

ABOUT CLEAN AIR FUND

Clean Air Fund is a global philanthropic organisation that works with governments, funders, businesses and campaigners to create a future where everyone breathes clean air. We fund and partner with organisations across the globe that promote air quality data, build public demand for clean air and drive action. We also influence and support decision makers to act on air pollution.

ABOUT CLIMATE POLICY INITIATIVE

CPI is an analysis and advisory organisation with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has seven offices around the world in Brazil, India, Indonesia, South Africa, the United Kingdom, and the United States.

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CLEAN AIR FUND IS FUNDED BY:













ABOUT THE PHOTOS IN THIS REPORT

All the photos in this report capture real-life people and places by local photographers, and were commissioned by Clean Air Fund. Many of these photos are available to use for free at climatevisuals.org

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FOREWORD

Air pollution is a global challenge that transcends borders. The World Health Organization estimates that 99% of us breathe harmful air. Over 8 million people die prematurely each year as a result of air pollution - more than twice as many as from malaria, tuberculosis, and HIV/AIDS combined. In my country Brazil, nearly 68,000 lives were cut short in 2021 due to exposure to dirty air. Illegal fires and deforestation are a major driver of poor air quality, impacting the health of our people and our planet. Although progress has been made, change is not coming fast enough.

The cost of air pollution can be counted in dollars as well as human lives. The World



Adalberto Maluf

National Secretary of Urban Environment and Environmental Quality, Ministry of Environment and Climate Change, Brazil

Bank estimates that the health damage alone from air pollution is equivalent to USD 8.1 trillion a year, or 6.1% of global GDP. Around 1.2 billion working days are lost annually to sickness related to outdoor air pollution, and by 2060 this is projected to rise to 3.7 billion.

It doesn't have to be this way. We need to bring together countries to share the benefits of a more sustainable and resilient world. As current Chair of the G20 and upcoming host of next year's UN Climate Change conference, COP30, Brazil is proud to be championing another vision for the planet: one where humans and nature co-exist in harmony, where we respect the environment we are blessed with, and where economic prosperity leaves no one behind and doesn't come at the expense of our health and wellbeing.

Brazil has just approved new timelines to achieve the World Health Organization's air quality standards. Reducing air pollution can help deliver stronger economies, improved health and social outcomes, and more sustainable and inclusive growth. Action to clean our air also reduces greenhouse gas emissions, delivering multiple benefits for society, the economy, nature and climate. And yet this is an overlooked area of international policymaking and is severely underfunded.

In my capacity as co-chair of the Climate and Clean Air Coalition (CCAC) I have the privilege to work with policy makers across the world to place these issues in the spotlight, accelerate air pollution action globally, bring synergies from existing Multilateral Environment agreements, and raise national ambitions.

The State of Global Air Quality Funding 2024 report offers an annual snapshot of how much international development funding is being allocated to clean air action. The report provides a comprehensive analysis of the current state of funding for air quality initiatives and reveals the shortfall that persists, despite growing awareness and urgency. It examines not just how much funding is allocated, but also where and how.

It shows that international public funding does not come close to meeting the scale of the challenge we are facing or unlocking the significant opportunity of investment in air quality. What funding exists often does not reach the worst affected geographies and communities.

Recognising the significant gap between developed and developing countries in capacities, resources and technologies for tacking air pollution, we need to mobilise new and additional resources from all sources and partnerships at all levels, including under existing multilateral environmental agreements. This includes recommending additional funding for air quality action and using existing money more effectively through better integration of the climate and air quality agendas. By acknowledging that air quality can be an outcome of climate and development funding, and building this aim in from the outset, donors could reap far more impact from their investments. And in addition to international public finance, we need national and city level investment, and private sector participation too.

We all desire a world where clean air is available to all. As host of the G20 and COP30, Brazil is committed to reducing poverty, inequality and promoting social inclusion, as well as reducing air pollution for the most vulnerable, who suffer the most from pollution and extreme weather events resulting from climate change. Any just transition must take into account the needs of the most vulnerable.

Air pollution knows no borders. Tackling it is a global challenge that we can, and must, address together before it blights many more lives.

EXECUTIVE SUMMARY

Despite overwhelming evidence of the harm it inflicts, air pollution is still treated as the poor cousin of other development areas within health and climate.

Toxic air is one of the leading causes of premature deaths worldwide¹, with a death toll of more than 8 million people each year.² It also has crippling economic consequences. From loss of productivity and diminished crop yields to the health costs of treating conditions such as cancer and dementia, the cost of inaction runs into the trillions. The World Bank has estimated that these costs – a 'dirty air tax' of sorts – amount to around 6.1% of annual global GDP.³ Increasingly, air pollution is recognised as a delayer of development and driver of inequalities within and between countries.⁴

This report analyses international development funding flows to outdoor air quality-related projects for the five years up to and including 2022 and is based on the latest publicly available data.⁵ The donors covered in this analysis include bilateral and multilateral Development Finance Institutions (DFIs) and governments that provide international funding.

Levels of air pollution are escalating in most low- and middle-income countries, but international development funding for clean air efforts reached \$4.7 billion in 2022. Investments have crept back to pre-pandemic levels (\$4.6 billion in 2019), but clean air funding still only makes up 1% of all international development funding.

Along with this chronic underfunding, our analysis shows that investments are uneven and not sufficiently targeted or tailored. As a result, opportunities to realise clean air dividends are being missed:

- Compared with other international development funding, overall air quality finance is unusually skewed towards loans rather than grants: 92% of air quality funding is provided in the form of loans, creating costs for recipient countries and hindering uptake of this vital assistance. This comes in sharp contrast to the 63% share of grant funding seen for total Official Development Assistance in 2022.6
- There are wide 'funding deserts' because funding is spread unevenly across regions. For example, outdoor air quality funding for every country in Africa and the Middle East was only a third of the funding channelled to one Asian country, the Philippines (\$1.5 billion versus \$4.7 billion from 2018–2022).
- Low-income countries such as Chad and Somalia receive much less funding than upper middle-income countries such as Serbia and Costa Rica: \$2 versus \$73 of overall air quality funding per person from 2018 to 2022.
- Although the air pollution and climate crises share many of the same causes and solutions, less than 3% of international public climate finance explicitly targeted air quality improvements from 2018 to 2022.

- Projects focused on tackling black carbon (or soot) received only 0.1% of donors' outdoor air quality funding (\$18 million out of \$16 billion from 2018 to 2022), despite the unique and powerful role this pollutant plays in planetary and human health.
- Perversely, funding for fossil-fuel prolonging projects increased by 350% from \$1.2 billion in 2021 to \$5.4 billion in 2022, reversing the promising downward trend reported last year.⁷
- Our analysis shows that bilateral development agencies need to play a bigger role, bringing their expertise, and maximising many of their existing focuses on health funding, in order to balance the over-reliance on loan financing for outdoor air quality projects.

The report calls on bilateral and multilateral funders to increase the volume of outdoor air quality funding, to support states to realise the benefits from reduced air pollution, to improve the geographical balance of their portfolios and to tackle black carbon.

Specifically, international development funders are encouraged to: expand their grant funding; integrate air quality considerations across all thematic portfolios and funding decisions, especially for investments in climate and health; develop and enhance monitoring and tracking systems that fully account for air quality; and stop funding projects that prolong the use of fossil fuels.



TABLE OF CONTENTS

| 1. | THE | JRGENT CASE FOR INTEGRATED ACTION ON AIR POLLUTION | 11 |
|----|-------|--|----|
| | 1.1 | AIR POLLUTION IS A DEVELOPMENT DELAYER | 11 |
| | 1.2 | AIR POLLUTION IS A DRIVER OF GROWING INEQUALITY | 12 |
| | 1.3 | SCOPE OF ANALYSIS | 12 |
| | 1.4 | WHAT THIS REPORT COVERS | 15 |
| 2. | OVER | ALL AIR QUALITY FUNDING | 16 |
| 3. | AIR Q | QUALITY AND CLIMATE FUNDING | 31 |
| 4. | FOSS | IL FUEL-PROLONGING FUNDING | 44 |
| 5. | RECO | DMMENDATIONS | 51 |
| 6. | REFE | RENCES | 56 |

GLOSSARY

Outdoor air pollution

Outdoor air pollution, also known as ambient air pollution, refers to the presence of harmful substances and pollutants in the Earth's atmosphere, primarily generated by human activities such as industrial processes, transportation and energy production. These pollutants – including particulate matter, gases (e.g. nitrogen dioxide and sulphur dioxide), ozone, carbon monoxide, and volatile organic compounds – can adversely affect human health, ecosystems and the environment, leading to various respiratory, cardiovascular and environmental issues.

Indoor air pollution

Indoor air pollution refers to the presence of harmful pollutants within enclosed spaces, such as homes, workplaces, and buildings, and can negatively impact human health and well-being. These pollutants arise from sources such as household cleaning products, tobacco smoke, cooking emissions, building materials and inadequate ventilation. Prolonged exposure to indoor air pollutants (such as fine particles, volatile organic compounds, radon and mould spores) can lead to a range of health issues, including respiratory problems, allergies and other related ailments.

Outdoor air quality funding

Finance committed to projects where improvements to outdoor/ ambient air quality are an explicit benefit and objective (usually stated in the project description). Projects can include those relating to the transport, energy and health sectors.

Funding with air quality co-benefits

Finance committed to projects where improvements to outdoor/ ambient air quality are a co-benefit to the investment but are not explicitly mentioned in the project description. This also includes indoor air quality projects, which improve outdoor air quality indirectly.

Overall air quality funding

The sum of outdoor air quality funding and funding with air quality cobenefits.

Concessional finance

Concessional finance is debt or grant capital offered at more favourable terms than offered by the market. This could include lower interest rates or non-financial benefits such as longer repayment options or the inclusion of guarantees.

Air quality and climate funding

Funding for projects that deliver dual benefits across air quality and climate (including both mitigation and adaptation). This covers both (a) outdoor air quality funding that addresses climate change and (b) funding with air quality co-benefits that addresses climate change. This funding category represents the subset of air quality funding flows that simultaneously address climate change.

Fossil fuel-prolonging funding

Finance committed to projects or interventions (a) involving the construction of assets and infrastructure, which directly cause air pollution; or (b) leading to the creation of or promoting, air polluting activities.

International development funders

International development funders include multilateral development banks, bilateral development agencies and governments providing international funding to recipient countries, mainly in the form of concessional and non-concessional loans and grants. This funding is provided for a range of development purposes, including air quality.

Bilateral development finance institutions (DFI)

Development finance institutions (DFI) that are owned by a single country and direct international finance flows internationally. Bilateral DFIs include both bilateral development banks and bilateral development agencies that deliver development finance on behalf of government departments.

National DFIs Development finance institutions that are owned by a single country

and direct finance flows domestically.

Multilateral DFIs Development finance institutions with multiple shareholder countries

that direct finance flows internationally.

Governments Mention of governments refers to government departments and

agencies providing development finance to other countries.

Climate mitigation Resources directed to activities (a) contributing to reducing or avoiding

greenhouse gas (GHG) emissions, including gases regulated by the Montreal Protocol; or (b) maintaining or enhancing GHG sinks and

reservoirs.

Climate adaptation

finance

finance

Resources directed to activities aimed at reducing the vulnerability of human or natural systems to the impacts of climate change and climate-related risks by maintaining or increasing adaptive capacity and

resilience.

