



The successful implementation of such international commitments as the Paris Agreement, the United Nations' Sustainable Development Goals and the Habitat III New Urban Agenda is to a large degree reliant on the ability of cities, local stakeholders and communities to embark on more effective and integrated policy and planning approaches, particularly in addressing the health and environmental impacts of worsening levels of air quality. Clean Air Asia's Guidance Framework for Better Air Quality in Asian Cities is helping to guide cities towards the fulfilment of these objectives.

1. UN SUSTAINABLE DEVELOPMENT GOALS

At the 2015 United Nations General Assembly, 193 UN member states unanimously adopted the 2030 Agenda for Sustainable Development, a global development agenda that lays out 17 Sustainable Development Goals (SDGs) to be achieved by 2030. The SDGs, which came into effect in January 2016, are a universal set of goals, targets and indicators that set out quantitative objectives across the social, economic and environmental dimensions of sustainable development.



While there is no standalone SDG on air quality, it is explicitly mentioned in two of the 17 SDGs (one target each):

Goal 3.9 - Ensure healthy lives and promote well-being for all at all ages: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

Goal 11.6 - Make cities inclusive, safe, resilient and sustainable: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

However, because of the crosscutting nature of air quality, it relates to almost all the other SDGs even though those linkages are not specifically mentioned. Of the remaining 15 SDGs, action under at least five of them can be expected to contribute to the reduction of air pollution. For example, Goal 7 on sustainable energy, which target 7.1 aims to ensure universal access to affordable, reliable and modern energy services for everyone, represents a goal with implicit co-benefits for air quality.

Similar links are evident in Goal 12 on Sustainable Consumption and Production, and target 12.4 on the sound environmental management of chemicals, including a significant reduction of their release to the air; in Goal 2

on Food Security and Sustainable Agriculture in terms of emissions of air pollutants from agriculture, especially methane; in Goal 13 on climate action and measures to reduce greenhouse gas emissions which have the potential to yield co-benefits for clean air; and in Goal 9 on industry, innovation and infrastructure and target 9.4, which calls for the increased adoption of clean and environmentally sound technologies, including benefits for air quality.

It is recognized that cities are vital in achieving the SDGs. Importantly, the SDGs provide an opportunity for cities to adopt more integrated approaches that strengthen synergies and are more holistically aligned with clean air goals.

2. PARIS AGREEMENT

The Paris Agreement, which came into force on November 4, 2016, is an agreement within the United Nations Framework Convention on Climate Change dealing with greenhouse gases emissions mitigation, adaptation and finance starting in the year 2020. Its central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5C. The preamble of the Paris Agreement recognizes the need for stronger engagement with non-party stakeholders, promising to involve local and subnational governments in actions on capacity building, adaptation and loss-and-damage.



"Cities generate 80% of the world's GDP, produce 70% of the world's greenhouse gas emissions, and house more than 50% of the world's population. The agreement's ultimate success will depend on local leadership." - Los Angeles Mayor Eric Garcetti and 33 other mayors on the adoption of the Paris Agreement (www.lamayor.org/statement-los-angeles-mayor-eric-garcetti-and-33-other-us-climate-mayors-adoption-historic-paris)

The successful implementation of the Paris Agreement hence to a substantial degree depends on the ability of cities, local stakeholders and communities to develop innovative solutions to urban planning, design, building and managing cities in an integrated manner that explicitly targets reductions in air pollution and greenhouse gas emissions. Cities, which stand at the center of converging global frameworks, are well positioned to implement transformative processes involving the energy, transportation and industrial sectors that better align their development pathways with the targets stipulated in the Paris Agreement. Indeed, the ultimate success of the Paris Agreement hinges on ability of cities to contribute to a third of all global emission reductions.

3. NEW URBAN AGENDA

The New Urban Agenda is the outcome document agreed upon at the Habitat III cities conference in Quito, Ecuador, in October 2016. It sets a new global standard for sustainable urban development and helps rethink how cities are planned and managed. It takes into account the synergies that exist with other global agreements, including supports the 2030 Agenda on Sustainable Development, particularly SDG Goal 11 - Make Cities Inclusive, Safe, Resilient and Sustainable, and the Paris Agreement. In essence, it is a roadmap for building cities that can serve as engines of prosperity and centers of cultural and social well-being while protecting the environment. In relation to air quality, it is focused on increasing the use of renewable energy, providing better and greener public transport, and sustainably managing natural resources, on taking action to address climate change by reducing urban greenhouse gas emissions, and on promoting safe, accessible and green public spaces.



The New Urban Agenda is anchored in participatory urban policies that mainstream sustainable urban development as part of integrated development strategies and plans, supported by institutional and regulatory frameworks linked to transparent and accountable finance mechanisms.

