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## Econometric models derived from meta-analysis to estimate VSL and VOLY associated to air pollution at a global level: preliminary results

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Epidemiological research has shown a strong correlation between air pollution and risk of premature death. Among the damage costs of air pollution, premature mortality is by far the largest contributor, hence accounting for the number of deaths linked to poor air quality has become a key environmental indicator. Monetizing reductions in risks of death through cost-benefit analyses can be useful to create efficient public policies aiming at improving air quality. The benefits of prevented mortalities can be expressed in terms of a Value of a Statistical Life (VSL), an economic parameter representing individuals' willingness to exchange wealth for mortality risk reduction. In addition, the monetary Value Of a Life Year (VOLY) is also an important parameter to be measured, as it considers the change in life expectancy associated with air pollution. However, determining reliable estimates of VSL and VOLY can be challenging, as the methods employed in different studies can vary widely between, and even within, countries. Furthermore, most countries have insufficient and unreliable VSL and VOLY estimates. Lack of country-specific data and common methodology makes it difficult to assess climate policy at a global scale. To address this gap, a meta-analysis of existing literature is conducted to develop econometric models for estimating VSL and VOLY on a global level. The comprehensive search of articles and databases revisits established quantification methodologies for air pollution related mortality, which results in an extensive database of empirical data on VSL and VOLY estimates. Based on this new and updated database, transfer functions of VSL and VOLY are estimated for specific pollutants and different countries, according to each country's distinctive characteristics.