This report is a unique publication in that it is the first to analyse all forms (air, water, soil, occupational) of pollution and their health, economic and social impacts. It shows that pollution is linked to an estimated nine million deaths each year worldwide and that most of these deaths are due to non-communicable diseases caused by pollution such as heart disease, stroke, lung cancer and chronic obstructive pulmonary disease (COPD). Welfare losses due to pollution are estimated to amount to US$ 4.6 trillion per year (6.2% of global economic output). In the EU, pollution causes more than 400,000 deaths which represents 7.8% of all deaths.

This Lancet report on Pollution and Health has a great deal of data and analysis. In order to make sense of it for the European context, the below points can be considered:

- In the EU and other industrialised regions, outdoor air pollution is the most harmful source of pollution
  Whereas low and middle income countries struggle with indoor air pollution, in the EU it is outdoor air pollution (including ozone) that poses the greatest risk for health next to chemical, occupational and soil pollution. This report shows that in the EU-28 over 280 000 people die early each year because of poor air quality. Brand new figures from the European Environment Agency also show that air pollution also causes significant health costs, estimated to be up to 940 billion EUR for the year 2010 alone.

- Fossil fuel combustion is responsible for a great share of the burden of pollution in both low and high-income countries, including the EU
  The combustion of fossil fuels and the emission of carbon dioxide through electricity generating plants, chemical manufacturing facilities, mining operations, deforestation, and petroleum-powered vehicles are major sources of pollution. Coal is the world’s dirtiest fossil fuel, and coal combustion is an important cause of both pollution and climate change which have significant health impacts.

- Pollution-related disease has been largely ignored in the public health consensus to prioritise Non-Communicable Diseases (NCDs)
  Despite the fact that more than 70% of the diseases caused by pollution are non-communicable such as cardiovascular and respiratory diseases, interventions against pollution are barely mentioned in the Global Action Plan for the Prevention and Control of Non-Communicable Diseases by the World Health Organization (WHO).
  Across the European Region, cardiovascular disease causes more than half of all deaths. Even though NCDs are named under the WHO Europe’s policy framework “Health 2020” as a priority health area, they do not appear in the EU’s Health Programme.
  “The evidence that links pollution to cardiovascular and respiratory diseases is overwhelming and health care systems worldwide are struggling to meet the increasing challenge. However, we have a range of measures at hand to fight what has become a global problem. Pollution prevention is one of them and it can save the lives of millions of people every year while contributing to climate action and helping us build the healthy planet we all want.” – Genon Jensen, Executive Director, Health and Environment Alliance (HEAL)
- **The economic and health costs of pollution are huge**
  The costs of pollution-related death and disease are also highly concentrated in developing regions imposing vast costs on national budgets – equivalent to around 1.3% GDP in low-income countries, compared to around 0.5% GDP in high-income countries, and 0.13% GDP globally. Healthcare spending on pollution-related diseases also disproportionately affects lower income countries – accounting for an estimated 7% of health spending in middle-income countries each year, and 1.7% annual spend in high-income countries. This figures show the need for the EU to show global leadership on addressing global pollution challenges and assisting developing regions in tackling pollution.

- **Pollution control is underfunded.**
  Despite significant health impacts, the international development and health agendas have largely overlooked pollution. Funding is sparse when compared to resources for infectious disease and other environmental issues. In the EU there are policies in place that support pollution control globally, for example the EU’s waste shipment regulations forbid the export of toxic waste into non-EU countries and pesticides and products containing harmful substances are not allowed to enter the EU market. The EU’s REACH programme is another example of a pollution control initiative as is the EU’s engagement with international processes such as the UN Environment Programme for which it tabled resolutions on the need for pollution control to be debated by 193 member states. However, globally, no large foundations nor bilateral aid agencies currently include environmental health and pollution as a key focal area.

- **Chemical pollution is a great and growing global challenge but the report’s findings are a conservative estimate**
  The effects of chemicals such as endocrine disruptors on human health are poorly defined and their contribution to the global burden of disease is almost certainly underestimated. According to Richard Fuller, President of Pure Earth and co-chair of the Commission,

  "Most of the data is based on analyses that are very conservative. Many toxins are not included in the analysis, simply because there has not been enough research to calculate the burden of disease. The report does not include impacts related to endocrine disruptors, or asbestos for example. And many aspects of exposure are also not included, for the same reason – insufficient research.”

- **Primary prevention of pollution at source is essential for accelerating transition to a more sustainable, circular economy**
  Pollution control will benefit from efforts to slow the pace of climate change by transitioning to a sustainable, circular economy that relies on non-polluting renewable energy; on efficient industrial processes that produce little waste; and on transport systems that restrict use of private vehicles in cities, enhance public transport, and promote active travel.

- **The report stresses the need to consider environmental justice issues in tackling pollution - even in Europe**
  Environmental injustice exists in countries at all levels of income and development and in all regions of the world, and it is also a prevalent issue in Europe where poor and marginalized communities are disproportionally affected.
“Pollution, poverty, poor health, and social injustice are deeply intertwined. Pollution and related diseases most often affect the world’s poor and powerless, and victims are often the vulnerable and the voiceless. As a result, pollution threatens fundamental human rights, such as the right to life, health, wellbeing, safe work, as well as protections of children and the most vulnerable.” Commission author Karti Sandilya, Pure Earth, USA.

**Concluding quote from Richard Fuller:**

“You know, it’s strange. Pollution is something we put out into the world, something toxic, because we are industrious. And then, that toxin comes right back and poisons us, our neighbors, our children. The impact is huge - at least one death in every six. It’s just too much. Especially because we know it need not be that bad. There are proven strategies that can be used in the short-term to control pollution. Transitioning to a circular economic model, employing clean manufacturing methods is the long-term solution. But until we get there, low-cost options are available now that will allow us be productive and not poison ourselves or our children.”

**Many organizations were involved as partners and supporters of this effort. They include:**

Global Alliance on Health and Pollution with 50 members, including government agencies from over 20 countries (see [www.gahp.net/members/](http://www.gahp.net/members/)), European Commission, The World Bank, Institute for Health Metrics and Evaluation, National Institute of Environmental Health Sciences, Health and Environment Alliance (HEAL), Environmental Defense Fund, World Resources Institute/Access Initiative, Environmental Working Group, Global Alliance for Clean Cookstoves, CIESIN, Earth Institute, Resources for the Future, Indian Institute of Technology Delhi, UN Environment, UNDP, UNIDO, National Geographic, and more.

This *Lancet* report was conceived to bring attention to pollution’s enormous impact, notice that we have not paid sufficient attention to it, and show that it is solvable. The concept was developed by Rich Fuller of Pure Earth, and Dr. Philip Landrigan of Mt Sinai, co-chairs of the Commission. They can be contacted directly as follows:

- **Rich Fuller** fuller@pureearth.org
  Office: +1 (212) 870 3490

- **Dr Philip Landrigan** phil.landrigan@mssm.edu
  Office: +1 (212) 241 5959

The Health and Environment Alliance (HEAL) is the European launch partner of the report and can be reached as follows:

- **Vijoleta Gordeljevic** vijoleta@env-health.org
  Office: +32 234 36 42