Marginal health impacts

The table below provides emissions estimates for the nation of South Africa along with marginal health impacts for each species.

1. Use these data to estimate the number of premature mortalities caused by these emissions.

| Species | Emissions (tonnes/yr)1 | Marginal health impact (mortalities/tonne)2 |
| --- | --- | --- |
| Primary PM2.5 | 9.6 x 105 | 7.2 x 10-3 |
| SO2 | 3.3 x 106 | 4.8 x 10-3 |
| NOx | 2.4 x 106 | 3.1 x 10-4 |
| NH3 | 8.5 x 105 | 2.1 x 10-3 |
| Anthropogenic VOCs | 3.1 x 106 | 4.5 x 10-4 |

1: “Global Air Pollutant Emissions EDGAR v6.1.” <https://edgar.jrc.ec.europa.eu/index.php/dataset_ap61>. Does not include biomass burning emissions.

2: Preliminary results from the REACH-SAfrica model. Note that marginal impacts are a strong function of where the emissions occur. Here, for simplicity, we provide emissions-weighted regional-average values.