INTEGRATING ACTION ON AIR POLLUTION

An advocacy guide towards the fourth UN High-Level Meeting on NCDs and Mental Health and beyond

NCD Alliance

TIME TO ACT on NCDs LEAD

GLOBAL WEEK FOR ACTION ON NCDs

18-25 SEPTEMBER 2025

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Contents

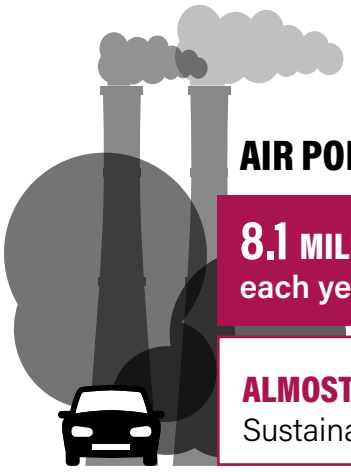
Executive Summary

This advocacy guide is aimed at supporting civil society organisations (CSOs) in making the case for the political prioritisation of air pollution as a critical risk factor for noncommunicable diseases (NCDs), including mental health and neurological conditions. It aims to assist CSOs in their preparations for the fourth High-Level Meeting of the UN General Assembly on the prevention and control of NCDs and the promotion of mental health and well-being (HLM4), happening on 25 September 2025 in New York, and its follow-up.

The guide is relevant for CSOs working at local, national, regional, and international levels who seek to mobilise their governments to act on air pollution within NCD plans. It also intends to support CSO engagement in other related policy processes, such as the implementation of the Paris Agreement.

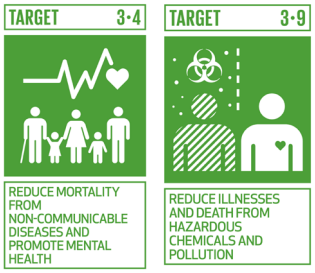
This guide contains key facts explaining why air pollution is central to the global NCD response. It provides a list of priority advocacy asks for how air pollution should be considered at the HLM4 and in its resulting Political Declaration. It also details a series of strategies that CSOs can use, either as individual advocates and organisations or as coalitions for a common cause, to make the case for bold and urgent action on air pollution as an issue for people living with or affected by NCDs.

Air pollution is the biggest environmental risk factor for NCDs, including mental health and neurological conditions, and the leading contributor to the global disease burden.[1]



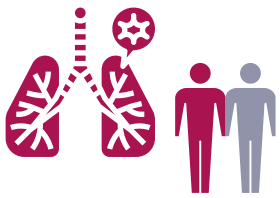
AIR POLLUTION CAUSES

8.1 MILLION DEATHS
each year, of which



ALMOST 90% ARE FROM NCDs[2] – undermining the attainment of Sustainable Development Goals (SDGs) targets 3.4 and 3.9 by 2030.

Almost
1 in 2
of all deaths from
CHRONIC OBSTRUCTIVE PULMONARY DISEASES (COPD).



More than
1 in 4
of all deaths from
ISCHAEMIC HEART DISEASE and **STROKE**.

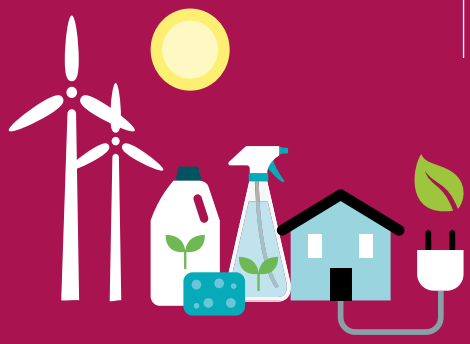
Almost
1 in 5
of all deaths from
LUNG CANCER and **TYPE 2 DIABETES.**[3]

Air pollution is highly preventable

The vast majority of NCDs attributable to air pollution could be reduced by **improving air quality through proven policies**[4], such as:

- **Transitioning away from fossils fuels,** the major driver of air pollution, and promoting clean modes of power generation, including through fiscal policy reforms;
- **Facilitating access to cleaner heavy-duty diesel vehicles** and low-emission vehicles and fuels;
- **Promoting cleaner industrial technologies** that reduce and capture harmful emissions;
- **Regulating the energy efficiency** of buildings;
- **Making cities greener,** and prioritising rapid urban transit, walking, and cycling networks;
- **Facilitating access to affordable clean household energy** for cooking, heating, and lighting;
- **Managing municipal and agricultural waste** to avoid open incineration.

It can be addressed through effective, cost-effective, equitable, and scalable interventions, **yet air pollution action remains dangerously underfunded and inadequately integrated** into NCD policy and practice.



Action on air pollution has been inadequate

- **Air pollution cost governments around the world $8.1 trillion in 2019** – the equivalent of 6.1% of global gross domestic product (GDP).[5]
- **It is diverting limited resources away from the NCD response,** contributing to rising healthcare costs that reduce capacity to respond to other NCDs and health threats.
- **It undermines the rights of all people, particularly persons affected by or living with NCDs**, to achieve the highest attainable standard of health, both in day-to-day life, and **by worsening the prognosis for people living with NCDs** such as cancer and respiratory diseases.
- **Inadequate action is also undermining the enabling conditions for growing nutritious food and supporting physical activity,** both essential for the prevention of NCDs.
- **It is coupled with the increased burden on air pollution posed by the production, manufacturing, and distribution of other NCD risk factor products,** such as tobacco, alcoholic beverages, and unhealthy foods and beverages.

Key advocacy asks on air pollution for the HLM4

In 2018, the Political Declaration of the third High-Level Meeting of the UN General Assembly on the prevention and control of NCDs acknowledged that air pollution is a critical risk factor for NCDs. This document updated the "4x4" NCD approach to a "5x5" NCD approach, also including mental health and neurological conditions as major NCDs.

Ever since, there has been a gradual but inadequate uptake of air pollution in the "5x5" NCD approach. Air pollution interventions are not being adopted as part of the NCD response at the scale or pace of change needed to improve the lives of millions of people at risk of or living with NCDs and to meet SDG target 3.4—reducing premature NCD mortality by one-third by 2030. What is required is an explicitly more inclusive approach to including air pollution action in national NCD strategies and plans, informed by policy frameworks such as the *WHO updated road map for an enhanced global response to the adverse health effects of air pollution*, to be adopted by the World Health Assembly (WHA) in May 2025[I].

The following advocacy asks on air pollution for the HLM4 build on the **five key priorities of the NCD Alliance** for this meeting: **accelerate implementation, break down silos, mobilise investment, deliver accountability, and engage communities.** The guide offers additional context and details on these policy asks, including specific sub-asks.

Accelerate action on air pollution by:

Fully integrating air pollution into policies and programmes for the prevention and control of NCDs, including mental health and neurological conditions, aligning national NCD plans with the updated WHO road map for an effective global response to the adverse health effects of air pollution.

Urgently and comprehensively regulating the practices of high-polluting industries, including the fossil fuels industry, supporting just and equitable transitions from all fossil fuels to renewable energy.

Reiterating WHO's mandate[6] to produce a menu of cost-effective 'best buy' policy interventions on air pollution, with a transparent timeline and urgent deadline.

Break down silos between human and planetary health responses by:

Acknowledging air pollution as the biggest environmental risk factor for health and the need to protect the right to a clean, healthy, and sustainable environment as essential to enjoy the right to health.[7]

Prioritising air pollution interventions that target major sources of pollution across sectors (such as emissions from energy use, transport, waste, agriculture, industry, construction, and buildings).

Aligning with related policy frameworks and processes, such as the WHO global plan of action on climate change and health.

I Version already endorsed by the WHO Executive Board in February 2025 is available **here**.

Mobilise investment for air quality by:

Phasing out subsidies for all fossil fuels (coal, oil and gas) that can be invested in access to safe clean energy, affordable and nutritious sustainable diets, and social protection services.

Proactively increasing the Official Development Assistance (ODA) allocated to air pollution and better integrating air quality interventions within international climate and development financing.

Investing in evidence generation on the cost-effectiveness of air quality interventions and the economic costs of inaction.

Build accountability into the integration of air pollution in the global NCD and mental health response by:

Expanding, standardising and mainstreaming data on air pollution in NCD and mental health surveillance, monitoring, and reporting activities.

Establishing baselines and monitoring networks for policy measures to tackle air pollution and reduce inequalities and ensuring routine reports.

Requesting technical assistance from WHO and other relevant UN agencies where needed to gather, use and align relevant data.

Meaningfully engage communities who cannot avoid breathing polluted air, including people affected by or living with NCDs by:

Proactively resourcing and involving CSOs and individuals with lived experience in social participation mechanisms for the co-development and implementation of air pollution interventions.