Super pollutants/short-lived climate pollutants

(SLCPs)

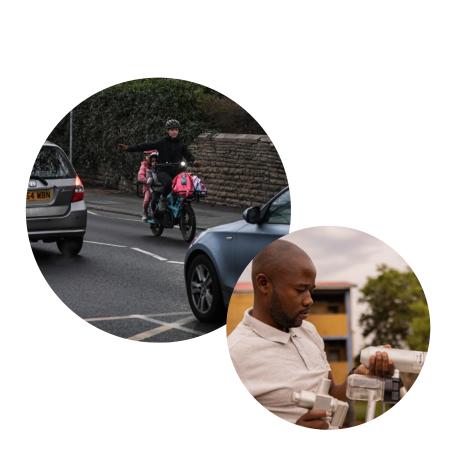
Super pollutants, short-lived climate pollutants (SLCPs) or non-CO2 pollutants include methane (CH4), black carbon, hydrofluorocarbons (HFCs), and tropospheric ozone (O3).8 These contribute to global warming, cause local environmental degradation and harm human

health.

Black carbonBlack carbon is a short-lived climate pollutant and a major component

of particulate matter that has air quality and climate impacts. It is the sooty black material emitted beside other air pollutants during incomplete combustion. For example, diesel engines, brick kilns, residential energy, wildfires and other sources that burn fossil fuels,

biomass and waste emit black carbon.





ABBREVIATIONS

ADB Asian Development Bank

AFD France's development agency

AFOLU Agriculture, forestry and other land use

AQIP Air Quality Improvement Programme

BMZ Germany's Federal Ministry for Economic

Cooperation and Development

CAEM Corporación Ambiental Empresarial

CARA Climate Action for a Resilient Asia

CCAC Climate and Clean Air Coalition

CEB Council of Europe Development Bank

CH4 Methane

COP Conference of Parties of the UNFCCC

CO, Carbon Dioxide

COVID-19 Coronavirus Disease

DAC Development Assistance Committee (of the Organisation for

Economic Co-operation and Development)

DFI Development finance institutions

EBRD European Bank for Reconstruction & Development

EIB European Investment Bank

EPD Ending Preventable Death

G7 Group of Seven

G20 Group of 20

GDP Gross Domestic Product

GHG Greenhouse Gas

HFCs Hydrofluorocarbons

IPCC Intergovernmental Panel on Climate Change

IsDB Islamic Development Bank

JICA Japan International Cooperation Agency

KfW German state-owned investment and development bank

MAP-AQ Monitoring, Analysis and Prediction of Air Quality

MDB Multilateral development bank

MIGA Multilateral Investment Guarantee Agency

NCQG New Collective Quantified Goal

NDC Nationally Determined Contribution

Ozone

OECD Organisation for Economic Development and Co-operation

OFID OPEC Fund for International Development

OPEC Organization of the Petroleum Exporting Countries

OpenAQ Open Air Quality

PM Particulate Matter

PM2.5 Particulate Matter (2.5 micrometers or less in diameter)

PROPARCO Subsidiary of the French development agency AFD, focused on

private sector development

RAP Resilient Asia Programme

SLCP Short-Lived Climate Pollutants

UNEP United Nations Environment Programme

UNITECC United National Framework Convention on Climate Change

USAID U.S. Agency for International Development

WHO World Health Organization

1. THE URGENT CASE FOR INTEGRATED ACTION ON AIR POLLUTION

Air quality is in a state of crisis. 99% of the world's population breathes dangerous, polluted air⁹ with disastrous consequences to health and wellbeing. Toxic air is estimated to have led to 8.1 million premature deaths in 2021 alone, and is the second leading risk factor for death globally.¹⁰ Beyond the human toll, there is a crippling economic cost: the World Bank estimates the cost of health damages from PM 2.5 air pollution at \$8.1 trillion a year in 2019, the equivalent of 6.1% of global GDP.¹¹

Despite the overwhelming evidence of the significant harms that poor air quality causes, air pollution is being overlooked by international development funders. Air quality has been treated for too long as the poor cousin of other development areas, such as health and climate, receiving insufficient funding that has not been effectively tailored or targeted to the issues at hand.

Investing in air quality at the required scale and integrating air quality considerations across development portfolios will save lives, support sustainable economic growth and aid in the critical shift away from fossil fuels towards greener and less polluting energy sources.

1.1 AIR POLLUTION IS A DEVELOPMENT DELAYER

Air pollution can no longer be considered an unavoidable byproduct of economic growth. Today's clean technologies offer countries the opportunity to pursue stable, sustainable development that limits the pollution of our common air. Poor air quality holds countries back, delaying development and erasing some of the gains made in areas such as health, education and economic growth. The Organisation for Economic Development and Co-operation (OECD) estimates that the annual number of working days lost to outdoor air pollution could reach 3.7 billion by 2060 (currently around 1.2 billion) if no action is taken.¹²

With an increasing focus on the climate change and health nexus, air quality should become a major topic in international climate discussions, such as COP, and other multilateral forums, such as G7 and G20. Positive first steps towards recognising this issue at recent multilateral events must be taken further. Developments at the UN COP28, hosted by the United Arab Emirates in 2023, included the climate and health political declaration, which made air quality recommendations and was endorsed by over 140 member states. A resolution adopted at the 77th World Health Assembly in 2024¹³ recognises the vital role climate and clean air play in improving health outcomes and sets new ambitions for governments to act.

In addition, the International Energy Agency's summit on Clean Cooking in Africa in 2024 mobilised \$2.2 billion in commitments to increase access to clean cooking. It also promised significant benefits for air quality, health, growth and education in Africa, particularly for African women and girls, and showed how funding for air quality can be realised with effective leadership.

The Global Methane Pledge increased focus on reducing methane emissions, a significant contributor to outdoor air quality issues. The Pledge has been signed by the European Union and 158 countries and mobilised over \$1 billion.

While there have been promising signs of political movement on air pollution on the international stage, the development funding needed to turn this into concrete action has not been forthcoming.

1.2 AIR POLLUTION IS A DRIVER OF GROWING INEQUALITY

The impact of air pollution is not felt equally, with nine out of ten deaths attributed to outdoor air quality occurring in low- and middle-income countries. Despite this evidence, international development funders are still not sufficiently targeting their financing towards those most in need. Donors must tighten the focus of their air quality funding on populations and countries that are disproportionately affected by air pollution, including older people, pregnant women and children and communities living in poverty. They must also ensure that funding better reaches underfinanced low- and middle-income countries, especially in Africa.

Donors also must consider the ability of countries to take on additional debt. The analysis in this report shows that international development funders offer remarkably low levels of concessional finance for air quality (i.e. finance offered at more favourable terms than the market), which may lead to reluctance to take up funding, given the mounting debt burdens being faced by low- and middle-income countries. To address the inequities of existing air quality funding, financing must be increased and the terms on which it is offered must improve.

1.3 SCOPE OF ANALYSIS

This report analyses international development funding going to projects related to outdoor air quality for the five years up to and including 2022 and is based on the latest data available. International development funders include bilateral and multilateral Development Finance Institutions (DFIs) and governments that provide international funding. Their finance flows can be in the form of concessional or non-concessional loans, grants, and/or other instruments.

Due to data limitations, the following funding modalities are excluded from this report, their importance to funding air quality efforts notwithstanding:

- Domestic public spending for air quality
- Private sector funding
- Philanthropic fundingⁱ
- Risk management instruments, owing to actual disbursements under these mechanisms being dependent on uncertain future events.

i <u>The Clean Air Fund's report, Philanthropic Foundation Funding for Clean Air</u>, provides an in-depth analysis of funding from this source.

The methodology sets out the approach taken on data sourcing and processing. Air quality funding data has challenges that make it difficult to build exhaustive datasets, including difficulties disaggregating air quality components from some wider environmental or public health spending; fragmented reporting with wide institutional disparities; and lack of a standardised tracking and reporting procedure for air quality finance from international development donors. The State of Global Air Quality Funding 2024: Methodology recognises and addresses these limitations, taking a leading approach to identifying and categorising global air quality finance flows. Due to improvements in the keywords applied and additional manual checks, previously published data on pre-2022 years may have changed slightly. Table 1.1 presents the flows assessed in the report analysis.

Addressing outdoor air pollution is too often neglected as a development intervention, thereby missing considerable health, economic and climate gains that could otherwise be achieved. Funders do, nonetheless, invest in projects that deliver air quality improvements as a co-benefit, without explicitly focusing on air quality. The Clean Air Fund welcomes this latter form of spending; nevertheless, it believes that making air quality aspects explicit will ensure projects are better designed to deliver stronger returns on investment. A separate analysis of each funding category conveys richer detail on how air quality funding is changing over time and provides support for targeted recommendations on how to maximise the efficiency of this funding.

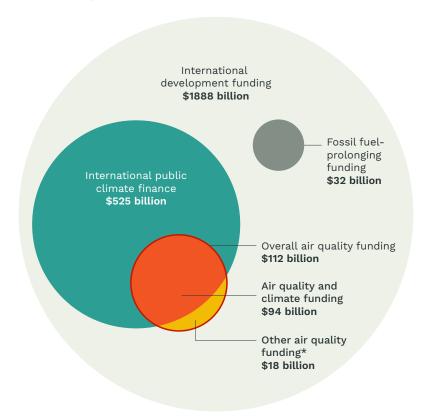
TABLE 1.1: FUNDING FLOWS COVERED IN REPORT ANALYSIS

| Fu | nding flow | Definition | Project example |
|-----------------------------------|---|--|--|
| | Outdoor air quality funding | Finance committed to projects where improvements to outdoor/ambient air quality are an explicit benefit and objective (usually stated in the project description). Projects can include those relating to the transport, energy and health sectors. | Air pollution prevention programmes, such as a multi-strand project to address air quality in a specific city through improving monitoring, funding interventions and raising awareness. |
| Overall air quality funding | Funding with air quality co-benefits | Finance committed to projects where improvements to outdoor/ambient air quality are a co-benefit to the investment but are not explicitly mentioned in the project description. This also includes indoor air quality projects, which improve outdoor air quality indirectly. | Electric vehicle incentive programmes for commercial fleets. |
| | Air quality and climate funding | Funding for projects that deliver dual benefits across air quality and climate (including both mitigation and adaptation). This covers both (a) outdoor air quality funding that addresses climate change and (b) funding with air quality co-benefits that addresses climate change. This funding category represents the subset of air quality funding flows that simultaneously address climate change. | Bus rapid transit projects to reduce urban air pollution and greenhouse gas emissions. |
| Fossil fuel-prolonging funding | | Finance committed to projects or interventions (a) involving the construction of assets and infrastructure that directly cause air pollution; or (b) leading to the creation of, or promoting, air polluting activities. | Development of a coal power plant. |

1.4 WHAT THIS REPORT COVERS

The sixth edition of our annual report presents the global landscape of outdoor air quality funding, analyses international development funding flows and draws insight from wider trends in development, climate, and fossil fuel finance. New this year is a deep dive into black carbon financing, highlighting the crucial role that targeted funding to mitigate super pollutants – which contribute to global warming and harm human health – plays in achieving climate and air quality goals. This report aims to build transparency, evidence, and practical recommendations for donors, policymakers and civil society to support and accelerate progress on outdoor air quality financing. Figure 1.1 depicts the different flows analysed in this report.

FIGURE 1.1: INTERLINKAGES BETWEEN INTERNATIONAL DEVELOPMENT FUNDING, AIR QUALITY FUNDING, CLIMATE FINANCE AND FOSSIL FUEL-PROLONGING FUNDING, 2018–2022



^{*&#}x27;Other air quality funding' refers to air quality funding that does not address climate change. This category includes projects from both outdoor air quality funding and funding with air quality co-benefits. Examples of 'other air quality funding' include efforts to improve the monitoring and modelling of air pollution and measures for the reduction of dust.

