.5 (35 µg/m^3) throughout South Asia
- Reducing population exposure at least cost
- Maximum feasible measures

	Ad-hoc selection of measures	WHO Interim Target 1	Reducing population exposure	Maximum feasible measures
Total number of deaths avoided	276,000	739,000	752,000	1,270,000
Cost per life saved (USD)	$38,000	$26,000	$7,600	$68,000

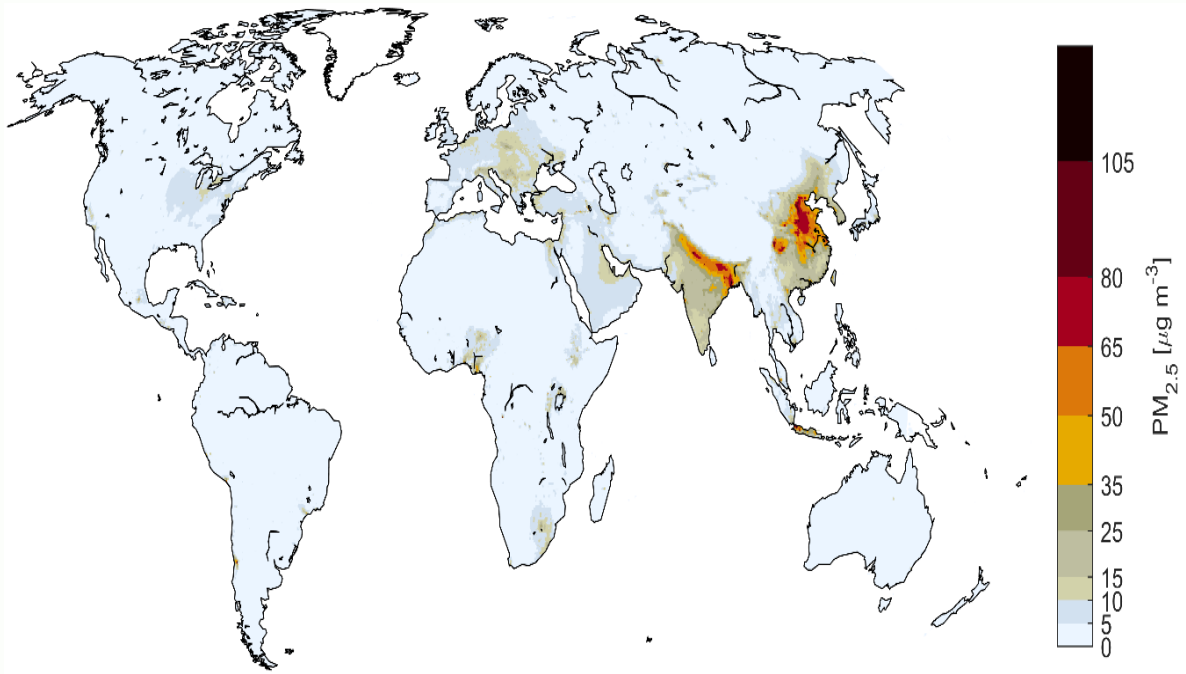
Source: World Bank Flagship Study: Ambient Air Quality and Public Health in South Asia, forthcoming

The sensitivity of estimated health benefits from policy interventions towards the assumed shape of the E-R function

PM2.5 from natural sources

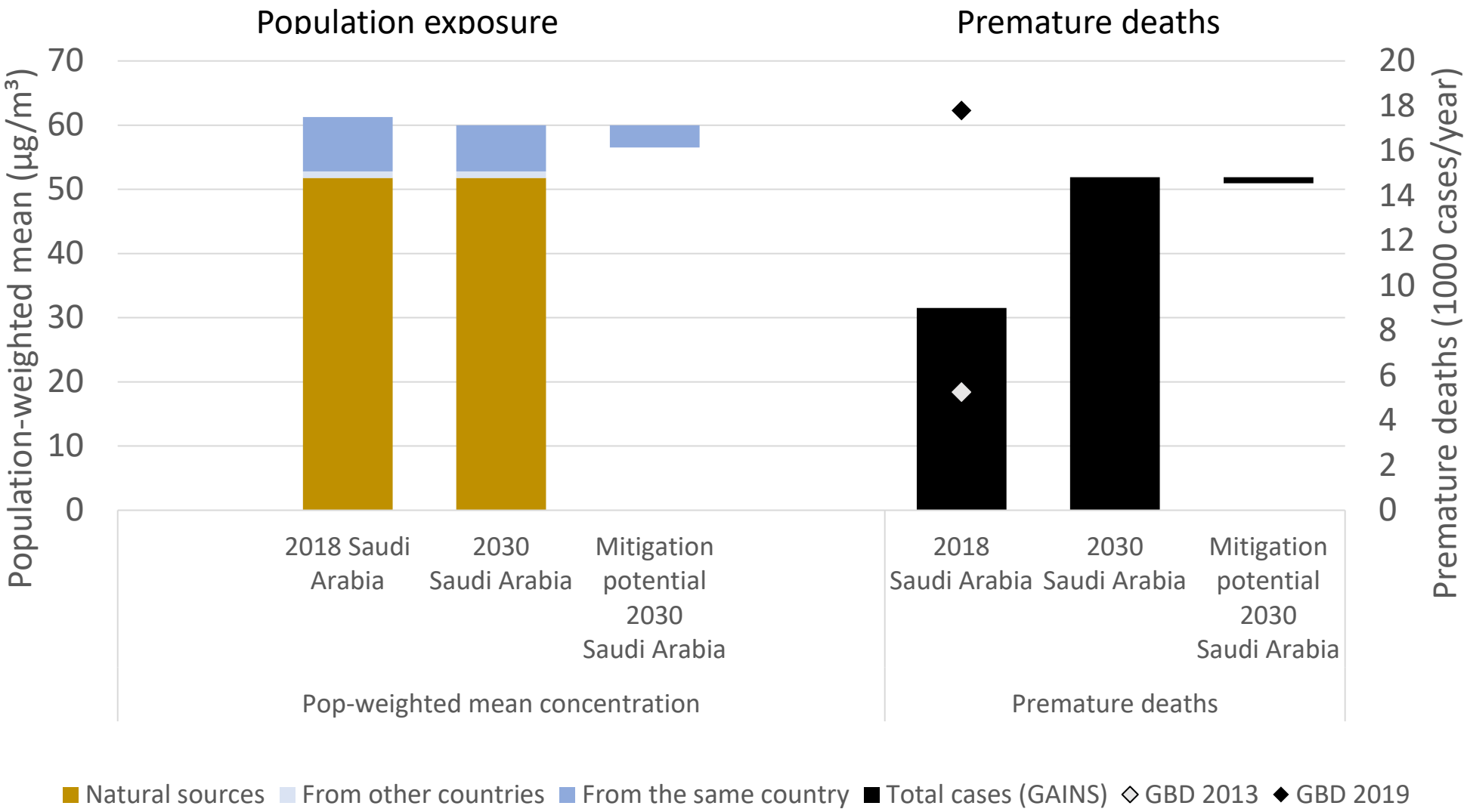


$PM_{2.5}$ from human activities



Source: Amann et al., Phil.Trans.Royal.Soc. (378) 2183

The potential impacts of AQ policy interventions in Saudi Arabia: Population exposure and mortality



Conclusions

- HIA is critical for revealing the health burden of poor air quality

- Uncertainties in current HIA methodologies suggest caution against deriving precise quantitative guidance for air quality management (AQM) strategies

- HIA clearly reveals the superior economic efficiency of AQM approaches focused on population exposure compared to conventional uniform ambient air quality standards