Developing guidance on conflict-of-interest management to safeguard civil society participation and policy development from vested interests misaligned with NCDs, such as the fossil fuel industry.

Improving health literacy and understanding towards the health effects of indoor and outdoor air pollution and learning from the communities most affected by air pollution.

For distribution among policymakers, access a two-pager with these air pollution-specific advocacy asks, including language recommendations for the HLM4 Political Declaration

Key actions for CSOs
to ensure the political prioritisation of air pollution

In preparation for the HLM4 on 25 September 2025, we encourage CSOs to:

Promote these recommended advocacy asks by:

- Identifying and engaging policymakers interested in action on air pollution and health, such as Ministers of Health, Ministers of Environment, Ministers of Energy, and Ministers of Finance (or their equivalents).
- Monitoring and engaging the parts of governments that will be participating and contributing to air pollution discussions around the HLM4.
- Engaging policymakers at all levels involved in processes related to the next UN Climate Change Conference (UNFCCC COP30).
- Engaging with UN Member States' missions in New York, including attachés with responsibilities for health and climate.
- Strengthening in-country relationships to understand processes for informing the national delegation to the HLM4, and sharing advocacy asks with them directly.

Demand the inclusion of persons with lived experience of NCDs and air pollution in engagement events in support of the HLM4, recognising that all people who live with NCDs are affected by air pollution either through causing or worsening their disease and condition, or in shaping their quality of life and wellbeing.

Generate and widely disseminate evidence and leverage sources of data on the health and economic impacts of air pollution with policymakers.

Provide specific recommendations about language and guidance for the Political Declaration of the HLM4.

Provide knowledge and intelligence with umbrella organisations that mobilise and coordinate civil society, including but not limited to NCD Alliance.

Work across civil society and academia to provide peer support and technical support to policymakers, such as through knowledge exchange and advocacy across government sectors.

Register, share the registration links with other supportive CSOs, and **participate in**:

- The **78th session of the WHA**, scheduled for 19-27 May 2025; and
- The **HLM4 itself**, on 25 September 2025.

Host or support the development of side events, national events, and/or meetings alongside the HLM4.

After the HLM4 and beyond, we encourage CSOs to:

Engage policymakers to translate international commitments and developments on air pollution and NCDs into concrete domestic policies and funding allocations.

Host national events and meetings to promote and amplify the commitments related to air pollution in the HLM4 Political Declaration.

Encourage governments to adopt and integrate air quality in multisectoral policymaking for sustainability.

Advocate for governments that champion air quality in the HLM4 to advance these priorities in future UNFCCC COPs.

Support, and encourage governments to support, a target on air pollution within the revised *WHO NCD Global Monitoring Framework* and wider mainstreaming of air pollution into surveillance, monitoring, and reporting activities for NCDs, including mental health and neurological conditions.

Work together to establish a global accountability mechanism for air pollution commitments that could inform the development of national shadow reports.

Support further context-specific evidence generation on the health effects of air pollution and the health, economic and wider benefits of interventions.

Develop and share materials, tools, and resources for purposes of national advocacy with policymakers and across civil society, such as policy briefs, evidence reviews, and case studies.

Collaborate to monitor policy developments and disseminate intelligence in favour of prioritising air pollution in national NCD responses.

Build coalitions among CSOs with interest in air pollution action to maintain momentum and accountability.

SECTION 1

Air pollution is the world's largest environmental risk factor for NCDs, and a major determinant of the global NCD response

Almost seven million deaths each year attributed to air pollution are due to NCDs. This is almost 90% of total deaths every year attributed to air pollution (8.1 million).[2] Air pollution is the biggest environmental risk factor for NCDs, including mental health and neurological conditions, and the leading contributor to the global disease burden.[1]

Air pollution...

- **Has negative effects not only on our lungs and heart**, but on most of our body, including brain health even from childhood.
- **Is at levels exceeding WHO air quality guidelines** for 99% of the world's population.
- **Is inequitable:** poorer countries and communities suffer most, with more than 90% of air pollution-related deaths taking place in low- and middle-income countries (LMICs).[8]
- **Shares drivers and intersects with climate change,** such as by accelerating the chemical reactions that form ozone, resulting in higher ozone pollution during heatwaves.
- **Is caused by the combustion of fossil fuels** (coal, diesel fuel, gasoline, oil, and natural gas) and biomass burning for energy production, heating, transportation, and industry combustion, typically to sustain the energy demands of high- and middle-income countries, and of rapidly industrialising economies.

Air pollution is a health emergency with long- and short-term health effects; for instance, air pollution peaks lead to acute NCD episodes and avoidable deaths. Research conducted in the United Kingdom found that days with higher air pollution trigger hundreds more heart attacks, strokes, and acute asthma attacks each year.[9] In 2023, decreases in air quality in the US due to wildfire smoke originating from Canada led to a 17% increase in emergency department visits for asthma.[10]

How many people are dying from NCDs caused by air pollution in your country?

1.1 All types of air pollution undermine NCD outcomes

Both outdoor and indoor air pollution cause significant harm to our health. Mortality attributed to air pollution now exceeds that of tobacco. Progress made on reducing indoor air pollution has been offset by increases in outdoor air pollution.

Ambient (outdoor) air pollution

Ambient (outdoor) air pollution refers to a range of pollutants (particles and gases) from a variety of sources, both natural and human-caused (e.g., transport, industry, agriculture), with the strongest evidence for public health concern including particulate matter ($PM_{2.5}$ and PM_{10}), ozone (O_3), nitrogen dioxide (NO_2), sulphur dioxide (SO_2) and dioxins, and persistent organic pollutants (POPs) associated with industrial emissions, waste incineration, and combustion processes.[11] In 2019, 99% of the world's population was living in places where the WHO air quality guideline levels were not met.[12]

Household (indoor) air pollution

Household (indoor) air pollution refers to the use of inefficient and polluting fuels and technologies in and around the home that contain a range of health-damaging pollutants, including small particles that penetrate deep into the lungs and enter the bloodstream.[13] Despite progress in recent decades, almost 3.6 billion people – 47% of the world's population – are still exposed to pollution from household use of solid fuels for cooking.[2]

The intersection between air pollution and climate change

Climate change and air pollution are deeply interconnected. Both crises are largely driven by fossil fuel extraction and combustion. Although carbon dioxide (CO_2) is not typically classified as an air pollutant in terms of direct health impacts,[II] it is a major driver of climate change – which, in turn, indirectly harms human health, including by worsening air quality. For instance, rising global temperatures contribute to higher levels of ground-level ozone and more frequent and intense wildfires, both of which exacerbate air pollution. [14, 15]

Climate change also exacerbates NCDs in many other ways. For instance, heat has also been directly associated with increased deaths from stroke and heart disease.[16] In addition, droughts and floods can threaten food security, while power outages and infrastructure damage because of extreme weather events can cause delays in NCD diagnosis, care and treatment.

What is the air quality like in your country?

II CO_2 is not typically classified as a direct air pollutant like particulate matter or ozone. Nonetheless, high CO_2 levels—particularly when combined with other indoor pollutants or present in very high concentrations—can still impact human health. For instance, see the article from *Nature Sustainability* 'Direct human health risks of increased atmospheric carbon dioxide' available here.

1.2 Air pollution and NCDs

Air pollution increases the risk of developing major NCDs, in addition to increasing the likelihood of complications or worse outcomes from many conditions.

Heart diseases and stroke

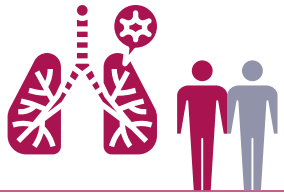
Both acute and chronic exposure to air pollution are associated with a wide range of cardiovascular and neurovascular conditions. These include myocardial infarction, heart failure, hypertension and stroke, as well as being linked to atherosclerosis (plaque building up in the arteries).[17] Research has consistently linked fine particulate matter ($PM_{2.5}$) and cardiovascular diseases, as well as the detrimental effects of gases such as NO_2 to cardiovascular conditions.[18] Mechanisms underlying these associations include increased oxidative stress, inflammation and the generation of oxygen free radicals.[17]

More than **one in four of all deaths from ischaemic heart disease and stroke** are from air pollution – equivalent to **2.5 million and 2 million deaths each year** respectively.[3]

Chronic respiratory diseases

Air pollution is associated with decreases in lung function, and increases in lung infections, respiratory symptoms, acute exacerbations of chronic obstructive pulmonary diseases (COPD) and respiratory-related hospitalisations.[19] Air pollution can also affect the prevalence, onset, symptoms, and response to treatment of asthma.[19] Exposure to NO_2 increases the risk of childhood asthma, while children's exposure to traffic-related air pollution is associated with decreased lung function and long-term respiratory impacts.[20] Mechanisms include inflammation, worsened mucociliary clearance (the process of lungs moving mucus towards the throat), viral resistance to mucus cells and an impaired immune system.[19]