The report is structured as follows:

- Overall air quality funding (area inside red circle)
- Air quality and climate funding (dark orange shaded area)
- Fossil fuel-prolonging funding (dark grey shaded area)
- Recommendations

2. OVERALL AIR QUALITY FUNDING

Funding for outdoor air quality projects was \$4.7 billion in 2022, bringing funding levels just above the pre-pandemic levels seen in 2019 (Table 2.1). Clean air funding, however, continues to represent an extremely small proportion of all international development funding, with levels flatlining at only 1% over the five years from 2018 to 2022.

Despite mounting evidence of the urgent need to increase air quality finance, funding commitments fail to grow at the necessary rate. To unlock the full potential of funding, air quality action must be mainstreamed across climate and development interventions, ensuring that air quality outcomes are considered throughout the project planning, implementation and evaluation processes. This chapter analyses the following:

- International development funding for outdoor air quality projects that have air quality as a primary or explicit objective (hereafter referred to as outdoor air quality funding).
- Funding for projects with air quality co-benefits that do not explicitly target air quality but that are likely to improve air quality outcomes through planned activities (hereafter referred to as funding with air quality co-benefits).

Both these types of funding are important components of the air quality landscape. Regardless of whether air quality is a primary objective or a cobenefit of a given project, explicitly designing and planning for improvements in air quality will increase the project's likelihood of achieving positive air quality outcomes. This also will ensure that opportunities to improve air quality are not inadvertently eroded as a result of a failure to consider air quality during the implementation process.

TABLE 2.1: AIR QUALITY FUNDING 2018-2022 (\$ BILLION)

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2018–2022 total |
|--------------------------------------|------|------|------|------|------|--------------------|
| Overall air quality funding | 24.7 | 21.0 | 11.2 | 23.3 | 31.7 | 112.0 |
| Outdoor air quality funding | 3.2 | 4.6 | 1.0 | 2.4 | 4.7 | 15.8 |
| Funding with air quality co-benefits | 21.6 | 16.4 | 10.2 | 21.0 | 27.0 | 96.2 |

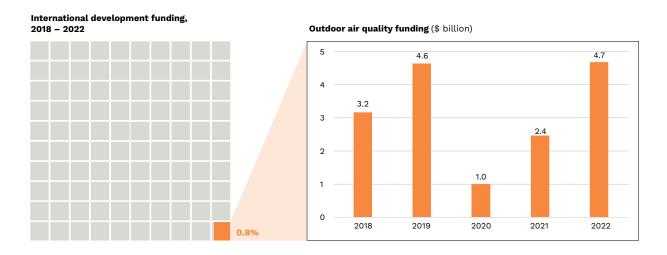
ii Further details on the classification of projects are available in <u>The State of Global Air Quality Funding 2024</u> <u>Methodology</u>.



A SCHOOL PLAYGROUND INEAR BELCHATOW COAL-FIRED POWER PLANT IN KLESZCZOW, POLAND, CREDIT: ANNA LIMINOWICZ / CLIMATE VISUALS

Funding has fluctuated significantly over the last five years, with volumes roughly halved in 2020 and 2021, most likely due to finance focused on pressures from COVID-19. While outdoor air quality funding in 2022 represented a recovery from this dip, funding levels have still barely surpassed 2019 levels (Figure 2.1).

FIGURE 2.1: OUTDOOR AIR QUALITY FUNDING AS A SHARE OF TOTAL INTERNATIONAL DEVELOPMENT COMMITMENTS, 2018 - 2022



When compared with total international development funding flows, outdoor air quality projects still made up only 1.1% in 2022: for every \$1,000 spent by international development funders, roughly \$11 was spent on outdoor air quality. This percentage has fluctuated around 1% for the last five years of data (2018-2022), with a dip to 0.4% in 2020. Although international development funding continued to increase in 2020 and 2021, outdoor air quality funding fell in those years as funders prioritised COVID-19-related budget support and vaccine donations to recipient countries.15

iii Previously published figures may have changed due to amendments in keywords and improvements in additional manual checks.

There appears to be growing momentum behind public financial institutions' climate finance commitments and development of climate strategies. These efforts should be mirrored for air quality, and opportunities for dual benefit finance (benefitting both air quality and climate outcomes) identified and pursued. Against a backdrop of funding constraints, opportunities that simultaneously address multiple objectives cannot be ignored, nor the untapped potential in sectors such as health. Pursuing these dual benefit opportunities can result in a greater percentage of international development funding being channelled into air quality even if funders' total spending remains the same.

BOX 2.1: POSITIVE STEPS ON AIR QUALITY BY SOME INTERNATIONAL DEVELOPMENT FUNDERS

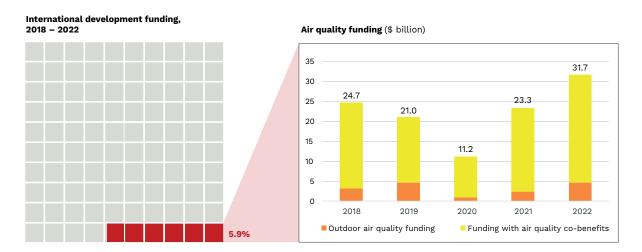
Although overall air quality funding from development donors remains far too low, a number of institutions have taken positive steps in recent years. Noteworthy examples include:

- The World Bank's **Multilateral Investment Guarantee Agency** (MIGA) pledged \$1 billion in financial guarantees in April 2024 to de-risk air quality projects in low- and middle-income countries.¹⁷ These guarantees aim to increase the creditworthiness of air quality projects, thereby mobilising much needed private sector investment.
- The UK **Foreign, Commonwealth & Development Office** (FCDO) has committed to ending the preventable deaths (EPD) of mothers, newborns and children by 2030,¹⁸ supported by a nearly £15 million programme.¹⁹ Tackling air pollution is a key focus within this EPD strategy since it increases the risks of respiratory illnesses to which children are particularly vulnerable. Through the EPD strategy, FCDO will support partnering countries in understanding and mitigating air pollution.
- The **Asian Development Bank** (ADB) launched the Asia Clean Blue Skies Programme in 2022 with \$1.5 million for the first phase.²⁰ The programme seeks to build the capacity of ADB recipient countries in designing and implementing air quality improvement solutions, and scaling up financing for air quality in the region.²¹ The programme would also develop air quality monitoring networks, train air quality specialists and raise public awareness on air quality.²²

FROM 2018 TO 2022, \$112 BILLION WAS PROVIDED IN OVERALL AIR QUALITY FUNDING; MOST (\$96 BILLION) WENT TO PROJECTS WITH AIR QUALITY CO-BENEFITS.

In addition to the relatively small pool of outdoor air quality funding, there is a larger pool for projects with air quality co-benefits. These projects achieve air quality improvements without that being an explicit objective. Combined, outdoor air quality funding and funding with air quality co-benefits represent the full breadth of international development financing that addresses air quality.

FIGURE 2.2: OUTDOOR AIR QUALITY FUNDING AND FUNDING WITH AIR QUALITY CO-BENEFITS AS A SHARE OF TOTAL INTERNATIONAL DEVELOPMENT COMMITMENTS, 2018–2022



Of the total \$31.7 billion of overall air quality financing in 2022, *85% (\$27 billion) was directed to projects that provide air quality co-benefits (Figure 2.2); this means that only 15% (\$4.7 billion) went to projects that have air quality as an explicit objective. The proportion of dedicated air quality funding has fluctuated between 10% and 20% of overall air quality funding for the last five years.

From 2018 to 2022, \$96.2 billion of financing with air quality co-benefits was provided, demonstrating that comparatively, there is a large pool of development finance that is improving air quality without explicitly setting out to do so. These projects are often focused on development or climate action in sectors and sub-sectors that generate air pollution, such as energy generation and transport. Funding for these types of projects should continue to increase, while ensuring air quality is mainstreamed in project planning.

61% OF OUTDOOR AIR QUALITY FUNDING WENT TOWARDS TRANSPORT PROJECTS FROM 2018-2022.

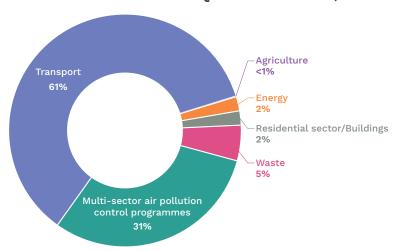
At \$9.6 billion, transport projects continued to draw in the majority of explicit outdoor air quality funding from 2018 to 2022 (Figure 2.3), amounting to 61% of the \$15.8 billion total. While transport's share of explicit outdoor air quality funding has been high throughout the five-year period from 2018–2022, it dropped to around 40% in 2020 and 2021 before rebounding to 82% in 2022.

While the transport sector provides abundant opportunity for projects that explicitly target air quality improvements, international development funders should also ensure that potentially high-impact projects in sectors such as waste, buildings and agriculture are not overlooked.

iv References to 'overall air quality funding' refer to the overall total of outdoor air quality funding (i.e. for projects that have air quality as a primary or explicit objective) and that for projects with outdoor air quality co-benefits (i.e. those that do not explicitly target air quality other than potentially improve air quality outcomes through planned activities).

v Methodological improvements for this year's report have resulted in a transport share of air quality funding that has increased across all years of data. For this reason, the sector analysis in this year's *The State of Global Air Quality Funding* report is not directly comparable with analyses from previous years.

FIGURE 2.3: OUTDOOR AIR QUALITY FUNDING, 2018-2022



OUTDOOR AIR QUALITY FUNDING REMAINS CONCENTRATED IN A HANDFUL OF ASIAN COUNTRIES, WITH JUST ONE COUNTRY RECEIVING TRIPLE THE AMOUNT RECEIVED BY ALL OF AFRICA AND THE MIDDLE EAST.

TRAFFIC JAM IN ULAANBAATAR, MONGOLIA. CREDIT: TSEND-OCHIR SANJAA

Outdoor air quality funding is highly concentrated in a small number of Asian countries, creating a regional inequity that is leaving countries in need behind (Figure 2.4). Between 2018 and 2022, around 70% of international development funders' outdoor air quality funding was concentrated in three Asian countries: the Philippines, Bangladesh and China. The majority of countries receiving considerable financing flows for outdoor air quality are in Asia and Central Asia, with Egypt and Senegal representing the only two African countries out of ten doing so. Indeed, total outdoor air quality funding for all countries in Africa and the Middle East from 2018 to 2022 stood at \$1.5 billion, less than a third of the funding received by one country, the Philippines, over the same period. The geographic concentration in funding is further illustrated by the fact that around half of Africa and the Middle East's \$1.5 billion was received by only one country: Egypt.

Overall air quality funding is slightly less concentrated, with the top three recipient countries (India, the Philippines and Bangladesh) receiving 33% of total flows (Figure 2.5).

vi This analysis focuses exclusively on countries that receive international development financing.
vii It should be noted that all countries could also be in receipt of other air quality funding flows, such as domestic public finance, which are not tracked in this report.

FIGURE 2.4: TOP TEN RECIPIENT COUNTRIES FOR OUTDOOR AIR QUALITY FUNDING, 2018-2022



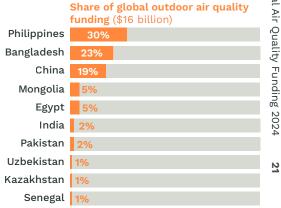
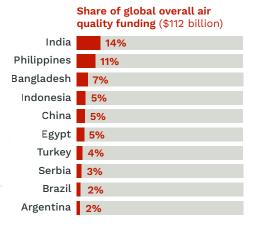


FIGURE 2.5: TOP TEN RECIPIENT COUNTRIES FOR OVERALL AIR QUALITY FUNDING, 2018-2022







OF THE MOST POLLUTED COUNTRIES, SEVEN OUT OF TEN RECEIVED NO MORE THAN 1% OF GLOBAL OVERALL AIR QUALITY FUNDING.

