POLLUTION AND HEALTH: SIX PROBLEMS AND SIX SOLUTIONS

Reference: The Lancet Commission on Pollution + Health, Oct 2017
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Introduction: Pollution and Health

Pollution currently poses one of the greatest public health and human rights challenges disproportionately affecting the poor and the vulnerable. Pollution can no longer be viewed solely as an environmental issue. It now affects the health and well-being of entire societies.

The Lancet Global Commission on Pollution and Health published its report on 20 October 2017. It is the first global analysis of all forms of pollution (air, water, soil and occupational) and its impact on the burden of disease, economic costs, and the environmental and social injustice of pollution.

Nearly 92% of pollution-related deaths occur in low- and middle-income countries. Children face the highest risks because small exposures to chemicals in utero and early childhood can result in lifelong disease, disability, premature death, as well as reduced learning and earning potential. The health impact of pollution is likely to be much larger than can accurately be quantified today because of insufficient data collection and scientific research from many pollutants.
Pollution is costly. Welfare losses due to pollution are estimated at $4.6 trillion per year; 6.2% of global economic output. The claim that pollution control stifles economic growth and that poor countries must pollute to grow is false.

Solutions exist that yield high returns on investment. Many of the pollution control strategies that have been widely used and have proven cost-effective in middle- and high-income countries are now ready to be exported and adapted for use by cities and countries at every level of income. Their application in carefully planned and well-resourced campaigns can enable developing countries to avoid many of the harmful consequences of pollution and leapfrog over the worst of human and ecological disasters.

Yet pollution is neglected by funding agencies worldwide. The report aims to raise awareness of pollution, end neglect of pollution-related disease, and mobilise the resources and the political influence that will be needed to effectively confront pollution. Prioritising and increasing investment in pollution cleanup and control presents an extraordinary opportunity to save lives and grow economies.
PROBLEMS OF POLLUTION AND HEALTH
Pollution has a large impact on human health

Diseases caused by pollution were responsible for an estimated:

- 9 million premature deaths (16% of all deaths worldwide) in 2015
- three times more deaths than AIDS, tuberculosis, and malaria combined
- fifteen times more deaths than all wars and other forms of violence.

It kills more people than smoking, hunger and natural disasters.

In some countries, it accounts for one in four deaths.
2. The health impacts from many pollutants are completely unquantified

The impacts from pollution are likely much larger than we can accurately quantify today, due to insufficient data collection and scientific research. More than 140,000 new chemicals and pesticides have been created since 1950. Of the 5,000 chemicals that are produced in the highest volumes, fewer than half have undergone any testing for safety or toxicity. Rigorous evaluation of new chemicals has become mandatory only recently in a few high-income countries.
3. Pollution disproportionately kills the poor and the vulnerable

Nearly 92% of pollution-related deaths occur in low- and middle-income countries. Within countries, pollution’s toll is greatest in poor and marginalized communities. Children face the highest risks. Small exposures to chemicals in utero and in early childhood can result in disease, lifelong disability and death.
Fossil fuel combustion in higher-income countries and the burning of biomass in lower-income countries accounts for 85% of airborne particulate pollution and is a major source of the greenhouse. Major emitters of carbon dioxide (coal-fired power plants, chemical producers, mining operations, and vehicles) are also major sources of other forms of pollution.
5. Pollution is neglected

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. No large foundations include environmental health and pollution as a focal area.

Despite the fact that more than 70% of the diseases caused by pollution are non-communicable, interventions against pollution are barely mentioned in the Global Action Plan for the Prevention and Control of Non-Communicable Diseases.
6. Pollution is costly

Spending on pollution-related diseases accounts for up to 7% of health budgets in middle-income countries. Pollution-related diseases cause productivity losses that reduce gross domestic product in low- and middle-income countries by up to 2% per year. Welfare costs from pollution are estimated to be $4.6 trillion per year—6.2% of global GDP. Solutions can yield economic gains.

In the United States, each dollar invested in air pollution control has returned an estimated $30 (USD) in benefits (range, $4 - $88) since 1970. Higher IQs and increased productivity from removing lead from gasoline has returned an estimated $200 billion (range, $110-$300 billion) each year since 1980 ($6 trillion total). The claim that pollution control stifles economic growth and that poor countries must pollute to grow is false.
6 SOLUTIONS TO THE PROBLEMS OF POLLUTION AND HEALTH
Elevate pollution as a national and international priority, and integrate it into country and city planning processes

Pollution can no longer be viewed solely as an environmental issue. It now affects the health and well-being of entire societies. Government leaders at all levels should prioritise pollution control within their agendas; integrate pollution control into development planning; and link pollution prevention to commitments on the SDGs, climate change, and non-communicable disease control. Cost-effective solutions exist and pay high returns on investment. Many countries have already taken bold steps to clean their air, water and soil. As a result, their health has improved and people are living longer. Household air and water pollution, the forms of pollution associated with profound poverty and traditional lifestyles, are slowly declining. However, ambient air pollution, chemical pollution and soil pollution – the forms of pollution produced by industry, mining, electricity generation, mechanised agriculture, and petroleum-powered vehicles – are all on the rise.
2. Increase funding for pollution control and prioritise by health impacts

The level of funding for pollution control in low- and middle-income countries is meager and should be substantially increased, both within national budgets and among international development agencies.

International support for pollution control is most effective when it leverages additional actions and funding by others. Examples include support for pollution prioritisation and planning processes within rapidly industrialising cities and countries; regulatory and enforcement assistance; building technical capacity; and supporting direct interventions to save lives. Financing programmes should be monitored to assess cost-effectiveness and to enhance accountability.
3. Establish systems to monitor pollution and its health effects

Data collected at the local and national levels are essential for measuring pollution levels, identifying and apportioning pollution sources, evaluating interventions, guiding enforcement, informing civil society and the public, and assessing progress toward goals.

The incorporation of new technologies such as satellite imagery and data mining into pollution monitoring can increase efficiency, expand geographic range, and lower costs.
4. **Build multi-sectoral partnerships for pollution control**

Inter-agency partnerships and public-private collaborations can prove to be effective tools in the development of clean energy sources and clean technologies that ultimately will prevent pollution at the source.

Cross-ministerial collaborations that involve Health and Environment Ministries, but also Ministries of Finance, Energy, Agriculture, Development, and Transport are essential.
5. Integrate pollution mitigation into panning processes for non-communicable diseases

Governments in affected countries should integrate pollution challenges and control strategies into their planning processes, ask for support from development assistance agencies and design and implement programmes that reduce pollution, and save lives. Donors, foundations, and individuals should prioritise pollution interventions and planning in their strategies.

Interventions against pollution need to be a core component of the Global Action Plan for the Prevention and Control of Non-Communicable Diseases.
6. Conduct research into pollution’s impacts and pollution control

Research is needed to understand and control pollution and to support change in pollution policy. Pollution-related research (research of the “pollutome”) should:

- Explore emerging causal links between pollutants, diseases, and subclinical impairment, for example between ambient air pollution and dysfunction of the central nervous system in children and in the elderly.
- Quantify the burden of disease associated with known toxic chemicals such as lead, mercury, chromium, arsenic, asbestos, and benzene.
- Characterise the health impacts from newer chemical pollutants such as developmental neurotoxicants, endocrine disruptors, novel insecticides, chemical herbicides, and pharmaceutical wastes.
- Identify and map pollution exposures in low- and middle-income countries.
- Improve estimates of the economic costs of pollution and pollution.
- Improve estimates of the cost of inaction and returns from interventions.

Figure: Pollutome (The Lancet Commission on pollution and health, 2017)