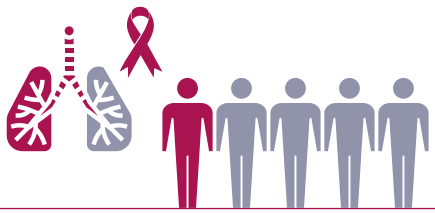
Almost **half of all deaths from COPD** are from air pollution – equivalent to almost **1.8 million people every year**.[3]



Cancers

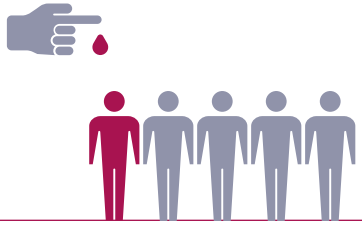
Large epidemiological cohort studies link $PM_{2.5}$ with lung cancer, and more recent data is emerging on the links between pollutant exposure with breast, gastrointestinal, brain, leukaemia and childhood cancers.[21] The mechanisms underlying these associations include oxidative stress, inflammation and direct DNA damage arising from pollutant absorption and distribution around the body.[21] In addition to incidence, a growing body of evidence finds that $PM_{2.5}$ concentrations are associated with more hospitalisations, poorer treatment outcomes and reduced survival for people living with different types of lung cancer.[22, 23]

Almost **one in five of all deaths from lung cancer** are from air pollution – equivalent to around **374,000 deaths each year**.[3]



Diabetes

The length and concentration of exposure to air pollution is associated with biomarkers for type 2 diabetes mellitus.[24] Evidence has linked short-term, medium-term and long-term exposure to $PM_{2.5}$ with glycaemic markers and incidence of type 2 diabetes.[25] The suggested mechanisms include increased inflammation, oxidative stress, and endoplasmic reticulum stress.[24]



Almost **one in five of all deaths from type 2 diabetes mellitus** are from air pollution – equivalent to around **282,000 deaths each year**.[3]

Mental health and neurological conditions

Evidence links air pollution with several poor outcomes for mental health and brain health, with new research constantly emerging. Observational evidence has linked air pollutants with a variety of brain and mental conditions, including dementia, depression, anxiety, personality disorders, schizophrenia, post-partum depression and risk of dying by suicide.[26, 27, 28, 29, 30]

Exposure to air pollution has also been associated with increased hospital admissions for mental health conditions,[31, 32, 33] and mental health service use among people recently diagnosed with psychotic and mood disorders.[34] Experimental studies indicate that air pollution may lead to inflammation and oxidative stress in the brain.[35]

The full impact of air pollution on NCDs

The full impact of air pollution across NCDs is likely to be widely underestimated.

Air pollution has been identified as the leading risk factor for disability-adjusted life years among all environmental and occupational risks, but these calculations only account for certain physical health impacts, not mental health impacts.[36] Although data on the disease burden of air pollution in regard to dementia are forthcoming, global estimates of the total disease and economic burden of air pollution currently exclude the many mental health and neurological conditions affected by air pollution.

Data on many other NCDs are not routinely included in morbidity and mortality estimates. For example, global estimates also only calculate air pollution-related cancer deaths as those arising from lung cancer, despite evidence linking several other cancers with air pollution.[3] Moreover, air pollution is responsible for cutaneous damage and altering the physiology of the skin, with implications for inflammatory skin diseases, skin accessory diseases, immune-related skin diseases, and skin tumours,[37, 38] yet these diseases are typically excluded from estimates.

1.3 Air pollution and vulnerable populations

Although exposure to air pollution affects everyone, people living with NCDs and other vulnerable populations experience particular risks,[12] including the following:

- Air pollution can cause **people living with NCDs such as respiratory and cardiovascular diseases** to have increased frequency and severity of disease symptoms and increased susceptibility to infectious diseases exacerbated by air pollution, such as the COVID-19 pandemic.
- **People living with cancer** have reduced chances of survival – living in a polluted environment presents a 12% increased risk of dying from cancer.[39]
- **People working in occupations with increased exposure to polluted air** face additional risk. For example, people who work in mining are at increased risk of lung diseases such as silicosis, coal workers' pneumoconiosis and lung cancer.[40]
- Air pollution can create a barrier to physical activity for **people who would like to exercise outdoors**, including by walking and cycling as active forms of transport.
- **Older people** are among those most susceptible to infections caused by air pollution, which can also aggravate pre-existing NCDs.
- **Pregnant women and children** are at higher risk, as air pollution is associated with worse maternal health, adverse birth outcomes, and negative long-term impacts on child health.
- **Women and girls** are most affected by household air pollution in LMICs.
- **People living or working in densely populated urban areas where transport and traffic is high,** or living near fossil fuel production or heavy industry, may experience high and prolonged exposure to air pollutants.
- **People living in LMICs**, where more than 90% of air pollution-related deaths take place, face higher risks.[8]

SECTION 2

Air pollution interventions are effective, cost-effective and equitable

While the burden of air pollution is high and increasing, fortunately evidence shows the potential of interventions to tackle this burden. There are many proven policies[4] for improving air quality that contribute to reducing the NCD burden and increasing health equity, with a high return on investment. By investing in proven interventions, governments can protect population health and promote sustainable economic growth and development.

Examples of proven air pollution interventions

- **Transitioning away from fossils fuels**, the major driver of air pollution, and promoting clean modes of power generation;
- **Facilitating access to cleaner heavy-duty diesel vehicles** and low-emission vehicles and fuels;
- **Promoting cleaner industrial technologies** that reduce and capture harmful emissions;
- **Regulating the energy efficiency** of buildings;
- **Making cities greene**r, and prioritizing rapid urban transit, walking, and cycling networks;
- **Facilitating access to affordable clean household energy** for cooking, heating, and lighting;
- **Managing municipal and agricultural waste** to avoid open incineration.[4]

2.1 Air pollution interventions are effective

Synergistic investments in key health and climate actions could save nearly two million lives, primarily through reducing air pollution.[41] 1.2 million deaths from air pollution per year could be avoided by efficiently pricing fossil fuels through corrective taxes and ending subsidies.[42] Estimates for just nine countries (Brazil, China, Germany, India, Indonesia, Nigeria, South Africa, the UK, and the US) show that meeting their Nationally Determined Contributions (NDCs) in line with the Paris Agreement would avoid nearly 1.2 million air pollution-related premature deaths by 2040, relative to business-as-usual.[43]

Air pollution interventions are also effective in the short-term, delivering almost immediate impacts on health. For example, when China implemented strict air pollution guidelines ahead of the Olympic and Paralympic games in Beijing in 2008, there was an increase in average birthweights.[44] Similarly, implementing a low-emission clean air zone in Bradford, England, resulted within a year in a reduction in GP visits for respiratory illnesses and heart problems by around 25%.[45]

2.2 Air pollution interventions are cost-effective

Although context-specific, evidence shows the economic benefits of implementing air pollution control strategies outweigh their relative costs.[46] For example, in the US, air pollution control measures are estimated to deliver a return-on-investment of 30:1 since the passing of the Clean Air Act in 1970.[47] The World Bank estimated the global health cost of mortality and morbidity from exposure to $PM_{2.5}$ at $8.1 trillion in 2019 – the equivalent of 6.1% of global GDP.[5] This is contrasted by the fact NCDs receive less than 2% of investment in health, despite the high burden they represent.[48] Higher air pollution is also associated with increased medical expenses and resulting changes in household consumption patterns,[49] and a less efficient allocation of health system resources.[50] Both divert scarce resources away from preventing and managing NCDs and mental health.

Air pollution interventions do also contribute to overall quality of life and can add up to other preventive measures; for instance, by promoting physical activity, bringing co-benefits which increases their cost-effectiveness. These interventions can include off-road cycle paths, street washing and sweeping, and motorway speed restrictions for ambient traffic-related pollution;[51] or the use of alternative fuels to alleviate cooking smoke from household air pollution.[52, 53]

What is the annual cost of fine particulate matter ($PM_{2.5}$) to your country, in millions of US Dollars and proportion of GDP?