Many countries with the highest exposure to air pollution receive a low level of overall air quality funding (Table 2.2), leaving them with little international support to address their growing air pollution crises. Seven of the ten most highly polluted countries received a 1% or lower share of global overall air quality funding from 2018 to 2022.

It is important to understand that factors such as population size and GDP affect a country's ability to absorb funding and explain why some countries may receive low levels of financing. When controlling for population size, however, there is evidence that countries with high exposure to air pollution receive low amounts. Eight of the

ten most highly polluted countries received under \$17 per person in overall air quality funding from 2018 to 2022 compared to the recipient-country average of \$40 per person. This underlines that many of the countries being overlooked by international development funders are those that are the most in need of support.

TABLE 2.2: OVERALL AIR QUALITY FUNDING FOR COUNTRIES WITH THE HIGHEST EXPOSURE TO AMBIENT PARTICULATE MATTER

| Country | Annual mean concentrations of PM2.5 (2021) | Overall air quality funding 2018– 2022 (\$ bn) | Overall air quality funding per capita (\$) | Share of global overall air quality funding |
|------------|--|---|---|---|
| Bangladesh | 74.0 | 7.8 | 47.2 | 7% |
| India | 58.7 | 16.2 | 12.1 | 14% |
| Nepal | 51.7 | 0.5 | 16.0 | <1% |
| Pakistan | 44.7 | 1.1 | 4.7 | 1% |
| Mongolia | 36.0 | 0.9 | 297.0 | 1% |
| Myanmar | 35.0 | 0.0 | 0.5 | <1% |
| Rwanda | 32.4 | 0.0 | 1.6 | <1% |
| Cameroon | 31.0 | 0.4 | 14.4 | <1% |
| Bhutan | 30.6 | 0.0 | 2.3 | <1% |
| China | 30.2 | 5.5 | 4.0 | 5% |

Source: Air Quality Life Index

Of the 7.3 billion people exposed to unsafe levels of air pollution every year, 80% live in low- and middle-income countries.²³ Air pollution disproportionately affects individuals and especially marginalised communities in lower-income countries where there are fewer and less strict air quality regulations and which often have a higher prevalence of polluting industry, transport and energy practices.²⁴ This exposure to air pollution can be compounded if those experiencing it do not have access to quality healthcare.

Despite these findings, air quality funding is not sufficiently being targeted at low-income countries. In fact, upper middle-income countries tend to dominate recipient rankings. For instance, from 2018 to 2022, low-income countries received an average of \$2 of overall air quality funding per person, compared to \$24 and \$73 per person for lower middle-income countries and upper middle-income countries, respectively.* Average funding per person for upper-middle income countries is skewed upwards by a small number of countries that receive relatively high levels of per capita of overall air quality funding, including Costa Rica (\$386), Georgia (\$226), Montenegro (\$277), Mongolia (\$297) and Serbia (\$452). Lower-income countries have limited fiscal space and therefore a lower capacity to introduce domestic measures to address air quality. International development funders must ensure that they take income, pollution exposure and wider developmental context into account when considering recipient countries for outdoor air quality funding.

International funding initiatives, such as The Global Fund to Fight AIDS, Tuberculosis and Malaria which invests over \$5 billion a year,²⁵ demonstrate that health is a priority for international funding. Evidence of air pollution's burden on

ix The average of overall air quality for all countries receiving international development financing.

x This analysis was conducted using the World Bank's country income classification data, accessed July 2024.

human health implies that improving air quality should be considered in parallel with other critical health priorities to save lives and protect the poorest in society. By centring equity in the development of clean air strategies, donors can ensure that their funding reaches those highly exposed countries in underserved regions that face significant challenges in addressing the health consequences of air pollution as a result of their weaker health systems. Combined with an increase in total flows of air quality finance, these positive steps will make it possible to address the regional inequity evidenced by the data.

CASE STUDY: USAID CLEAN AIR CATALYST

Cities in low- and middle-income countries bear the brunt of air pollution and climate change, globally. The flagship programme of the U.S. Agency for International Development (USAID), Clean Air Catalyst, aims to tackle this by providing the necessary capacity and support to local governments in three pilot cities, Indore (India), Jakarta (Indonesia) and Nairobi (Kenya). The programme is supported by an international consortium led by the World Resources Institute and Environmental Defense Fund that includes Columbia University's Clean Air Toolbox for Cities, the Climate and Clean Air Coalition, the Internews Network, MAP-AQ, OpenAQ and Vital Strategies.

TACKLING AIR POLLUTION BY APPLYING A HOLISTIC APPROACH

From 2021 to 2025, USAID is investing up to \$20 million by way of grant support to the cities of Indore, Jakarta and Nairobi.²⁶ The initiative applies a holistic approach by improving the knowledge around the source of pollution and by using this information to identify the most effective interventions. It aims to work with local governments, the private sector and community partners to reduce the bottlenecks. Some project examples are detailed below:

Indore

To improve the knowledge of air pollution distribution and its sources within Indore, USAID funded, in January 2023, the installation of three new air quality monitoring stations, including one that monitors both black carbon and PM2.5. The results from these have provided an understanding of the timing of air pollution, with high levels recorded during the mornings and evenings. These suggest that transportation is a significant contributor of air pollution.²⁷

Jakarta

Alongside funding improvements in the data collection, USAID also has engaged stakeholders for their perspectives. A learning workshop was held including mostly female neighbours from urban villages, non-government organisations and air pollution experts. Topics included the impacts of air quality solutions and information sharing strategies for hard-to-reach communities.²⁸

Nairobi

USAID has funded a training workshop, relating to air pollution in the Kenyan capital, for 49 journalists and editors. It focussed on building the capacity of local journalists to improve the media coverage of air quality issues as well as a deepening of public understanding.²⁹

This initiative aims to demonstrate how future projects can map local air pollution sources cost effectively, as well as provide tailored solutions with an inclusive approach. The workshop demonstrated how actions to reduce air pollution also should consider the impact on marginalised communities and how the co-benefits of health, climate change and development goals can be effectively captured.

INDEBTED COUNTRIES ARE RECEIVING 92% OF THEIR OVERALL AIR QUALITY FUNDING AS LOANS.

Debt vulnerabilities in lower-income countries have increased sharply in recent years. Sluggish growth following the COVID-19 pandemic and cost-of-living shocks have led to many countries borrowing more to support domestic spending and meet costly import bills. Countries with growing debt burdens have been hit hard by higher interest rates, with debt servicing costs expected to increase by up to 39% for the world's 24 poorest countries in 2023 and 2024. As a result, many governments have less money for domestic spending in areas that could promote growth and sustainable development, such as air quality.

Countries struggling to manage debt burdens may be reluctant or unable to take on new borrowing. Against this backdrop, concessional air quality finance (i.e. finance offered at more favourable terms than the market) can be a lifeline for highly polluted countries that cannot afford to take on more market-rate loans. Increasing the volume and efficiency of concessional capital, particularly grants, is key to avoiding recipient-side delays to project implementation and ensuring air quality funding reaches where it is needed most.

Despite the demonstrated need for grant financing, air quality funding is dominated by loans. From 2018–2022, 92% of overall air quality funding was provided as loans, and just one third of that loan funding was provided at concessional rates (Table 2.3). Only 6% of overall air quality funding came in the form of grants, in stark contrast to the 63% share of grant funding seen for total Official Development Assistance in 2022. 32,xii

TABLE 2.3: AIR QUALITY FUNDING BY INSTRUMENT, 2018 - 2022

| | Funding provided as loans | Loan total (\$ bn) | Funding provided as grants | Grant total (\$ bn) | Concessional funding | Concessional funding total (\$ bn) | 2018- 2022 total |
|--|---------------------------------|--------------------------|----------------------------------|---------------------------|-------------------------|--|------------------------|
| Overall air quality funding | 92% | 103.5 | 6% | 6.3 | 36% | 40.4 | 112.0 |
| Outdoor air quality funding | 91% | 14.7 | 8% | 1.3 | 70% | 11.2 | 15.8 |
| Funding with air quality co- benefits | 92% | 88.8 | 5% | 5.0 | 30% | 29.2 | 96.2 |

Table note: funding totals include very small amounts of funding delivered through instruments other than grants and loans, such as risk management instruments and project-level equity. This means that together, grant funding and loan funding will make up slightly less than 100% of the total.

This imbalance highlights that international development funders should increase the provision of low-cost loans and especially grants being committed for projects with air quality co-benefits. Ensuring careful targeting of these instruments

xi The remaining 2% of overall air quality funding was provided through other instruments including project-level equity and risk management funding.

xii For 2022 specifically, the percentage of overall air quality provided as loans was 93%.

for countries at risk of debt distress with high exposure to air pollution could yield high returns. The ADB provides a good example of this targeting with its Concessional Assistance Policy,³³ which uses measures of debt distress to determine the proportion of grants received by recipients.

The picture is slightly improved when considering outdoor air quality funding in isolation, though proportions of concessional finance still sit far below the average for international development funding. Outdoor air quality was similarly dominated by loan funding from 2018 - 2022, with loans making up 91% of the total. However, 70% of financing was concessional; this is a measured improvement on the 30% seen for funding with air quality co-benefits. However, the proportion of grant financing still remains very low when focusing on outdoor air quality, making up only 8% of flows.

Development agencies, national governments and multilateral DFIs all appear in the list of top providers of concessional air quality finance (Table 2.4). Even within this table, there is a great deal of variation; some funders, such as the ADB, are included due to the sheer volume of their overall financing but provide very low shares at concessional terms. Many provide high volumes of low-cost loans but very few grants, and only the Canadian Government is providing the majority of its overall air quality funding in grant form.

Air quality cannot continue to be the poor cousin within development, receiving chronically low levels of concessional funding and even lower levels as grants. The high proportion of market-rate loans in funders' air quality finance means that it is more expensive for recipient countries to pursue air quality improvements than to address other areas of development. As many low and middle-income countries struggle to keep on top of their debt burdens, this can actively discourage efforts to address one of the greatest dangers to public health and development today.

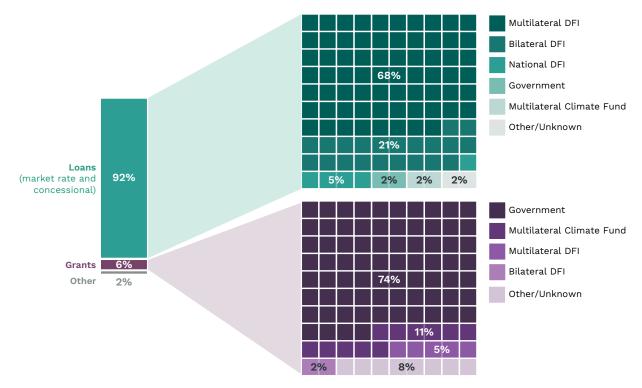
TABLE 2.4: TOP PROVIDERS OF CONCESSIONAL OVERALL AIR QUALITY FUNDING, 2018 - 2022

| Ranking | Funder | Concessional finance (\$ million) | % of grants in overall air quality finance | % of low-cost loans in overall air quality finance |
|---------|---|---|---|--|
| 1 | Japan International Cooperation Agency | 15,361 | 0% | 100% |
| 2 | European Investment Bank | 4,007 | 0% | 15% |
| 3 | France's Agence Française de Développement | 2,745 | 4% | 81% |
| 4 | Germany's KfW Group | 2,414 | 0% | 100% |
| 5 | Green Climate Fund | 1,858 | 20% | 45% |
| 6 | Government of Japan | 1,505 | 0% | 100% |
| 7 | Export-Import Bank of Korea | 1,497 | 0% | 100% |
| 8 | Central American Bank for Economic Integration | 1,312 | 0% | 100% |
| 9 | Asian Development Bank | 1,052 | 1% | 4% |
| 10 | Government of Canada | 959 | 75% | 25% |



TRUCK REPAIR IN ACCRA, GHANA. CREDIT: PRINCE KUARANCHIE

FIGURE 2.6: OVERALL AIR QUALITY FUNDING BY INSTRUMENT AND TYPE OF FUNDER, 2018-2022



Multilateral DFIs continue to provide the largest share of overall air quality funding, making up 63% of the total over the five years from 2018 to 2022 and representing six of the top ten donors (Table 2.5). Two multilateral DFIs in particular, the European Investment Bank and the Asian Development Bank (ADB), have provided two-thirds of multilateral DFI funding for overall air quality (Table 2.6). The ranking of donors changed little since last year's 2017–2021 assessment in terms of rankings, with no new entrants or exits. While bilateral DFIs (Japan International Cooperation Agency (JICA)), Agence Française de Développement/ PROPARCO), national DFIs (i.e. China Development Bank) and multilateral climate funds (i.e. Green Climate Fund) are all present in the top donor ranking, these types of institutions, collectively, have provided less than half the multilateral DFI-level of funding over 2018–2022.