4. GUIDANCE FRAMEWORK FOR BETTER AIR QUALITY IN ASIAN CITIES

Clean Air Asia's Guidance Framework for Better Air Quality in Asian Cities, implemented by the Integrated Programme for Better Air Quality in Asia, provides cities with the knowledge and direction needed to effectively reduce air pollution. Targeted at national and local-level policy and decision-makers, and organized around six priority air-quality management areas, it maps out a series of steps and actions to guide cities in the development of cleaner, greener and healthier urban spaces.

Guidance Area 1 - *Air quality standards and monitoring* - assists national governments in the development and strengthening of ambient standards and city governments in the implementation of monitoring programs to better protect public health and the environment.

This means well-planned and situated monitoring stations, properly calibrated instruments, and accurate measurements of multiple pollutants and how they interact to geographically track air quality and determine emissions levels and variations attributable to such factors as traffic conditions, weather and time. It enables observations of pollution trends, and assessments of compliance with air quality standards and the effectiveness of air pollution interventions. It also feeds into improved modeling and the development of tailored and sustainable interventions, and contributes to health-impact studies that inform at-risk populations of the impacts of emissions.

Guidance Area 2 - *Emissions inventories and modeling* - enables cities to better understand the different sources and levels of air pollutants and how they are dispersed, and to evaluate current and projected future emissions.

This means the identification and quantification of different sources of emissions over given periods of time. This is important as it enables cities to identify emissions hotspots, the main contributors and priority areas for action, to more accurately assess the health and environmental impacts, and to develop targeted air quality management policies and mechanisms that address those different sources of pollution. City managers can only effectively deal with emissions if they know where the pollution is coming from and what level of emissions each of those different sources is adding to the air pollution problem.

Guidance Area 3 - *Health and other impacts* - assists cities in developing and strengthening local and national programs to enable them to consistently monitor the health, environmental and economic impacts of air pollution.

The underdeveloped stage: There is a lack of policies and information on air quality management, and little or no capacity to achieve better air quality. The city's air quality is deteriorating due to a lack of control systems and mechanisms.

The developing stage: The knowledge and ability to move towards better air quality exist but are insufficient. Consequently, air pollution remains high and there are attendant health and environmental impacts.

The emerging stage: Activities, policies and communications focused on better air-quality management are in place and are more regularly and systematically implemented.

The maturing stage: Air quality management activities, policies and systems are regularly implemented, and significant gains in the reduction of air pollution are being made due to supportive policies and governance processes.

Fully developed cities: Air quality activities, policies and processes are in place, and the focus is primarily on ensuring the sustainability and continued improvement of those measures.

In terms of premature mortality statistics, Asia has the largest share of ambient PM_{2.5}-related deaths worldwide. Understanding not just the health costs, but also the environmental impacts, such as contributions to ozone-layer depletion and global climate change, and the associated economic costs, is vital to effective air quality management. When city managers are able to accurately assess the costs of pollution damage, they are better able to develop policies, strategies, programs and projects that address these impacts.

Guidance Area 4 - Air-quality communication - assists cities in developing effective communication strategies aimed at informing and educating stakeholders, and increasing their engagement in all aspects of air quality management.

Communication is an essential component of air quality management. The development and implementation of measures to curb air pollution will only be effective if their relevance and impact are adequately imparted to policymakers and the public. Using air quality data to inform people helps raise awareness, change attitudes, foster behavior change and promote the adoption of better-targeted policies and programs.

Guidance Area 5 - Clean air action plans - assists cities in developing and strengthening policies and legislation that help improve air quality across multiple sectors. It enables cities to map out cost-effective policies and measures that utilize available resources to address emissions built on an understanding of the sources of air pollution and the status of air quality. They include instruments and strategies to ensure compliance with air quality and emissions standards, the implementation of viable control measures, and alignment with national policies and international guidelines. They also seek to improve urban and land-use planning processes and better align cities' air quality objectives with other development goals. The development of clean air action plans is a collaborative process involving governments and stakeholders.

Guidance Area 6 - Governance - enables cities to establish good governance approaches that are conducive for the implementation of clean air policies and mechanisms covering all aspects of air quality management.

Air quality governance can spell the difference between clean air and polluted skies. Establishing an enabling environment for the implementation of multi-stakeholder and multi-level measures with a clear institutional mandate, effective institutional arrangements and appropriate financing is the key to reducing air pollution. It enables coordinated approaches that cross multiple dimensions.

The Guidance Framework caters to all cities, irrespective of the level of air pollution or their ability to manage air quality - from the least developed to the most developed. It defines five different urban development stages - Underdeveloped, Developing, Emerging, Maturing, Fully Developed - to help cities assess their air quality status and capacity, and in tailoring what needs to be done to progress further along the development spectrum. It's multi-sector, multi-faceted and integrated approach to air quality management is aligned with, and is helping to realize, the objectives of the SDGs, the Paris Agreement and the New Urban Habitat.

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