2.3 Air pollution interventions are equitable

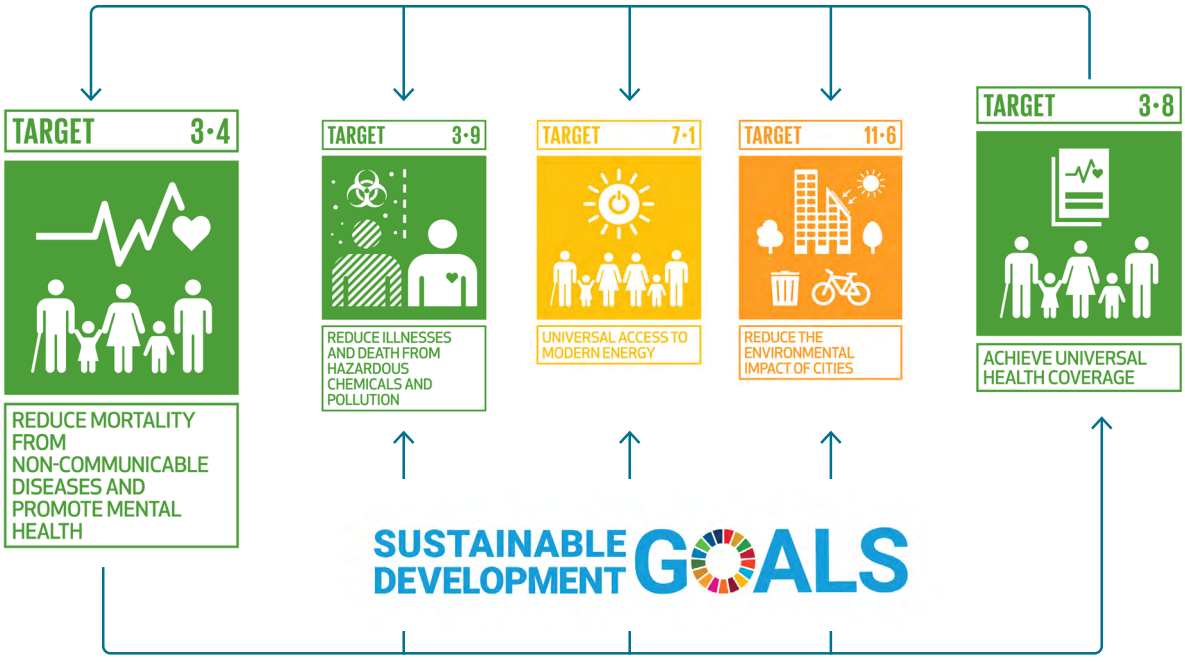
Air pollution is increasingly recognised as a delayer of development and a driver of inequities within and between countries.[54, 55] Inequities in air pollution exposure are associated with most indicators of disadvantage. Vulnerable populations are often concentrated near high traffic roads and industrial areas, and with a lack of greenspace.[56] Household air pollution from burning kerosene, biomass and coal on open fires or inefficient stoves disproportionately affects women, children and those of lower socioeconomic status.[57] In 2021, more than 700,000 deaths in children under 5 years were attributable to air pollution-associated diseases. The majority of these deaths, more than 500,000, were linked to exposure to household air pollution.[2]

Air pollution interventions are essential to achieve the SDGs

Without action on air pollution, countries will not achieve the **SDG target 3.4**, **to reduce by one third premature mortality from NCDs through prevention and treatment and the promotion of mental health and well-being**. SDG target 3.4 is also interconnected with other SDG targets that contribute to improved air quality, including:

- **Target 3.9 to reduce the number of deaths** and illnesses from hazardous chemicals and air, water and soil pollution and contamination, which includes a specific **indicator 3.9.1 to measure substantial reduction in deaths and illnesses from air pollution**;
- **Target 7.1 to ensure universal access** to affordable, reliable and modern energy services, includes a specific **indicator 7.1.2 to measure greater reliance in clean fuels and technology**;
- **Target 11.6 to reduce the adverse per capital environmental impact of cities**, which includes a specific **indicator 11.6.2 to measure mean levels of fine particulate matter in cities**.

Moreover, the averted costs and diseases from acting on air pollution would enable the reallocation of much needed financial, workforce and technological capacities for the attainment of **SDG target 3.8**, to achieve UHC, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all. Removing subsidies on fossil fuels alone would generate enough revenue for developing countries to achieve the SDGs, **including universal health coverage (UHC)**.[58]



SECTION 3

Barriers to implementation of air pollution interventions

Policy interventions to prevent and control air pollution represent a wise and cost-effective investment in public health. However, several barriers stand in the way of their implementation. These interventions often suffer from inadequate funding and are not well integrated into WHO's NCD policy and practice. Additionally, decision makers from the health sector frequently lack the authority or mandate to influence air pollution policy.

3.1 Air pollution interventions are underfunded

Despite polluted air being the largest environmental threat to public health worldwide, air pollution received just 1% of all international development funding from 2018 to 2022.[55] The nature of this development funding is also problematic. Only 6% of Official Development Assistance (ODA) for air quality was given as grants, compared to an average of 63% of general ODA.[55] Instead, 92% of air quality funding was provided in the form of loans, with only a third of these loans provided at concessional rates. This trap of high interest and debt costs for recipient countries will limit the ability of low-income, heavily polluted countries to benefit from funding.

When funding is being invested in air pollution, it is done so inequitably. Estimates predict that just US$ 2 per person are spent on air quality in low-income countries, compared to US$ 73 per person spent on air quality in upper-middle-income countries.[55] Clean air funding for all of Africa and the Middle East combined from 2018 to 2022 (USD$ 1.5 billion) accounted for only a third of the funding channelled to one Asian country: the Philippines (USD$ 4.7 billion) over the same period.[55]

3.2 Air pollution interventions are not well integrated in WHO's NCD policy and practice

WHO has not published a set of 'best buy' policy interventions for preventing and controlling air pollution with the explicit purpose of improving NCD and mental health outcomes, despite being mandated in 2019 "to prepare a menu of policy options and cost-effective interventions to provide support to Member States [...] to reduce the number of premature deaths from noncommunicable diseases attributed to air pollution, while recognizing the importance of addressing all environmental determinants" by 2020.[6] Instead, WHO's best buys and other recommended interventions for the prevention and control of NCDs[59] are currently written to "complement" two supporting documents relating to air pollution. These are:

- The **Compendium of WHO and other UN guidance in health and environment** (last updated in 2024); and
- **WHO's global air quality guidelines** for particulate matter ($PM_{2.5}$ and PM_{10}), O_3, NO_2, SO_2 and carbon monoxide (CO),[60] though noting the guidelines are explicit that they "do not address specific recommendations on policies and interventions because these are largely context specific: what might be effective in one setting might not work in another".

Despite being drafted to complement these supporting documents, the current NCD 'best buys' do not adequately integrate either one of them. The only reference to air pollution in the current 'best buys' is "access to improved stoves and cleaner fuels to reduce indoor air pollution", as a recommendation without any cost-effectiveness analysis for managing chronic respiratory diseases.[59]

3.3 Health decision makers often do not have responsibility for air pollution policy decisions

Many advocates and policy makers experience a dual challenge of engaging the health sector in air pollution discussions; and of integrating health perspectives on air pollution in other multisectoral policy discussions. This may be because policies that intersect with air pollution are not understood or prioritised as a public health issue. For example, fossil fuel subsidies are typically discussed as an issue of general taxation, employment or economic development, rather than a public health competency. Strengthened cooperation between policy portfolios, including through whole-of-government approaches, can deliver co-benefits for health, including where health is not the decision-making government department. This may include the development or strengthening of national multisectoral coordinating mechanisms on NCDs and national multisectoral NCD strategies.

SECTION 4

Key advocacy asks on air pollution for the HLM4

In 2018, the Political Declaration of the third High-Level Meeting of the UN General Assembly on the prevention and control of NCDs acknowledged that air pollution is a critical risk factor for NCDs. This document updated the "4x4" NCD approach to a "5x5" NCD approach, also including mental health and neurological conditions as major NCDs.

Ever since, there has been a gradual but inadequate uptake of air pollution in the "5x5" NCD approach. Air pollution interventions are not being adopted within the NCD response at the scale or pace of change needed to improve the lives of millions of people at risk of or living with NCDs and to meet SDG target 3.4 to reduce premature NCD mortality by one-third by 2030. What is required is an explicitly more inclusive approach including air pollution action in national NCD strategies and plans, informed by policy frameworks such as the *WHO updated road map for an enhanced global response to the adverse health effects of air pollution*, to be adopted by the World Health Assembly (WHA) in May 2025[III].

The following advocacy asks on air pollution to governments for the HLM4 build on the **five key priorities of the NCD Alliance** for this meeting: ***accelerate implementation, break down silos, mobilise investment, deliver accountability, and engage communities.***

III Version already endorsed by the WHO Executive Board in February 2025 is available **here**.

4.1 Accelerate implementation

Tackling NCDs has been described as a policy win, but implementation failure. Strong political commitments were made in previous high-level meetings in 2011, 2015 and 2018, but not enough progress in reaching the targets and indicators has followed.