TABLE 2.5: TOP TEN DONORS FOR OVERALL AIR QUALITY, 2018–2022

| Current ranking (2018–2022) | Previous ranking (2017–2021) | Funder | Overall air quality funding (\$ bn) |
|-----------------------------------|------------------------------------|---|---|
| 1 | 2 | European Investment Bank | 26.7 |
| 2 | 1 | Asian Development Bank | 19.7 |
| 3 | 3 | Japan International Cooperation Agency | 15.4 |
| 4 | 5 | World Bank Group | 6.0 |
| 5 | 4 | Asian Infrastructure Investment Bank | 4.8 |
| 6 | 6 | China Development Bank | 4.5 |
| 7 | 7 | Inter-American Development Bank | 4.4 |
| 8 | 8 | European Bank for Reconstruction and Development | 4.2 |
| 9 | 9 | France's Agence Française de Développement/ PROPARCO | 3.7 |
| 10 | 10 | Green Climate Fund | 2.9 |

TABLE 2.6: TOP TEN MULTILATERAL FUNDERS OF OVERALL AIR QUALITY, 2018–2022

| Current ranking (2018–2022) | Previous ranking (2017– 2021) | Funder | Overall air quality funding (\$ bn) |
|--------------------------------|--|---|--|
| 1 | 2 | European Investment Bank | 26.7 |
| 2 | 1 | Asian Development Bank | 19.7 |
| 3 | 4 | World Bank Group | 6.0 |
| 4 | 6 Asian Infrastructure Investment Bank | | 4.8 |
| 5 | 3 | Inter-American Development Bank | 4.4 |
| 6 | 5 | European Bank for Reconstruction and Development | 4.2 |
| 7 | 7 | Development Bank of Latin America | 1.5 |
| 8 | 10 | Central American Bank for Economic Integration | 1.3 |
| 9 | 9 CEB (Council of Europe Development Bank) | | 0.6 |
| 10 | 11 | New Development Bank | 0.5 |

In contrast, when focusing specifically on the smaller pool of outdoor air quality financing, bilateral DFIs have contributed more than multilateral DFIs. From 2018 to 2022, bilateral DFIs have provided 58% of global outdoor air quality funding (or \$9.1 billion) in comparison to the 30% (\$4.8 billion) contributed by multilateral DFIs.^{xiii}

xiii Small amounts of outdoor air quality funding are provided by other types of funders, including government departments and agencies that provide international development funding. This means that the total provided by bilateral and multilateral DFIs will be less than 100%.

Bilateral DFIs are explicitly targeting air quality outcomes in more of their funding than multilateral DFIs. From 2018 to 2022, 40% (or \$9.1 billion out of \$22.7 billion) of bilateral DFI air quality funding went to projects with explicit air quality objectives. For multilateral DFIs, this figure was 7% (or \$4.8 billion out of \$70.6 billion). Bilateral DFIs should maintain and expand their outdoor air quality funding and multilateral DFI should emulate their progress, integrating air quality considerations across sectors and thematic areas.

The smaller pool of explicit outdoor air quality funding comes from a limited number of funders: seven multilateral and five bilateral DFIs contributing the most significant amounts of finance (Table 2.7 and Table 2.8). It is therefore clear that the number of institutions providing outdoor air quality funding must expand. All international development funders need to strengthen the internal case for action on air pollution, integrating air quality considerations across all their respective thematic areas and portfolios.

It is worth noting that the figures and shares discussed in this section can be skewed by large projects (e.g. JICA's \$1.9 billion loan in 2022 relating to the expansion of metro systems in the Philippines). Not only the bilateral but also the multilateral DFIs have seen significant fluctuations in funding over the five years from 2018 to 2022. Thus, data from the years following 2022 will be key to understanding if post-COVID-19 funding changes will be maintained and start to build towards consistent trends.

TABLE 2.7: TOP MULTILATERAL DFI FUNDERS OF OUTDOOR AIR QUALITY, 2018 - 2022

| Ranking | Funder | Outdoor air quality funding (\$ million) | Previous year's ranking |
|---------|---|--|----------------------------|
| 1 | Asian Development Bank | 3,069 | 1 |
| 2 | World Bank Group | 515 | 4 |
| 3 | European Bank for Reconstruction and Development | 497 | 3 |
| 4 | Asian Infrastructure Investment Bank | 380 | 2 |
| 5 | European Investment Bank | 141 | 6 |
| 6 | Islamic Development Bank | 133 | 5 |
| 7 | Inter-American Development Bank | 30 | 7 |

TABLE 2.8: TOP BILATERAL DFI FUNDERS OF OUTDOOR AIR QUALITY, 2018-2022

| Ranking | Funder | Outdoor air quality funding (\$ million) | Previous year's ranking |
|---------|---|--|-------------------------|
| 1 | Japan International Cooperation Agency | 8,508 | 1 |
| 2 | Germany's KfW Group | 344 | n/a |
| 3 | France's Agence Française de Développement/ PROPARCO | 175 | 2 |
| 4 | Austrian Development Bank | 94 | 3 |
| 5 | USAID Inter-American Development Foundation | 1 | n/a |

CASE STUDY: GOVERNMENTS AND BILATERAL DFIS FUNDING OUTDOOR AIR QUALITY PROJECTS

Air quality management begins with air quality tracking that can identify pollution sources and direct funding and support to where it is most needed. However, the absence of comprehensive and precise air quality tracking and data systems continues to be a significant barrier globally.³⁴ Bilateral development finance institutions (DFI) and government agencies with data expertise including the Japan International Cooperation Agency (JICA), Agence Française de Développement (AFD) and the UK Foreign, Commonwealth & Development Office (UK FCDO) have been funding technical assistance programmes for air pollution monitoring in several Asian cities to address this issue.

Since 2022, JICA has funded a technical co-operation project in Thailand (Project for Sustainable Management of PM2.5 Prevention and Reduction Measures), which relates to Bangkok's Metropolitan Region. The project aims to strengthen Bangkok's capacity for air quality management by improving its PM emission inventory, developing a simulation model, assessing the pollution structure, formulating effective pollution control measures and sharing knowledge.³⁵

In 2020, the AFD implemented the Air Quality Improvement Program (AQIP) as part of its regional air quality program in Southeast Asia. The program aims to support member countries within the Association of Southeast Asian Nations in developing clean air policies.³⁶ Through AQIP, AFD—in partnership with the Global Green Growth Institute—initiated, in May 2023, a two-year €800,000 project in the Siem Reap Municipality of Cambodia.³⁷ The project aims to monitor and ultimately publish air quality data to better inform the public and private sectors. Within its first year, AQIP notably developed quality assurance and quality control measures for air quality monitoring stations as well as updating the emission inventory tool for the transport sector.³⁸

Bilateral and multilateral DFIs and government agencies can also partner with each other with a view to expanding their regional reach to more comprehensively address air quality management. As part of its Climate Action for a Resilient Asia (CARA) initiative, the UK FCDO finances £50 million for the Resilient Asia Programme (RAP). RAP seeks to strengthen regional capacity and climate resilience in Asia, including management of its air quality.³⁹ In particular, the Indo-Gangetic Plains that comprise Bangladesh, India, Nepal and Pakistan face critical air pollution, trapped within airsheds. The World Bank is partnering with this programme to implement a broader airshed management approach under its Asia Regional Integration, Cooperation, and Engagement umbrella Trust Fund.⁴⁰

IMPROVEMENTS TO THE TRACKING OF AIR QUALITY FINANCE ARE LONG OVERDUE.

International development agencies must prioritise the standardisation of methodologies to track and report air quality finance. Implementation of robust tracking and reporting will make it easier for funders to track their own progress on air quality and make iterative improvements. Funders taking these steps will be able to assess project impacts in a way that will contribute to improving the business case for future air quality projects.

Introduction of a new air quality marker for the reporting of development funding to the Development Assistance Committee of the Organisation for Economic Cooperation and Development (OECD-DAC) would be a valuable first step. It should be accompanied by wider efforts to develop the shared metrics that allow for enhanced analyses of the effectiveness of the various air quality interventions, to support the increase in funding for maximum impact.

Climate finance tracking frameworks can also be modified to include air quality considerations. As multilateral, bilateral and national DFIs begin to implement frameworks such as the Common Principles for Climate Finance Tracking and their national or regional taxonomies, they also should consider how these methodologies can be built on to track project impact on air pollution metrics alongside factors such as emissions.

3. AIR QUALITY AND CLIMATE FUNDING

Air quality and climate change are two sides of the same coin.⁴¹ Both issues have compounding effects on each other and share many of the same sources, pollutants and, ultimately, solutions. Like air quality, no one is safe from the risks associated with climate impacts, although those in lower-income countries are likely to be harmed first and worst⁴² despite having a low historical contribution to the greenhouse gas (GHG) emissions driving these issues. Projects and interventions that address both climate and air pollution offer the opportunity for international funders to achieve synergies across multiple outcomes, such as health, climate and wider development, thus maximising the impact of their investments.

International climate finance is increasing, albeit too slowly and at too small a scale.xiv It must be used effectively in a way that ensures co-benefits across development metrics (including climate, air quality, gender and poverty) are realised. Funding measures to address super pollutants, such as black carbon, are a clear example; with irreversible climate impacts and lives lost to dirty air, we cannot afford to overlook potential win-win solutions.

At COP29 in November 2024, countries are expected to agree on significant new financial commitments to tackle the climate crisis under the New Collective Quantified Goal (NCQG). There is no better time to take stock of the funding needed to jointly tackle air pollution and climate change.

Donor countries should take account of the full range of benefits their financing can achieve in acting on climate change, including pricing in the many air quality, development and security benefits associated with this investment.

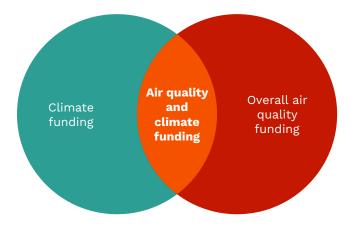
BOX 3.1: INTERLINKAGES BETWEEN AIR POLLUTION AND CLIMATE CHANGE

Air quality and climate are intrinsically linked, with significant crossover in their sources, pollutants and solutions. Global warming and air pollution can be affected by various natural factors (e.g. volcanic eruptions, suspended desert dust); however, the two have been pushed to crisis levels by human activity. Fossil fuels are a key driver, accounting for more than half of the 8.3 million deaths caused by ambient air pollution each year.⁴³ Climate scientists have estimated that 90% of global CO2 emissions in 2023 were related to fossil fuels (as opposed to land-use).⁴⁴ Furthermore, super pollutants, such as methane and black carbon, contribute to both the warming of the planet and to the pollution of our common air.

