



Forum: 4th committee

Issue: Reducing air pollution in metropolitan areas

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Introduction

With a rising amount of the world's population living in densely populated urban areas, there has been a huge increase in the number of people affected by air pollution. In 2012, indoor and outdoor air pollution lead to the death of over 6.5 million human beings with almost 90% of all the deaths occurring in low- and middle-income countries, most of those being countries in the South-east Asia and Western Pacific regions.



Thankfully, in the past two years, the database created by the World Health Organization (WHO) in collaboration with the University of Bath, United Kingdom— is now covering 3000 cities in 103 countries, with more cities measuring air pollution levels and recognizing the associated health impacts. Yet, urban air pollution data remain sparse in the African region.



“Air pollution is a major cause of disease and death. It is good news that more cities are stepping up to monitor air quality, so when they take actions to improve it they have a benchmark,” said Flavia Bustreo, WHO Assistant-Director General for Family, Women’s and Children’s Health.

“When dirty air blankets our cities the most vulnerable urban populations – the youngest, oldest and poorest – are the most impacted.” With the decline of urban air quality, the risk of stroke, heart disease, lung cancer, and chronic and acute respiratory diseases, including asthma, increases for the people who live in metropolitan areas.

The impact of air pollution on human health is of growing concern as research unravels more links between a number of serious diseases among various age groups and air pollution (e.g. diabetes, neurodevelopment, pre-term birth, low weight birth, etc.)

A high air quality is crucial to the overall health of people living in metropolitan areas, and The Sustainable Development Goals (SDGs) of the 2030 Agenda, adopted at a UN summit in September 2015, calls for substantially reducing the number of deaths and illnesses from air pollution. In May 2016 WHO issued a new road map for accelerated action with local health sectors increasing monitoring and assuming a greater leadership role in national policies affecting air pollution.

Cause and Status

The main sources of air pollution include coal-fired power plants, industrial activities, household fuel and waste burning and inefficient modes of transport. However, not all air pollution originates from human activity, for example, air quality can also be



influenced by dust storms, mainly in regions close to deserts.



“Fast action to tackle air pollution can’t come soon enough,” top UN World Health Organization (WHO) environmental official Maria Neira said while revealing the new air quality model, on 27th September 2016.

According to the latest data gathered by the global urban ambient air pollution database, 98% of cities low- and middle-income countries with more than 100,000 inhabitants does not meet the air quality limit set by WHO while being 56% in high-income countries. Furthermore, the model indicates that 92% of the world’s population inhabits areas where air quality exceeds the limits set by WHO.

Yet, it is to be mentioned that more than half of the monitored cities in high-income countries and more than one-third in low- and middle-income countries reduced their air pollution levels by more than 5 per cent in five years.

Measures against air pollution

Convention on Long-range Transboundary Air Pollution (CLRTAP)



Initiated due to the public outcry against the impacts of Acid Rain in Europe, the Convention on Long-range Transboundary Air Pollution (CLRTAP) was signed in 1979 and entered into force in 1983. As the first regional environmental convention, CLRTAP has been instrumental in the reduction of key harmful pollutants in both Europe and North America.

BreatheLife 2030 campaign

Is a global communications campaign to increase public awareness of air pollution as a major health and climate risk. BreatheLife is led by WHO in partnership with the United Nations Environment Programme (UNEP)-hosted Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants. The campaign stresses both the practical policy measures that cities can implement (such as better housing, transport, waste, and energy systems) and measures people can take as communities or individuals (for example, to stop waste burning, promote green spaces and walking/cycling) to improve our air.

Key terms:

Air pollution

Air pollution is contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and Sulphur dioxide.

The Climate and Clean Air Coalition

The Climate and Clean Air Coalition is a voluntary partnership of governments, intergovernmental organizations, businesses, scientific institutions and civil society organizations committed to improving air quality and protecting the climate through actions to reduce short-lived climate pollutants.



WHO's Ambient Air quality guidelines

WHO's Ambient Air quality guidelines limit annual mean exposure to particulate matter with a diameter of less than 2.5 micrometres (PM_{2.5}), such as sulfate, nitrates and black carbon, which penetrate deep into the lungs and cardiovascular system, posing the greatest health risks.

Metropolitan area

A metropolitan area, sometimes referred to as a metro area or commuter belt, is a region consisting of a densely populated urban core and its less-populated surrounding territories, sharing industry, infrastructure, and housing.

Multilateral environmental agreement

A multilateral environmental agreement (MEA) is a legally binding agreement between three or more states relating to the environment. They are predominantly produced by the United Nations. It is called a bilateral environmental agreement if the agreement is between two nation states.

Suggestions for improvement:

Efforts regarding politics:

Industry: clean technologies that reduce industrial smokestack emissions; improved management of urban and agricultural waste, including capture of methane gas emitted from waste sites as an alternative to incineration (for use as biogas);

Transport: shifting to clean modes of power generation; prioritizing rapid urban transit, walking and cycling networks in cities as well as rail interurban freight and passenger



travel; shifting to cleaner heavy duty diesel vehicles and low-emissions vehicles and fuels, including fuels with reduced sulfur content;

Urban planning: improving the energy efficiency of buildings and making cities more compact, and thus energy efficient;

Power generation: increased use of low-emissions fuels and renewable combustion-free power sources (like solar, wind or hydropower); co-generation of heat and power; and distributed energy generation (e.g. mini-grids and rooftop solar power generation);

Implementing strategies for waste reduction, waste separation, recycling and reuse or waste reprocessing; as well as improved methods of biological waste management such as anaerobic waste digestion to produce biogas, are feasible, low cost alternatives to the open incineration of solid waste. Where incineration is unavoidable, then combustion technologies with strict emission controls are critical.

Ratification of The 1979 Geneva Convention on Long-range

Transboundary Air Pollution: With 51 parties out of UNECE's 56 member States, the Convention covers most of the region. Over the past 30 years, the Convention has been extended by 8 Protocols, focused upon setting strict reduction targets for releases of pollution for the protection of human and environmental health. Each of these Protocols targets pollutants such as Sulphur, nitrogen oxide, persistent organic pollutants, volatile organic compounds, ammonia, and toxic heavy metals.

Country research:

<https://www.cia.gov/library/publications/the-world-factbook/>



Useful links:

<http://breathelife2030.org/>

<http://www.ccacoalition.org/en>

<http://www.unece.org/env/lrtap/welcome.html>

<http://www.who.int/mediacentre/news/releases/2016/air-pollution-estimates/en/>

<https://www.unece.org/env/lrtap/welcome.html>

<http://www.who.int/mediacentre/factsheets/fs313/en/>

<http://www.unece.org/environmental-policy/conventions/envlrtapwelcome/cross-sectoral-linkages/air-pollution-and-climate-change.html>

<http://www.unece.org/environmental-policy/conventions/envlrtapwelcome/cross-sectoral-linkages/air-pollution-and-health.html>

<http://www.un.org/sustainabledevelopment/blog/2016/09/vast-majority-of-world-6-76-billion-people-living-with-excessive-air-pollution-un-report/>

<http://www.un.org/sustainabledevelopment/blog/2016/05/un-health-agency-warns-of-rise-in-urban-air-pollution-with-poorest-cities-most-at-risk/>

https://www.unece.org/env/lrtap/status/lrtap_st.html

Status of ratification of The 1979 Geneva Convention on Long-range Transboundary Air Pollution as of 24 May 2012