Why air pollution action is relevant

Despite the political commitment to integrating air pollution action in global NCD and mental health responses, progress has been limited. It is now time that air pollution is fully integrated into the global NCD and mental health response to accelerate progress towards SDG target 3.4. Political commitment without implementation is inadequate.

Advocacy asks

Through the Political Declaration, countries should commit to:

- **Fully integrate air pollution into policy and programmes for the prevention and control of NCDs, including mental health and neurological conditions. This should include:**
  - Align national NCD plans with the updated *WHO road map for an effective global response to the adverse health effects of air pollution* to be approved by Member States at the 78th session of the World Health Assembly (WHA78), integrating national plans to implement the updated road map within their national NCD plans by no later than 2030.
  - Monitor progress towards the road map's target of a 50% reduction in the population-attributable fraction of mortality from anthropogenic sources of air pollution by 2040, relative to 2015 baseline values, integrating this data into national surveillance, monitoring and evaluation activities for NCDs and mental health.
  - Assess air pollution as a major driver in demand forecasting for health systems, and acknowledge that health systems that fail to prioritise air pollution will always be less resilient.
  - Request that WHO allocate sufficient capacities for the normative work, technical assistance and country support across the three levels of WHO, and its related entities such as WHO Collaborating Centres, to respond to the need to integrate air pollution action into national NCD plans.
- **Urgently and comprehensively regulate the practices of high-polluting industries, including the fossil fuels industry,** as determinants of health and health equity with misaligned commercial interests, supporting just and equitable transitions from all fossil fuels to renewable energy to accelerate progress on NCDs and many other areas, such as climate change.
- **Reiterate WHO's mandate to produce a menu of cost-effective 'best buy' policy interventions on air pollution** as a major NCD risk factor, with a transparent timeline and urgent deadline. This work can draw on the expertise of other UN agencies, such as UNEP. This gap is undermining the integration and operationalisation of air pollution interventions.

4.2 Break down silos

A person's health is not purely a matter of individual choice; choices are constrained and outcomes determined by their circumstances and environment.

This makes NCDs far more than a health issue – they are a poverty issue, an equity issue, and a major human rights and sustainable development issue, as they disproportionately burden the poorest and most vulnerable populations with disease, disability, and death. People affected by other health conditions, as well as environmental, social and commercial determinants of health, may be more vulnerable to NCDs, and those affected by NCDs are often more vulnerable to other conditions and determinants. Focused action is needed for the effective integration of NCDs into other global health and development agendas, including planetary health and the climate crisis.

Why air pollution integration is relevant

The air we breathe is a cross-border, universal determinant of health. Effective responses to air pollution as a threat to global NCD and mental health outcomes require multisectoral attention to the determinants of health and health equity, acknowledging that all governments and societies stand to benefit from the prevention and control of air pollution, regardless of the extent to which these interventions are targeted towards public health.

Advocacy asks

Through the Political Declaration, countries should commit to:

- **Acknowledge air pollution as the biggest environmental risk factor for health**, impacting not only NCD and mental health responses in primary health care and universal health coverage, but also in health promotion and the wider determinants of health, as well as the protection of the right to a clean, healthy, and sustainable environment as essential to enjoy the right to health and health-related human rights.
- **Prioritise air pollution interventions that target major sources of pollution across sectors** (such as emissions from energy use, transport, waste, agriculture, industry, construction, and buildings), facilitating multisectoral collaboration and policy coherence for health.
- **Align work on air pollution and health with related policy frameworks and processes,** including:
  - Within the ***WHO global plan of action on climate change and health***, to be adopted by the WHA in May 2025.
  - Within the **updated WHO road map** for an enhanced global response to the adverse health effects of air pollution.
  - Integrating the health and health equity benefits of air pollution interventions in the *UN Framework Convention on Climate Change (UNFCCC) Paris Agreement* **Nationally Determined Contributions (NDCs)** due to be published in 2025.
  - Integrating the links between air pollution, NCDs and mental health in **One Health policies and plans**.
  - In work reaffirming **resolution** A/RES/76/300 establishing the right to a clean, healthy and sustainable environment as a human right important for the enjoyment of the right to health and health-related human rights.

4.3 Mobilise investment

In many countries, particularly those relying on development assistance for health to supplement and support domestic health budgets, the current allocations of government and development health spending are not aligned with national disease burdens. As governments work to optimise their budgets and implement UHC, the development of nationally costed plans must be central to implementation and to initiatives that expand and sustain investment in NCDs.

It is also important to apply an equity lens in all decision-making to reach the furthest behind first through strengthening social and financial protection schemes for NCDs. Globally, out-of-pocket spending for NCDs is estimated to be twice as high per visit to a health clinic compared to infectious diseases. This makes seeking and sustaining care for NCDs a significant financial burden due to the chronic nature of NCDs, which tend to require costly long-term or lifelong treatment.

The bottom line is: the investment required to effectively prevent and manage NCDs is far less than the cost of inaction,[61] and the cost of meaningful action on NCDs is an affordable one, with a proven return on that investment.[62]

Why financing for air pollution is relevant

International development funding for air quality is not being provided at sufficient volumes to match the scale of the challenge, nor sufficiently targeted and tailored to meet the needs and circumstances of recipient countries. Air pollution interventions are effective, cost effective and equitable. Their benefits need to be unlocked through investment. The sooner this is done, the faster air pollution interventions will pay for themselves again and again and again, through improved public health, reduced healthcare costs, and increased economic productivity.

Advocacy asks

Through the Political Declaration, countries should commit to:

- **Phase out subsidies for all fossil fuels (coal, oil and gas) thereby improving air quality while releasing revenue streams for health and development financing**, that can be invested in access to safe clean energy, affordable and nutritious sustainable diets, and social protection services.
    - Beyond fossil fuel subsidies, **implement a more coherent fiscal policy approach for investing in the determinants of health**, and effectively addressing those determinants misaligned with health, recognising that these interventions are both cost-effective for the disease they are targeted towards, and bring wider societal economic benefits in economic productivity, reduced healthcare costs and increased capacities for sustainable development.
- **Proactively increasing the tiny fraction of Official Development Assistance allocated to air pollution and NCDs**, in addition to better integrating air quality interventions within international climate and development financing, to a level that matches the disease burden; and supporting UN agencies and international financial institutions to increase development financing for action on air pollution.
- **Invest in evidence generation on the cost-effectiveness of air quality interventions and the economic costs of inaction**. This includes the scaling-up and wider use of the **AirQ+ tool** in policy and planning.

4.4 Deliver accountability

Civil society welcomes the commitments made to tackle NCDs, yet slow progress indicates the need for greater accountability to ensure governments are following through with the appropriate action.

This requires fit-for-purpose accountability mechanisms on the global level and strong national surveillance and monitoring processes. Investments in surveillance and monitoring should be purposeful. This means not collecting data for its own sake but using it to inform new policies and evaluate existing policies to retain their effectiveness. This includes integrating with other relevant accountability mechanisms for NCDs, and establishing new mechanisms for areas that are not yet covered, such as financing.

Why air pollution monitoring is relevant

Data on air pollution should be expanded, standardised and mainstreamed into surveillance, monitoring and reporting on the prevention and control of NCDs, including mental health and neurological conditions. By combining the evidence we have on which air pollution interventions to adopt with the effective surveillance, monitoring and reporting of the impact of air pollution on NCDs and mental health outcomes, countries can accelerate data-driven responses to air pollution. Doing so will enhance accountability, helping governments to celebrate and champion the health and societal benefits of air pollution interventions.

Advocacy asks

Through the Political Declaration, countries should commit to:

- **Expand, standardise and mainstream data on air pollution in NCD and mental health surveillance, monitoring, and reporting activities**. Examples include:
  - Integrating air pollution into the targets of the WHO NCD Global Monitoring Framework, the indicators of the WHO NCD Global Progress Monitor, the WHO NCD and mental health country profiles, the NCD Country Capacity Survey, and the STEPwise approach to NCD risk factor surveillance.
  - Establishing, aligning and resourcing national air quality guidelines with global standards and track progress towards SDG 3.9 and the updated WHO road map's target, including through high-quality and robust air quality monitoring schemes.
  - Promoting cross UN agency accountability and encourage partnerships with other UN agencies and international finance institutions to monitor the delivery of commitments presented at the Second Global Conference on Air Pollution and Health, and language related to air pollution in the text of the Political Declaration resulting from HLM4.
- **Establish baselines and monitoring networks** for policy measures to tackle air pollution and reduce inequalities, and routinely report on the health harms of air pollution and the health and economic benefits of interventions. These actions should also include:
  - Establishing multistakeholder mechanisms for documenting improvements on air quality, the impact of interventions, and evaluations of policy processes and specifically of attempted influence from interests misaligned with health in these processes, for improving the monitoring of existing initiatives.
  - Acknowledging civil society's role in accountability, including through the development of shadow reports, and in integrating civil society in supporting monitoring, data analysis and dissemination activities.
- **Request technical assistance from WHO and other relevant UN agencies** to align national air quality guidelines with global standards and targets, gather and use data on the impacts of air pollution on morbidity, mortality, and quality of life, and expand the number of NCDs for which disaggregated data related to air pollution is collected.