The negative impacts of climate change exacerbate poor air quality, with longer and hotter summers increasing the risk of polluting and health-harming wildfires and drought-related dust storms.⁴⁵ Reducing the volumes of combusted fossil fuels has a positive impact on not only air quality but also on greenhouse gas emissions, meaning that actions such as replacing diesel vehicles with electric ones, improving energy efficiency in homes and combining an expansion of renewable power generation with a phase-out of fossil generation will all reap the benefits of climate and air quality.

This section analyses the sub-set of international development funding flows that address both air quality and climate, henceforth referred to as air quality and climate funding. As shown in Figure 3.1, this is made up of projects from both outdoor air quality funding and funding with air quality co-benefits.

FIGURE 3.1: RELATIONSHIPS BETWEEN AIR QUALITY FUNDING AND CLIMATE FUNDING



BETWEEN 2018 AND 2022, 84% OF OVERALL AIR QUALITY FUNDING (\$94 BILLION OUT OF \$112 BILLION) WAS DIRECTED TO PROJECTS THAT ALSO ADDRESSED CLIMATE CHANGE.

The majority of international development overall air quality funding also addresses climate change. From 2018 to 2022, \$94 billion (84%) of overall air quality funding went to projects that delivered climate benefits (Table 3.1). Air quality and climate funding reached a record \$31 billion in 2022—a third higher than any other year in this period. The increase can be explained by a greater number of large transport projects with air quality co-benefits being tagged as climate finance in 2022.*

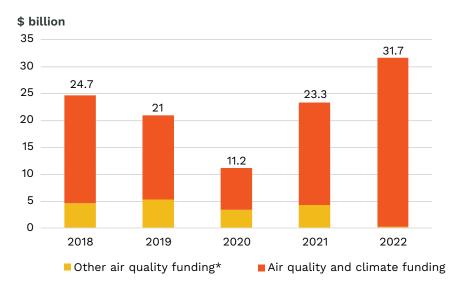
From 2018 to 2022, a remaining \$18 billion (16%) of overall air quality funding went to projects that did not address climate change nor delivered climate-related improvements (Figure 3.2). Examples of these include efforts to improve the monitoring and modelling of air pollution and measures for the reduction of dust. As with the overall funding of air quality, recipients are regionally concentrated, with 65% of the \$94 billion directed to countries in the Asia, Central Asia and Eastern Europe region during the same period, with India and the Philippines benefiting from 15% and 13%, respectively.

TABLE 3.1: AIR QUALITY AND CLIMATE FUNDING, 2018–2022 (\$ BILLION)

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2018–2022 total |
|---------------------------------|------|------|------|------|------|--------------------|
| Air quality and climate funding | 20.0 | 15.7 | 7.8 | 19.1 | 31.4 | 94.0 |

xv This increase was also impacted by methodological improvements carried out for this year's report, resulting in a number of out-of-scope projects being removed from the pool of overall air quality funding that does not address climate. This has led to a small increase in the share of air quality and climate funding for 2022.

FIGURE 3.2: AIR QUALITY AND CLIMATE FUNDING AS A SHARE OF OVERALL AIR QUALITY FUNDING, 2018–2022 (\$ BILLION)



*'Other air quality funding' refers to air quality funding that does not address climate change. This category includes projects from both outdoor air quality funding and funding with air quality co-benefits. Examples of 'other air quality funding' include efforts to improve the monitoring and modelling of air pollution and measures for the reduction of dust.

Most overall air quality and climate funding is spent on projects that do not explicitly target air quality. Of the \$94 billion committed to air quality and climate from 2018 to 2022, only \$13 billion (or 14% of total) has included projects with an explicit air quality objective. This is not surprising, as many climate projects are captured within the broader category of funding with air quality co-benefits even if they do not have an explicit air quality objective. Examples of these eligible climate solutions include modal shifts from fossil fuel vehicles to public transport and programmes that promote energy efficiency. The large volume of air quality and climate funding that does not explicitly target air pollution provides the opportunity to improve and maximise air quality outcomes across projects, as was discussed earlier in this report.⁴⁶

BILATERAL DEVELOPMENT FINANCE INSTITUTIONS ARE LEADING THE WAY ON INTEGRATING AIR QUALITY AND CLIMATE AT SCALE, BUT MULTILATERAL DEVELOPMENT FINANCE INSTITUTIONS ARE PROVIDING GREATER VOLUMES OF FUNDING.

Bilateral DFIs are integrating air quality and climate at scale, with 94% of their overall air quality funding also addressing climate change. JICA is an example of this, with 96% of its overall air quality funding also delivering climate improvements. Other donor types, including multilateral DFIs and national governments, offer slightly lower shares of air quality and climate funding, at 81% and 73%, respectively.

During the 2018–2022 period, multilateral DFIs provided 61% of global air quality and climate funding, or \$57 billion out of a total of \$94 billion. The top ten donors for air quality and climate funding have entries from multilateral DFIs, bilateral DFIs, national DFIs and multilateral climate funds (Table 3.2).

\$88 billion of the \$94 billion air quality and climate funding total was provided through loans, with a third of these loans being provided at concessional rates. Only \$4 billion (4%) of air quality and climate funding was given as grants, which is broadly in line with the proportions seen for outdoor air quality funding and overall air quality funding more generally.

TABLE 3.2: TOP FUNDERS OF AIR QUALITY AND CLIMATE FUNDING, 2018–2022

| Ranking | Funder | Overall air quality and climate funding (\$ billion) | |
|----------------------|--|--|--|
| 1 | European Investment Bank | 23.7 | |
| 2 | Asian Development Bank | 17.9 | |
| 3 | Japan International Cooperation Agency | 14.7 | |
| 4 | China Development Bank | 4.5 | |
| 5 | World Bank | 3.4 | |
| 6 | Asian Infrastructure Investment Bank | 3.1 | |
| 7 | France's Agence Française de Développement/PROPARCO | 3.1 | |
| 8 | European Bank for Reconstruction and Development | 3.0 | |
| 9 Green Climate Fund | | 2.6 | |
| 10 | Germany's KfW Group | 2.4 | |

MOST OF THE OVERALL AIR QUALITY AND CLIMATE FUNDING (87%) WENT TO CLIMATE MITIGATION PROJECTS, WITH MUCH OF THIS CONCENTRATED IN THE TRANSPORT SECTOR.

Air quality and climate funding was concentrated in climate mitigation, as opposed to climate adaptation, with \$82 billion (87%) of funding going towards projects aiming to cut emissions. Climate adaptation projects specifically addressing air quality, however, are scarce, making up only 4% of air quality and climate funding, at \$3.9 billion.

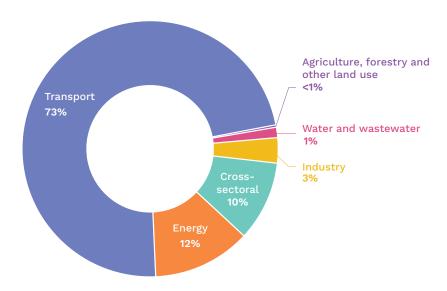
With significant barriers still in place for private adaptation finance, international development funding continues to play an important role in providing and leveraging finance. Adaptation interventions must be carefully assessed and based on the context of the various adaptation activities. Air quality should be considered in parallel with biodiversity, water and land use to avoid an unintentional worsening of air quality in the targeted area.

Within the mitigation component of air quality and climate funding, the projects covered a range of sectors, with transport (73%), energy systems (12%)^{xvi}, and cross-sectoral projects (10%) topping the list (Figure 3.3). Transport projects are a significant example of how climate and air quality considerations can be integrated in project design. Rail and public transport projects dominate air quality and climate funding, as illustrated by three major projects in 2022:

- Launch of the Manila subway project (\$1.9 billion)
- Creation of a mass rapid transit system in Dhaka (\$984 million)
- Construction of a high-speed rail in Mumbai-Ahmedabad (\$761 million)

Other notable sectors with far-reaching impacts, such as AFOLU, continue to be overlooked in terms of air quality and climate funding, making up only 0.3% of the total during the 2018–2022 period.

FIGURE 3.3: AIR QUALITY AND CLIMATE FUNDING BY SECTOR, 2018-2022

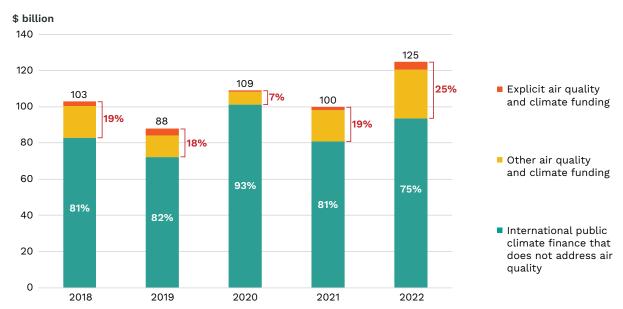


LESS THAN 3% OF INTERNATIONAL PUBLIC CLIMATE FINANCE SPECIFICALLY TARGETED AIR QUALITY, 2018–2022.

The proportion of climate financing from international development funders relating to air quality increased in 2022; this suggests that this share may be bouncing back from the 2020/2021 dip (Figure 3.4). For instance, in 2022, a quarter of international public climate finance either explicitly targeted air quality or delivered air quality co-benefits, representing a strong rebound from the shares of 7% and 19% in 2020 and 2021, respectively. The increase also represents a five-year peak.

Looking over the five years from 2018–2022, international public climate finance amounted to \$525 billion.*Vii Of this, 2.6% (\$13 billion) explicitly targeted outdoor air pollution, representing the intersection between outdoor air quality and climate finance. This is a small increase on the 2% share reported in The State of Global Air Quality Funding 2023 for the 2017–2021 period. The share continues to be too low, considering the significant gains that could have been achieved from targeting, tracking and reporting the air quality benefits of climate interventions.

FIGURE 3.4: AIR QUALITY AND CLIMATE FUNDING AS A SHARE OF INTERNATIONAL PUBLIC CLIMATE FINANCE, 2018–2022 (\$ BILLION)



CASE STUDY: LEVERAGING AIR QUALITY CO-BENEFITS IN CLIMATE FINANCE: GREEN CLIMATE FUND'S INVESTMENT IN NAIROBI, KENYA (2018)

Problem

As a rapidly urbanising middle-income country, Kenya faces rising emissions and deteriorating air quality. Transport, waste mismanagement and biomass fuel burning are key sources of air pollution in the country's capital city, accounting for 40%, 25%, and 15% of PM2.5 concentrations in the city.⁴⁷ In 2019, Nairobi recorded air pollution that was 4.2 times higher than recommended levels by the World Health Organization.⁴⁸ Limited national monitoring capabilities hindered informed decision-making and investments on climate change mitigation and adaptation strategies.⁴⁹ Air quality monitoring stations were often private or serving specific research purposes, lacking the scope and data accessibility required for national planning.

