

Methodology

In June 2014 the United Nations Environment Assembly (UNEA) adopted resolution 1/7 *Strengthening the Role of the United Nations Environment Programme in Promoting Air Quality*. Paragraph 4 and 7 of the resolution requested UNEP to develop a report detailing actions taken by governments to promote air quality. Towards this end, UNEP embarked on an initiative to compile actions and policies being undertaken by governments around the world to improve air quality. This report details some of these actions.

Actions aimed at improving air quality at country level can be vast and wide, however, the scope of this report focusses on actions that aim to address the most common air quality challenges and whose mitigation actions are replicable in majority of countries around the world. For example, coal burning power plants are recognised as a significant source of air pollution around the world. A few countries are tackling this problem by investing in nuclear power. As nuclear power may not be a viable or desirable option for most countries around the world at this time, nuclear power is not covered in the report as an alternative to coal.

The first step in developing this report was to generate country specific air quality actions/policies catalogue. These catalogues, details actions and policies that governments around the world are taking to improve air quality. Data in these catalogues was obtained through literature reviews and desktop research. In addition, governments were invited to review this catalogues and make any amendments or corrections to the catalogues. Several governments reviewed their country specific catalogues and made a few corrections which were incorporated in the final catalogues available online at <http://www.unep.org/transport/airquality/>. These catalogues, formed the base for the development of this report.

From the literature review and desktop research, four key sources of air pollution were identified as the most important drivers of air pollution in a majority of countries around the world. In addition, several countries had achieved some level of success in addressing these challenges and the actions taken to achieve this were found to be relatively replicable in other countries. The four identified key sources of air pollution that will be the focus of this

report are; industrial activities, road transport, open waste burning (municipal and agricultural) and indoor air pollution from cooking and heating.

In addition to these four emission sources, ten common actions taken by governments to improve air quality were identified. These actions were identified and selected to be the focus of this report based on their proven efficacy in improving air quality and also their ease of replicability in majority of other countries around the world. For instance, road transport was identified as one of the most prominent emission sources of air pollutants that impact human health. To effectively manage this, several actions and policies can be implemented; however, improving vehicle emission standards and fuel quality, and increasing investment in public and non-motorised transport were identified as the most effective and replicable actions to mitigate against this emission source. Therefore these actions will be addressed in this report as actions aimed at minimising emissions from the transport sector.

The top ten actions identified and which will be the focus of this report will include a mixture of both legislative and programmatic efforts aimed at improving air quality. These actions are also categorised based on the main air pollution sources that they address among the identified four above. These actions are: *For Industrial activities*, 1) Establishing incentives that promote investments in renewable energy, pollution control technologies, energy efficiency and clean production mechanism and 2) Increasing energy efficiency across the board. *For road transport*, 3) Reducing fuel sulphur content, 4) Tightening vehicle emission standards to at least Euro 4 or its equivalent and 5) Increasing investments in public and non-motorized transport systems. *For open waste burning*, 6) Reducing open burning of both agricultural and municipal waste. *For Indoor air pollution*, 7) Improving access to clean cooking and heating fuels and 8) Improving access to clean and efficient cook/heating stoves. *For general legislative efforts*, 9) Establishing and continuously tightening ambient air quality standards, and 10) Adopting and aiming to achieve WHO recommendations for ambient air quality standards.

To take stock on the efficacy of the actions taken by governments to improve air quality based on the ten points above. Data indicating progress or current status of each of the top ten actions was obtained from various sources, with the online catalogue, World Bank and

the World Health Organisation (WHO) data portals being the most dominant sources of the data. Other sources of the data included; UNEP, www.BRTdata.org and Global Coalition for Clean Cookstoves.

Neither the catalogue nor this report captures every source of air pollution or every action that can be taken to tackle the problem. Rather, this is the first step in identifying globally-relevant indicators and solutions to the air pollution challenges. Some of the major drivers of air pollution that are not addressed in this report include; transboundary air pollution, which can significantly impact background levels of air pollutants. Transboundary air pollution was not addressed mainly because the focus of this exercise was to focus on what national governments are doing to address air pollution. Likewise, emissions from forest fires and agricultural activities such as manure handling and fertilizer use, are not covered in this report, even though they are a significant source of air pollution in some places.

In addition to the global report, fourteen sub-regional reports were prepared based on the information derived from the air quality catalogues. These reports provide statistics of the number of countries engaged in the “Top Ten” actions, and any best practices identified per action within the regions.

It is envisioned that countries that implement and enforce actions highlighted in this report will enjoy significantly improved air quality. It is also hoped that the catalogue and regional reports developed from these catalogues will increase the interest in air pollution and spur on further developments.