4.5 Engage communities

To achieve health for all, starting with those left furthest behind, the meaningful involvement of communities and people living with NCDs is essential. This requires placing people living with NCDs at the centre of all processes and efforts related to the NCD response, including governance, polices, programmes and services, from the very first stages of design and planning through to implementation, evaluation, and scale-up.

Civil society has a central role in facilitating this, offering technical support as well as a platform to amplify the voices of people living with NCDs and a bridge between them and governments and other decision makers. Every country and community has a unique set of circumstances, but the principles of meaningful involvement are replicable across all contexts.

Why engaging around air pollution is relevant

Air pollution creates conditions that perpetuate NCDs. The air we breathe should not cause more people to live with NCDs, including mental health and neurological conditions. Nor should it be responsible for making people less responsive to their treatment, increase their risk of complications, or make someone less able to participate in the communities and societies in which we live, grow, work and age. Although exposure to air pollution can affect anyone, certain populations are especially vulnerable, and these communities should meaningfully inform and engage in air pollution interventions to ensure these are responsive to population needs. Such multistakeholder processes must also be safeguarded from the vested interests of high-polluting commercial actors.

Advocacy asks

Through the Political Declaration, countries should commit to:

- **Proactively resource and involve CSOs and individuals with lived experience in social participation mechanisms** for the co-development and implementation of air pollution interventions, to ensure their responsiveness to community needs and health inequities.
    - Prioritise people from the most affected communities in the design of engagement mechanisms, as the voices of people living in highly polluted environments are rarely heard from in policy discussions, domestically or internationally.
    - Resource and create conditions to bring together different communities, voices and perspectives affected by air pollution, within and beyond those working on NCDs and mental health conditions.
- **Develop guidance on conflict-of-interest management** to safeguard civil society participation and policy development from vested interests misaligned with NCDs, such as the fossil fuel industry and other high-polluting commercial actors, drawing on lessons from Article 5.3 of the *WHO Framework Convention of Tobacco Control* (WHO FCTC) and the *WHO Framework of Engagement with Non-State Actors* (FENSA).
- **Improve health literacy and understanding towards the health effects of indoor and outdoor air pollution, and learning from the communities most affected by air pollution**. Emphasis should be placed on context-specific health promotion at the community level, and with health professionals.

SECTION 5

Key actions for CSOs to ensure the political prioritisation of air pollution

5.1 In preparation for the HLM4 on 25 September 2025

- **Promote these recommended advocacy asks**, by:
  - Identifying and engaging policymakers interested in action on air pollution and health, such as Ministers of Health, Ministers of Environment, Ministers of Energy, and Ministers of Finance (or their equivalents). These policymakers may be interested in, or have championed, air quality interventions, including interventions for emissions reductions, energy transition initiatives, and fossil fuel subsidy reforms.
  - Monitoring and engaging the parts of governments that will be participating in and contributing to air pollution discussions around the HLM4, such as deliberations for the *WHO updated road map on air pollution, and/or the WHO global plan of action on climate change and health*, as well as in direct HLM4 preparations. This might include ministries listed above, but also your head of state or government and their executive office, as well as country delegations to WHO and the UN.
  - Engaging policymakers at all levels involved in processes related to the next UN Climate Change Conference (UNFCCC COP30), including the preparatory meetings, such as the Subsidiary Body for Scientific and Technological Advice, and the Subsidiary Body for Implementation, in June 2025.
  - Engaging with UN Member States' missions in New York, including attachés with responsibilities for health and climate.
  - Strengthening in-country relationships to understand processes for informing the national delegation to the HLM4, and sharing advocacy asks with them directly.
- **Demand the inclusion of persons with lived experience of NCDs and air pollution** in engagement events in support of the HLM4, recognising that all people who live with NCDs are affected by air pollution, either through causing or worsening their disease or condition, or in shaping their quality of life and wellbeing.
- **Generate and widely disseminate evidence and leverage sources of data** on the health and economic impacts of air pollution with policymakers.
- **Provide specific recommendations about language** and guidance for the Political Declaration of the HLM4.
- **Provide knowledge and intelligence with umbrella organisations** that mobilise and coordinate civil society, including but not limited to NCD Alliance. This might also include engaging interdisciplinary expertise, such as from the environmental justice community.
- **Work across civil society and academia to provide peer support and technical support to policymakers,** such as through knowledge exchange and advocacy across government sectors.
- Register, share the registration links with other supportive CSOs, and **participate in**:
  - The **78th session of the WHA**, scheduled for19-27 May 2025, which will include discussions on the updated *WHO road map for an enhanced global response to the adverse health effects of air pollution*, and the *WHO global plan of action on climate change and healt*h; and
  - The **HLM4 itself,** on 25 September 2025.
- **Host or support the development of side events, national events, and/or meetings** alongside the HLM4, building on the **Global Week for Action on NCDs campaign,** and consider supporting the **Call to Lead**.

5.2 After the HLM4 and beyond

- **Engage policymakers to translate international commitments and developments on air pollution and NCDs** into concrete domestic policies and funding allocations.
- **Host national events and meetings to promote and amplify the commitments** related to air pollution in the HLM4 Political Declaration.
- **Encourage governments to adopt and integrate air quality in multisectoral policymaking for sustainability,** such as fiscal policies, industrial planning, national energy transition plans, transport and infrastructure planning, urban development, waste management plans, and pathways for food systems transformation.
- **Advocate for governments that champion air quality in the HLM4 to advance these priorities in future UNFCCC COPs** (including aligning air pollution with this year's NDCs ahead of COP30 and establishing an air pollution day at future COPs) and other processes relating to planetary health, such as the 17th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP17) in 2026.
- **Support, and encourage governments to support a target on air pollution within the revised WHO NCD Global Monitoring Framework** and wider mainstreaming of air pollution into surveillance, monitoring, and reporting activities for NCDs, including mental health and neurological conditions.
- **Work together to establish a global accountability mechanism for air pollution commitments** that could inform the development of national shadow reports.
- **Support further context-specific evidence generation** on the health effects of air pollution, on the health and economic benefits and cost-effectiveness of air quality interventions, and on the costs of inaction, including healthcare costs, and the co-benefits of cleaner air to economies, equity, and the wider sustainable development agenda.
- **Develop and share materials, tools, and resources for purposes of national advocacy** with policymakers and across civil society, such as policy briefs, evidence reviews, and case studies.
- **Collaborate to monitor policy developments and disseminate intelligence** in favour of prioritising air pollution in national NCD responses.
- **Build coalitions among CSOs** with interest in air pollution action to maintain momentum and accountability.

ANNEX 1

The interconnections between air pollution and the other major NCD risk factors

As set out in the "5x5" NCD approach, air pollution is one of five key risk factors that worsens the frequency and severity of the five major NCD groups. However, air pollution is not only a major NCD risk factor but is also interconnected with the other four risk factors.

Tobacco use

Tobacco farming, curing, manufacturing and distribution contributes to air pollution through carbon dioxide emissions and deforestation.[63] A single cigarette has been estimated to have a climate change contribution of 14 grams of carbon dioxide.[64] Moreover, when cigarettes are burned, they create more than 7,000 chemicals, at least 69 of which are known to cause cancer, and many are poisonous.[65] One study in Italy found that 3 cigarettes release up to ten times as much particulate matter into the air as a diesel engine running in a garage – both for 30 minutes.[66]

Unhealthy diets

The systems of agricultural intensification and trade liberalisation that perpetuate unhealthy diets and the nutrition transition - displacing traditional diets with ultra-processed foods and beverages high in fat, sugar and salt – are not only a major NCD risk factor on their own. They are fundamentally enabled and worsened by air pollution. These systems lead to the release of greenhouse gas emissions from crop and livestock farming, pesticide use, deforestation and nitrous oxide emissions via animal manure discharge.[67] In turn, agricultural output is undermined by air pollution, such as particulate pollution undermining the ability of crops to photosynthesize sunlight and reducing yields, or ozone emissions being toxic to crops.[68] As such, chemical pollutants and agricultural intensification create self-sustaining factors that worsen both air pollution and unhealthy diets as NCD risk factors.