Solution

The Kenyan government secured \$9.3 million funding from the Green Climate Fund and co-financers to develop a greenhouse gas (GHG) and short-lived climate pollutant monitoring network in Nairobi for improved compliance and stricter enforcement of emission standards. This was in addition to more comprehensive climate change reporting. This project aligns with multiple goals of the Kenyan government. It directly supports Kenya's "Vision 2030", which aims to elevate itself to a nation that provides a high quality of life in the next decade by reducing air pollution. The emissions data collected will inform Kenya's efforts to reduce GHG emissions by 32% by 2030 under the Paris Agreement.⁵⁰

This project has four main components:

- 1. **Establish a city-wide emissions monitoring network** to track various SLCPs, including black carbon and methane, as well as GHGs like carbon dioxide, along with atmospheric parameters.
- 2. **Develop emission and transport models** to estimate pollution levels in areas not covered by monitoring stations; identify pollution sources; and predict future air quality scenarios.
- **3. Strategic communication and outreach** focused on raising public awareness about air quality issues. This includes sharing targeted air quality data with enforcement agencies and policymakers to bridge knowledge gaps.
- **4. Strengthen institutions** to maintain the network beyond the duration of the project and build human and institutional capacity.

Impact

Financing air quality makes climate finance more comprehensive. The Green Climate Fund considers a range of investment criteria when approving projects. Air quality has been specifically identified as an environmental co-benefit indicator under sustainable development potential criteria. Beyond directly meeting these criteria, this project also showcases the co-benefits of addressing air quality, especially in terms of reducing burdens on the healthcare sector and the economy at large. An estimated 2,100 deaths could be prevented if clean air interventions are implemented from 2030 to 2040. The cumulative impact of these interventions would also translate into an estimated \$192 million savings, representing approximately 23% of Kenya's total healthcare expenditure in 2022. 52

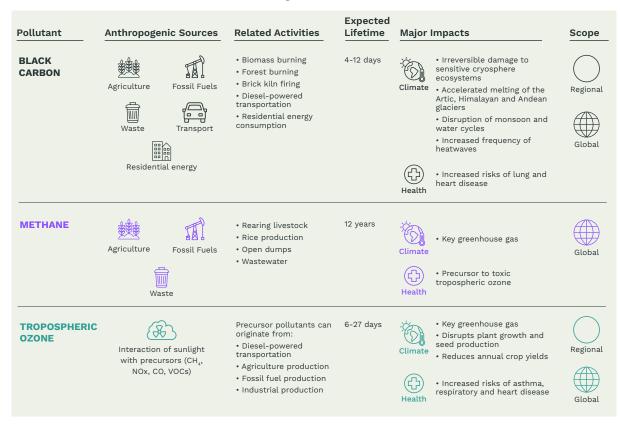


THE INTERSECTION OF AIR QUALITY AND CLIMATE: SHORT-LIVED CLIMATE POLLUTANTS.

Short-lived climate pollutants, or super pollutants – methane ($\mathrm{CH_4}$), black carbon, hydrofluorocarbons (HFCs), and tropospheric ozone ($\mathrm{O_3}$) – are significant contributors to anthropogenic global warming.⁵³ The names of these pollutants are derived from the fact that they remain in the atmosphere for a relatively short period in comparison to $\mathrm{CO_2}$, which continues to affect climate for a longer period.⁵⁴ Although super pollutants' atmospheric lifetimes are short, their warming potential is greater than that of $\mathrm{CO_2}$. In other words, they are more effective at trapping solar radiation in the atmosphere for the time that they are around. The short lifetimes and potent climate effects of these pollutants mean that reducing them can have fast and powerful benefits on warming. Action on super pollutants is needed to meet the temperature goal of the Paris Agreement. According to the IPCC's Sixth Assessment Report, even rigorous action on $\mathrm{CO_2}$ leaves a greater than 66% chance of exceeding the 1.5°C limit if non- $\mathrm{CO_2}$ pollutants are not significantly reduced.⁵⁵

At the intersection of climate change and air pollution, the super pollutants black carbon, methane and tropospheric ozone severely affect health outcomes (Figure 3.5). Many of the 8.3 million deaths from air pollution, worldwide, in 2021 were the result of super pollutants (6% were due to ozone, of which methane is a precursor; 38% were from household air pollution, including black carbon emissions from cookstoves; and 58% were from ambient PM2.5, of which black carbon is a primary component). Tackling these pollutants will not only slow the warming of the planet but also save lives. An overview of the sources, major impacts, and regional scope of short-lived climate pollutants is depicted in Figure 3.5.

FIGURE 3.5: OVERVIEW OF SHORT-LIVED CLIMATE POLLUTANTS AT THE INTERSECTION OF CLIMATE AND AIR QUALITY



DEADLY SUPER POLLUTANT BLACK CARBON IS SYSTEMATICALLY OVERLOOKED BY INTERNATIONAL DEVELOPMENT FUNDERS.

Methane, a short-lived climate pollutant, has been attracting increased global attention in recent years, following the launch of the Global Methane Pledge at COP26 in 2021. This pollutant-specific approach has seen remarkable success, with 158 countries and the European Union participating in the pledge and over \$1 billion in new grant funding mobilised in the year between COP27 and COP28 for methane action.⁵⁷ The urgent need for action on black carbon funding (Box 3.3) suggests that a similar pollutant-specific drive from the international climate community also should be considered.

BOX 3.3: WHY FUND BLACK CARBON?

Black carbon, a component of particulate matter that is primarily produced by the incomplete combustion of fossil fuels and biomass, deserves a unique focus among short-lived climate pollutants and climate-air quality pollutants:

- Climate impacts and tipping points: Black carbon absorbs sunlight and heats the atmosphere, increasing global warming. When deposited on ice and snow, it limits the ability of surfaces to reflect sunlight, leading to the heating of the surface and an accelerated melt.⁵⁸ Loss of Arctic ice can establish feedback loops that result in further warming, as less ice means reduced reflection of sunlight and ice melt risks releasing methane stored in permafrost.⁵⁹ Black carbon also affects the formation of clouds and rain patterns and can exacerbate heatwaves and heat-related illnesses.⁶⁰
- Impact on human health: This particulate matter is a component of air pollution, causing significant harm to human health, including respiratory and cardiovascular diseases. Black carbon is a major contributor to the 8.3 million yearly deaths from ambient air pollution.
- Known solutions: Black carbon is co-emitted alongside other particulate matter and gases, including CO₂, that have established monitoring processes and known mitigation solutions. While sources vary by geographic region, there are many tried and tested solutions to reduce black carbon emissions (and their co-pollutants), such as switching to clean cooking and clean transportation. Results are demonstrated through California's success in reducing these emissions by approximately 90% over 50 years by way of emission standards for diesel vehicles and regulations on biomass burning.⁶¹

Under current policy scenarios, it is estimated that black carbon emissions will decrease slightly (around 3%) by 2030 – mostly originating from black carbon reductions in China.⁶² These limited reductions are not sufficient to limit global warming to 1.5°C and will not reduce the health burden of black carbon to the required scale. Far more remains to be done in terms of black carbon reductions for climate and health benefits. According to the Climate and Clean Air Coalition (CCAC), an 80% reduction of black carbon is technically possible using existing solutions, such as interventions in the brick manufacturing sector, improved standards in transport fuels, and improved access to finance and technology.^{63,64}

Black carbon has been repeatedly overlooked by climate and air quality protocols and targeted financing, often going completely untracked. 65,66 As such, it is vital that more development finance is directed towards black carbon to establish monitoring, scale deployment of solutions and integrate considerations of short-lived climate pollutants across climate and development agendas.

DESPITE THE POWERFUL BENEFITS OF TACKLING BLACK CARBON, IT IS BARELY BEING FUNDED, RECEIVING LESS THAN 1% OF OUTDOOR AIR QUALITY FINANCE.

This is the first time funding for addressing black carbon is tracked in The State of Global Air Quality Funding.*VIII The analysis shows that explicit action on black carbon carbon (projects where black carbon or soot are mentioned directly) is barely being funded, receiving only \$18 million during the 2018–2022 period (Figure 3.6). International development funders' black carbon finance from 2018 to 2022 represents only 0.1% of their outdoor air quality funding; in other words, black carbon finance makes up an incredibly small fraction of an already limited pool of funds. These figures are extremely low considering the unique and powerful role this pollutant plays in planetary health.

Only eight international development funders provided black carbon finance from 2018 to 2022, and all of them were bilateral DFIs and government departments and agencies (Table 3.3). The absence of multilateral DFI funding represents a costly missed opportunity.

Funding for projects addressing black carbon-rich sources over the same time period was estimated at a higher \$2.8 billion. These funds predominantly support projects in the residential sector, e.g. on clean cooking, and large market-rate loans to China where black carbon emissions have been reducing over the last decade. Greater awareness and understanding on black carbon, particularly its powerful climate effects close to cryosphere regions like the Himalayas and monsoon systems like in West Africa, is vital towards prioritising underfunded solutions that can maximise local climate and health benefits.

FIGURE 3.6: BLACK CARBON FINANCE, 2018–2022 (\$ MILLIONS)

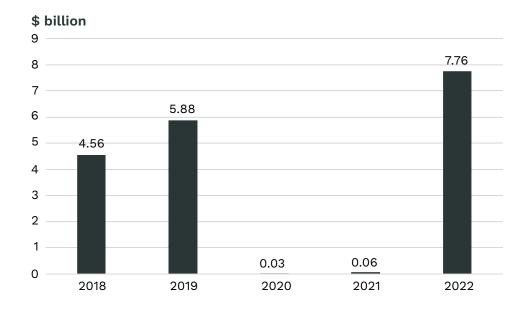


TABLE 3.3: PROVIDERS OF BLACK CARBON FINANCE, 2018-2022

| Ranking | Funder | Black carbon finance (\$ million) | | |
|---------|---|-----------------------------------|--|--|
| 1 | Government of Canada | 8 | | |
| 2 | U.S. Agency for International Development | 5 | | |
| 3 | Government of Norway | 3 | | |
| 4 | Government of Germany | 3 | | |
| 5 | Swedish International Development Cooperation Agency | <1 | | |
| 6 | Government of the United Kingdom | <1 | | |
| 7 | Slovak Agency for International Development | <1 | | |
| 8 | Swedish Research Council | <1 | | |

A clear opportunity exists for development funders to tackle black carbon emissions through their investments. Improving the data collection and reporting of black carbon is an important first step. This would help funders in their efforts to amass evidence on the triple benefits of their projects (climate mitigation, adaptation, and health) as well as encourage funding for future projects.

One way to address the staggering gaps in black carbon financing is by integrating black carbon targets and additional measures into Nationally Determined Contributions (NDCs), which will attract donor funding by communicating national needs and signalling intent to act (Box 3.4). Ultimately, this would also allow better tracking of progress against black carbon reductions. As of 2023, however, only 17 countries have included black carbon considerations in their NDCs.⁶⁷

The Climate and Clean Air Coalition provides various publications to support inclusion of black carbon and other non-CO2 pollutants within NDCs.⁶⁸

Black carbon has been overlooked not only by international development funders but also by policymakers, regulators and the private sector. Addressing black carbon does not require a new suite of solutions to detract from wider development efforts; rather, huge gains can be unlocked by targeting this super pollutant in joined-up overall air quality and climate action. To be effective, however, it calls for increased financing. Drawing on the success of the single-pollutant approach utilised for methane, development funders, governments, the private sector and civil society must be well informed of the urgency required to address the pollutant's harms, with actors joining together as soon as possible to initiate the mobilisation of funds at scale. As development resources wear thin, these win-win opportunities must not remain untapped.