Related, air pollution also negatively affects food security. Because of its effects on plants, ozone can reduce crop yields and harm biodiversity, threatening food security and access to nutrition and dietary quality as a preventative factor for NCDs for millions of people. For example, it is estimated that 16.8 million metric tons of wheat will be lost in Europe in 2050 as a result of ground-level ozone. [2, 69]

Alcohol use

The production of one litre of beer produces between 510 and 842 g of carbon dioxide, depending on the type of packaging used.[70] Some country-by-country data exist on the contribution of alcoholic beverages to total emissions, such as 4.8% of total average household carbon dioxide emissions in Australia,[71] 2.5-11% of dietary greenhouse gas emissions in Sweden,[72] and 1.5% of the UK's total greenhouse gas emissions. This is excluding the wider land and water pollutants of alcohol.[73] Research also suggests that agriculture, brewing, vinification and/or distillery, packaging and transportation of alcohol in Sweden led to between 0.73 (for beer) and 2.38 kg (for strong wine) of carbon dioxide equivalents per litre.[72]

Physical inactivity

Air pollution and physical inactivity can have a mutually reinforcing relationship. Highly polluted environments create conditions that prevent activeness and so increase overall physical inactivity, while specific periods of high air pollution coincide with decreased physical activity over these periods.[74] This appears using measures of both air quality index and particulate matter.[75] In turn, the absence of active behaviours can reinforce infrastructure and land use not being designed in a manner conducive to physical activity, such as the ability to walk or cycle, or the location of high-polluting industries and vehicles.

ANNEX 2

The integration of air pollution across wider WHO and UN strategic priorities and commitments for improving health outcomes

Previous Political Declarations of the High-Level Meetings of the UN General Assembly on the prevention and control of NCDs

In 2018, countries adopted resolution **A/RES/73/2**, the Political Declaration of the third High-Level Meeting of the UN General Assembly on the prevention and control of NCDs. In this resolution, countries committed to "scale up efforts and further implement… [actions to] increase global awareness, action and international cooperation on environmental risk factors, to address the high number of premature deaths from non-communicable diseases attributed to human exposure to indoor and outdoor air pollution, underscoring the particular importance of cross-sectoral cooperation in addressing these public health risks".

In 2022, WHO Member States agreed an 'Implementation Roadmap' for achieving the Global Action Plan for the prevention and control of NCDs 2013–2030 (**A75/10 Add.8**). The implementation roadmap is valid for 2023-2030 inclusive. It identifies the full alignment of air pollution with the respective global action plans for NCDs and mental health as critical for progress on global outcomes:

"The implementation road map, while focusing on the "4 by 4 NCD agenda" (tobacco use, the harmful use of alcohol, unhealthy diet, physical inactivity, cardiovascular diseases, cancer, diabetes and chronic respiratory diseases) as per the mandate, will have to be implemented in full alignment with the commitments to reduce air pollution and promote mental health and well-being (the "5 by 5 NCD agenda")".

"The efforts to meet the objectives of the comprehensive mental health action plan 2013–2030 aligns with the expansion of the "4 by 4 NCD agenda" to the "5 by 5 NCD agenda" encompassing mental health and air pollution, as well as synergizing with SDG indicator 3.4.2 (Suicide mortality rate). The WHO menu of cost-effective interventions for mental health and the WHO air quality guidelines can be considered along with other NCD interventions, as appropriate to the local context".

In 2023, WHO also presented an updated menu of policy options and cost-effective interventions for the prevention and control of noncommunicable diseases (**EB152/6**). In this updated menu, the WHO Secretariat stated it will "step up leadership" for supporting Member States in addressing the health effects of air pollution by "…expanding knowledge on and monitoring of exposure and impacts of air pollution and building capacity of health and other sectors with tools to engage in multisectoral action… [and] supporting Member States to adapt the implementation of the new WHO global air quality guidelines to take account of the national context, by means of a series of activities to foster intersectoral dialogues and policies".

The contribution of air pollution to the five pillars underpinning the Global NCD Compact 2020-2030

The **Global NCD Compact** is a high-profile initiative launched in 2020 by WHO and the Governments of Norway and Ghana, that aims to bring together Heads of State and Government to accelerate action on NCD prevention and control by 2030. It focuses on **five commitments** and related areas of action: engage, accelerate, invest, align and account. The Compact has delivered the 'Implementation Roadmap' for achieving the Global Action Plan for the prevention and control of NCDs 2013–2030, which focuses on four of its pillars: engage, accelerate, align and account.

Moreover, the **UN Secretary General Report produced for the HLM4 on the progress on the prevention and control of NCDs and the promotion of mental health and well-being** also builds its recommendations for the HLM4 Political Declaration on the five pillars of the Global NCD Compact, with a focus on governance under engage, health promotion under align, and health systems strengthening under accelerate. **NCD Alliance's five key priorities for the HLM4**, which have informed the advocacy asks within this guide, were also inspired by the Global NCD Compact's pillars. The following sections aim to identify how air pollution specifically interconnects with the five pillars of the Compact as articulated under the US Secretary General Report.

Engage (enhancing governance)

- High-polluting environments are critical determinants of NCD and mental health morbidity, mortality and quality of life outcomes.
- The increasing prioritisation of the right to a safe, clean, healthy and sustainable environment as a human right important for the right to health and health-related human rights.
- Air pollution affects the ability of all persons living with NCDs and mental health conditions to thrive and flourish.
- Air pollution both exacerbates the frequency and severity of emergency risks to health, while persons living with an air pollution-related NCD or mental health condition are likely to experience poorer outcomes in an emergency context.

Accelerate (investing in primary health care and health system strengthening)

- Despite poor air quality being the largest environmental threat to public health worldwide, air pollution received just 1% of all international development funding from 2018 to 2022.
- Air pollution is a driver of multi-morbidities for NCDs and mental health conditions that undermines the effective global response.
- Air pollution is both a determinants of health, and a factor that undermines efforts to accelerate strengthened primary health care and health systems.
- Air pollution places additional demands on the health workforce and medicines and health technology resources. This both increases the number of people living with NCDs and mental health conditions, and diverts resources away from the wider NCD and mental health response.

Invest (mobilising sustainable financing)

- Interventions to reduce air pollution are effective, cost-effective and equitable.
- A failure to invest in air pollution has serious human consequences: it creates additional and needless misery for people living with NCDs and mental health conditions, both in causing preventable NCDs and mental health conditions, and in worsening the quality of life for persons living with an NCD or mental health condition.
- Air pollution interventions can deliver transformative benefits to health systems and to wider sustainable financing, not only creating more efficient health systems, but more livable environments conducive to sustainable development, economic security and more equitable societies as determinants of health.

Align (creating health-promoting environments)

- Air pollution is a critical determinant of cardiovascular disease, cancer, diabetes, chronic respiratory diseases, and brain and mental ill-health, all major NCDs in the '5x5' approach.
- Air pollution is associated with a range of different mental health conditions, including depression, anxiety, personality disorders, schizophrenia, dementia or cognitive impairment, and dying by suicide.
- Air pollution intersects with, exacerbates and/or is exacerbated by tobacco and alcohol use, unhealthy diets, and physical inactivity as the other four NCD risk factors in the '5x5' approach.
- NCDs and the climate crisis share common drivers, namely fossil fuels in addition to unhealthy, unsustainable food systems, requiring aligned solutions.

Account (strengthening data and surveillance)

- Increased attention to data and surveillance on air pollution have highlighted their core contribution to global NCD outcomes.
- The lack of data on the impact of air pollution on mental health conditions, despite clear evidence of epidemiological harm, is holding back the full integration of air pollution in the '5x5' approach.
- Air pollution is absent from the nine voluntary global targets and 25 indicators that comprise the NCD Global Monitoring Framework. Air pollution should be integrated in any forthcoming revisions to this framework and/or other initiatives for the collection, analysis, and dissemination of country-level risk factor information.

Other instruments and processes

WHO Updated road map for an enhanced global response to the adverse health effects of air pollution

In January 2025, the WHO Executive Board decided to recommend the World Health Assembly to adopt the draft updated road map for an enhanced global response to the adverse health effects of air pollution (**EB156/24**). The target of the draft roadmap is for "...countries to achieve a 50% reduction in the population-attributable fraction of mortality from anthropogenic sources of air pollution by 2040, relative to 2015 baseline values".

The roadmap will be further discussed for acceptance at the 78th session of the World Health Assembly (WHA78) in 2025. It builds on a roadmap for action originally developed in 2015 for advancing resolution A68.8, titled *Health and the Environment: addressing the health impact of air pollution*.

WHO's 14th General Programme of Work (GPW14) 2025-2028

WHO Member States have agreed that responding to the escalating threat to health posed by climate change as one of the six strategic objectives of the **14th General Programme of Work (GPW14)**. The GPW is a strategic document that sets a high-level roadmap and agenda for WHO's work on global health. It also provides a framework for resource allocation and decision-making by the organisation. GPW14 will run from 2025-2028 inclusive.

WHO is prioritising two key areas underneath this strategic objective. First, bolstering climate-resilient health systems to ensure that people around the world are protected from the escalating health risks of climate change, by driving comprehensive health protection from climate-related risks. Second, championing and promoting lower-carbon health societies, guiding progress towards health systems that not only provide essential healthcare, but that are also climate resilient and low carbon.

Air pollution places additional burdens on clinical services that undermines the resources for, and efficacy of health system performance, and indeed risk increasing their carbon emissions in response. In being the source of exposure from carbon pollution within the home and outdoors, air pollution is integral to a lower-carbon society.

WHO intersectoral global action plan on epilepsy and other neurological disorders

In 2022, WHO Member States adopted the **Intersectoral global action plan on epilepsy and other neurological disorders 2022-2031**, which aims to improve access to treatment and care and quality of life of people with neurological disorders, their care givers and families as well as promote brain health across the life-course.

The global action plan notes that exposure to environmental hazards directly influences brain health, and that "approximately 5% of the global stroke burden [in disability-adjusted life years, in 2019] was attributable to ambient air pollution. Across the world, vulnerable communities are subject to greater exposure to environmental toxins due to the conditions in which they work and live. Toxin-induced encephalopathies, including exposure to heavy metals such as lead, mercury and air pollutants (e.g., carbon monoxide) can cause serious health and nervous system damage in all age groups".

The global action plan agrees actions of the WHO Secretariat to "provide support to Member States in evaluating and implementing evidence-based options that suit their needs and capacities in order to assess the health impact of public policies, evidence generation and guidance regarding environmental risk such as air pollution, heavy metals, pesticide and industrial solvents for optimal brain health and the prevention of neurological disorders".

WHO in-draft resolution on promoting and prioritising an integrated lung health approach

In February 2025, WHO's Executive Board recommended that the draft resolution on promoting and prioritising an integrated lung health approach (**EB156/CONF./5**) is adopted at WHA78. This draft resolution acknowledges indoor and outdoor air pollution "as one of the leading risk factors for lung diseases, especially in developing countries that are disproportionately impacted", and that the root cause of air pollution "is predominantly socioeconomic in nature, and [linked] with social and environmental determinants of health".

The draft resolution also urges WHO Member States "in alignment with [their] relevant policies on addressing communicable, noncommunicable and occupational lung diseases, to… strengthen awareness of the health impacts of air pollution and enhance national air quality standards and monitoring capacity… [and] strengthen existing, or establish new, comprehensive integrated approach lung health programmes including: (a) strengthening health promotion, primary preventive services – particularly tobacco and vaping control, reducing indoor and outdoor air pollution exposure – and vaccination programmes for preventable respiratory infections".

WHO resolution on climate change and health, and draft global plan of action on climate change and health within existing resources

At the 77th session of the World Health Assembly (WHA77), WHO Member States adopted a dedicated resolution on climate change and health (**WHA77.14**). This resolution recalled resolution WHA68.8 (2015) on addressing the health impact of air pollution and resolution, and emphasised awareness that "changes in weather and climate are threatening biodiversity and ecosystems, food security, nutrition, air quality and safe and sufficient access to water, and driving up food-, water-, and vector-borne diseases, underscoring the need for rapidly scaled-up adaptation actions to make health systems more climate resilient".

The resolution also requests the WHO Director-General to develop a results based, needs-oriented and capabilities-driven global WHO plan of action on climate change and health coherent with the text of the UNFCCC and the Paris Agreement by the World Health Assembly in 2025. The draft text of this plan was presented to the 156th session of the WHO's Executive Board in January 2025 (**EB156/52**), and a final version will be presented at WHA78 for adoption.

The draft global plan of action proposes that WHO Member States "mitigate climate change, as agreed under the United Nations Framework Convention on Climate Change… through the reduction of greenhouse gas emissions and other climate-changing pollutants, such as black carbon", and "promote research and development to detect, prevent, test for, treat and respond to climate-sensitive diseases and health outcomes, including those related to climate-forcing pollutants, and support affected communities in efforts to adapt to climate impacts".

The draft global plan of action also proposes that the WHO Secretariat "provide best practice methods, technical guidance, tools and case studies to evaluate the health effects of policy scenarios (such as the expected lives saved by improvements in air quality associated with nationally determined contributions to the Paris Climate Agreement), or specific policy interventions (such as provision of clean household energy, fossil fuel subsidy reform or carbon pricing)".

UN Quadripartite Organizations work on One Health approaches in policy and practice

The Quadripartite Organizations of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the World Organisation for Animal Health (WOAH, founded as OIE), and the WHO have collaborated to advance a 'One Health' approach, for driving the change and transformation required to mitigate the impact of current and future health challenges at the human–animal– plant–environment interface at all levels.

In response to requests to prevent future pandemics and to promote health through a sustainable One Health approach, the Quadripartite has developed the **One Health Joint Plan of Action (2022–2026)**. Air pollution is a core component of this joint plan of action. It notes that air pollution from fossil fuels and other sources has "demonstrably negative impacts on human and animal health, biodiversity including plants, animals and ecosystems and water quality, as well as productive sectors, such as agriculture and fisheries", and sets as an action to "promote, inform and support the sound management of chemicals and waste, including wastewater, and the prevention, reduction and control of pollution into air, water and soil, in order to minimize threats to the health of ecosystems, animals, plants and people".

Operationalising the final report of the WHO Council on the Economics of Health for All

The Council on the Economics of Health For All was established in 2020 by the WHO Director-General to rethink how value in health and wellbeing is measured, produced, and distributed across the economy. Its mission was to bring health and well-being into the centre of how we think about purpose, value and development, shaping the economy with the objective of building healthy societies that are just, inclusive, equitable and sustainable.

Air pollution is highlighted as an example of a crisis interlinking health, inequity and climate that undermines this mission. Their final report **Health for All: transforming economies to deliver what matters** makes a recommendation of countries to restore and protect the environment by upholding international commitments to a regenerative economy which links planet and people, noting "it is likely that no country is currently meeting the needs of all its people and operating within ecological boundaries [and] many high-income nations have strong social foundations but their carbon and material footprints are unsustainable". The report also notes that "given the disastrous consequences climate change is already having on health, Health for All should be seen as a guiding principle in making a just transition to a post-carbon economy", and gives the example that "prevention is not limited to the health sector, but engages multiple sectors to address the social, economic and commercial determinants of health [such that] incentivizing oil and gas industries by means of subsidies ends up burdening health care in the form of respiratory conditions from air pollution".

The WHO and World Meteorological Organization (WMO) Joint Climate and Health Programme

In 2018, the World Meteorological Organization and World Health Organization signed the **WMO-WHO Health, Environment, and Climate Cooperation Framework**.

Air pollution is directly relevant to the five objectives of the framework, to:

- Promote the alignment of relevant policies and raise awareness of environment and climate related risks and solutions to protect human health
- Promote the generation and application of scientific evidence
- Develop appropriate technical mechanisms and partnerships to facilitate the development, delivery, access to and use of data and tailored information products
- Develop and disseminate technical and normative guidance, scientific publications and tools, and other actions to support capacity development
- Monitor progress on the access and use of reliable and relevant weather, climate, and environmental information.

The Political Declaration of the High-level Meeting of the UN General Assembly on Antimicrobial Resistance

Despite the established link between people living with NCDs and their vulnerability to antimicrobial resistance, the **Political Declaration of the High-level Meeting of the UN General Assembly on Antimicrobial Resistance** does not explicitly reference air pollution.

In advance of the declaration, the Quadripartite Organizations of FAO, UNEP, WOAH, and WHO established an AMR Multi-Stakeholder Partnership Platform to make a **call for actionable steps in response to the rising threat of antimicrobial resistance** for consideration by UN Member States.

These recommendations also do not refer to air pollution specifically, instead noting the need to "strengthen health systems through comprehensive primary and secondary prevention strategies, such as infection prevention and control (IPC), stewardship programmes, water, sanitation and hygiene (WASH), vaccination, early diagnosis and prompt treatment and environmental management of air, water, soil, food and vectors for better human, animal and environmental health".

The right to a healthy environment

The non-binding resolutions of the UN General Assembly **(A/RES/76/300)** and UN Human Rights Council **(A/HRC/48/L.23/REV.1)** have recognised access to a healthy and sustainable environment as a universal right, with central provisions that recognise "the right to a safe, clean, healthy and sustainable environment as a human right that is important for the enjoyment of human rights".

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Accelerating action on NCDs to promote health, protect rights and save lives