CASE STUDY: INTEGRATING SHORT-LIVED CLIMATE POLLUTANTS INTO NATIONALLY DETERMINED CONTRIBUTIONS: SUCCESS OF THE BRICKS INITIATIVE IN COLOMBIA (2020)

An integrated approach

Colombia has undertaken a proactive and integrated approach to address air pollution and climate change. In its 2020 NDC, Colombia emerged as a leader in tackling the climate change-air quality nexus. The country's effort is underscored by its top ranking on the Global Climate & Health Alliance's NDC Scorecard for having developed a set of comprehensive national policies on air quality, a prime example for integrating short-lived climate pollutants (SLCP) into NDC objectives.⁶⁹

Methane and hydrofluorocarbons represent 9% of Colombia's total greenhouse gas reduction commitment.⁷⁰ Moreover, Colombia became one of the first countries to prominently feature black carbon in its NDC by committing to a 40% reduction from 2014 levels.⁷¹

This successful integration of SLCPs into Colombia's 2020 NDC stems from its longstanding collaboration with the Climate and Clean Air Coalition (CCAC). By applying the CCAC's Supporting National Action and Planning on SLCP methodology, Colombia effectively developed its national strategy for SLCP mitigation in 2018.⁷²

A notable example of its NDC sectoral target-setting on critical linkages between climate change and air quality is evidenced from the brick industry, historically one of Colombia's most significant black carbon and CO2 emitters. The proposed measures within the brick industry are projected to reduce CO2 emissions by 0.19 million tonnes and black carbon emissions by 83 tonnes by 2030, compared to 2014 levels. Evidently, integrating black carbon into NDCs is an effective way to achieve synergy between climate and air quality governance.

The case study below, coupled with the integration of black carbon in Colombia's NDC, ultimately demonstrates the importance of consistently and holistically tracking climate and air quality co-benefits in projects. In doing so, countries can leverage compelling narratives to attract funding by demonstrating that addressing air pollution can contribute significantly to global climate goals. Similarly, SLCP targets can act as an incentive for project developers to actively seek these co-benefits to enhance their access to funding, while also promoting greater government coordination between climate and air quality domains.

Tackling black carbon and CO2 emissions in brick production: a successful initiative funded by the CCAC (2013–2020)

Problem

Production of hand-moulded bricks using rudimentary kilns accounts for an estimated 20% of total worldwide black carbon emissions. These kilns, typically heated with coal, are widespread globally. In Colombia, with over 2,435 brick kilns, 70% of which operate on fossil fuels, the brick sector was an important sector to address. It is an economically significant industry, directly employing 21,000 people and indirectly supporting nearly 8,000 more. A major problem lies with artisanal kilns, which produce only 11% of the country's bricks but make up the majority (75%) of kilns. The industry has severe health implications, contributing to estimated 15,700 annual air pollution-related deaths in the country.

Solution

From 2013 to 2020, a CCAC-funded project, in collaboration with Colombia's Ministry of Environment and the Corporación Ambiental Empresarial, targeted sustainable production practices in the brick industry through three key objectives.⁸⁰

- 1. Create an enabling public policy environment: This aims to reduce black carbon emissions and increase sustainability in the sector.
- 2. Increase scientific knowledge and technical tools: The project developed detailed inventories, conducted emission measurements, and performed cost-benefit analyses.
- **3.** Raise awareness and provide incentives: This involved engaging brick producers in the transition to sustainable practices.
- **4.** For the first time in Latin America, black carbon emissions from the brick industry were monitored and measured, providing the basis for a comprehensive portfolio of mitigation and reduction actions. The project, with an implemented budget of \$647,130, was part of the broader CCAC Bricks Initiative, which had a global budget of over \$3.8 million. Bricks Initiative, which had a global budget of over \$3.8 million.

Impact

This CCAC initiative made significant progress between 2016 and 2017, resulting in the reduction of 194,775 tonnes of CO2 emissions through the adoption of more energy-efficient technologies and practices across 255 brick kilns in Latin America.⁸⁴ In Colombia, the collaboration achieved notable milestones:⁸⁵

- Identification of nine emission factors for technological models
- 168 black carbon measurements, carried out across ten departments
- 2,446 people trained
- 832 hours of measurements
- 34 businesses and eight universities involved in research and measurement efforts
- A portfolio of black carbon reduction activities developed for the sector.

Additionally, the project led to the amendment of legislation to better regulate the brick industry, a significant step in formalising and overseeing this historically informal sector.⁸⁷ In recognition of its pioneering efforts, the project received the Sustainable Development Goals Award in 2020 under the non-business category by the Global Compact Network for Colombia and the Bogota Chamber of Commerce. The 'Colombian model' has been lauded for sustainable brick production, serving as a template for similar initiatives worldwide.⁸⁷

"Housing is about shelter. Seeing - very literally- air pollution from brick production, a primary building material in many regions, was simply unacceptable. We supported work that brought together brick producers and governments, to improve processes, to cut down emissions and operating cost. Investing in improved operations means investing in clean air and reducing near-term warming.

Our work with Colombia's brick sector demonstrates these multiple benefits, including reduced pollutant exposure for producers, their families and surrounding communities. It is high time we prioritize investments and actions that cut super pollutants in key sectors." - Martina Otto, Head of Climate and Clean Air Coalition Secretariat at UNEP

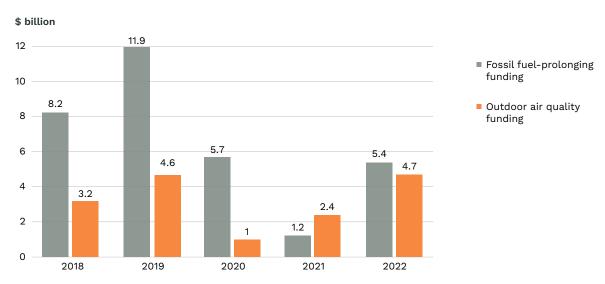
4. FOSSIL FUEL-PROLONGING FUNDING

At the conclusion of the 2022 German G7 summit, world leaders committed to end their direct international public funding of fossil fuels by the end of the year. Since then, countries from across the world have come together to make landmark pronouncements at COP28 on their intent to transition away from fossil fuels in energy systems to make space for low carbon technologies. These commitments added to a slew of G7 and G20 promises to phase out inefficient fossil fuel subsidies, made every year since 2009.

DESPITE A PROMISING DOWNTURN IN 2021, FOSSIL FUEL-PROLONGING FUNDING INCREASED BY 350% TO \$5.4 BILLION IN 2022.

The extent to which the 2022 G7 commitment has gone ignored is significant. The data paints a very clear picture (Figure 4.1) of a dramatic increase in donor's fossil fuel-prolonging funding in 2022. This funding increased by almost 350% between 2021 and 2022 (from \$1.2 billion to \$5.4 billion). This follows a promising dip in 2021 of funding for counter-productive fossil fuel-prolonging projects. Instead, in 2022, fossil fuel-prolonging funding is once again higher than outdoor air quality funding. A growing gap between commitment and action reinforces the need for renewed focus and accountability on the phasing out of all fossil fuel funding by international development funders.

FIGURE 4.1: ANNUAL INTERNATIONAL DEVELOPMENT FUNDING FOR FOSSIL FUEL-PROLONGING PROJECTS, 2018–2022



GLOBAL INSTABILITY IS LIKELY TO HARM PROSPECTS FOR AN ACCELERATED AND JUST TRANSITION.

Heavy reliance on fossil fuels was typical of post-pandemic economic recoveries, following two years of national lockdowns and global travel restrictions that led to a marked reduction in demand during 2020 and 2021.89 The Russian invasion of Ukraine in February 2022 led to spikes in energy prices and concerns about security of supply, possibly contributing to the increases in the proportion of international development funding going towards fossil fuel projects in recipient countries. Much of the fossil fuel-prolonging funding that international development funders committed in 2022 will not bear fruit for many years; therefore, it is highly unlikely that this funding was providing meaningful support or relief for recipient countries in the midst of the energy crisis.

Locking in a high-carbon pathway for recipient countries' future economic development will have serious impacts. International development funders must have watertight strategies that will prevent their funding from contributing to this outcome.

MULTILATERAL DFIS DOMINATE LIST OF INSTITUTIONS CHANNELING INTERNATIONAL DEVELOPMENT FUNDING INTO FOSSIL FUELS.

The funding of fossil fuels inflicts major health and environmental costs across ecosystems and populations, with a disproportionate impact on vulnerable demographics and communities. It is a missed opportunity for investments that could have delivered equitable health, environmental and economic benefits. International development funding of fossil fuels must be reduced at pace, within a just transition framework to ensure that the lowest-income communities and workers are not left behind.

Amongst international development funders, multilateral development banks (MDBs) continue to provide the lion's share of fossil fuel-prolonging funding.xix From 2018 to 2022, eight of the top ten funders were MDBs, except for JICA and the Saudi Development and Reconstruction Program for Yemen. The eight MDBs contributed \$22.9 billion (71%) of fossil fuel-prolonging funding during this five-year period. These assessments are taken from publicly available OECD-DAC data.⁹⁰

The top three funders during the 2018–2022 period were the Islamic Development Bank (IsDB) (\$11.2 billion), JICA (\$4.6 billion) and EBRD (\$2.9 billion), as shown in Table 4.1. The IsDB commonly invested in oil and gas extraction, production and refinery processes in countries including Bangladesh, Egypt and Pakistan. JICA invested in coal-fired power plants in Bangladesh, gas-fired power plants in Uzbekistan and oil and gas refinery upgrading in Iraq. JICA also funded technical cooperation activities in the Middle East, Sub-Saharan Africa and East Asia and

the Pacific. EBRD funded natural gas power plants and provided some support for the build up of gas reserves in Ukraine and Moldova in 2022.

The ISDB has kept its top position each year from 2018 to 2020. While JICA was a significant funder during this period, notably ranking second in 2019 with \$3.9 billion fossil fuel-prolonging funding, it has considerably reduced its funding in recent years and was no longer a lead funder in 2021 or 2022. The OPEC Fund for International Development and Germany's KfW Group, have likewise fallen out of the league table despite ranking highly in earlier years. KfW Group and JICA are agencies of G7 governments, suggesting increasing alignment with G7 commitments to reduce funding by the end of 2022. Conversely, the Saudi Development and Reconstruction Program for Yemen and the Abu Dhabi Fund for Development have joined the league table from 2021 onwards.

ADB has ranked in the top ten countries from 2018 to 2022, ranking third in 2022 with \$691 million fossil fuel-prolonging funding, as seen in this year's rankings in Table 4.2. The European Bank for Reconstruction and Development and the World Bank Group have ranked in the top ten each year from 2018-2022.

TABLE 4.1: TOP TEN PROVIDERS OF FOSSIL FUEL-PROLONGING FINANCE, 2018–2022

| Ranking | Funder | Fossil-fuel prolonging funding (\$bn) | Percentage of total (%) | Overall air quality funding (\$bn) | Percentage of overall air quality funding (%) |
|---------|--|--|----------------------------|---|--|
| 1 | Islamic Development Bank | 11.2 | 35% | 0.5 | <1% |
| 2 | Japan International Cooperation Agency | 4.6 | 14% | 15.4 | 14% |
| 3 | European Bank for Reconstruction and Development | 2.9 | 9% | 4.2 | 4% |
| 4 | Asian Development Bank | 2.7 | 8% | 19.7 | 18% |
| 5 | World Bank Group | 2.6 | 8% | 6 | 5% |
| 6 | International Islamic Trade Finance Corporation | 1.7 | 5% | 0 | 0 |
| 7 | Inter-American Development Bank | 1.3 | 4% | 4.4 | 4% |
| 8 | Asian Infrastructure Investment Bank | 0.7 | 2% | 4.8 | 4% |
| 9 | European Investment Bank | 0.7 | 2% | 26.7 | 24% |
| 10 | OPEC Fund for International Development | 0.7 | 2% | 0 | 0 |
| | All top ten funders | 29.2 | | 81.6 | |

TABLE 4.2: TOP TEN PROVIDERS OF FOSSIL FUEL-PROLONGING FINANCE, 2022

| Ranking | Funder | Fossil-fuel prolonging funding (\$bn) | Percentage of total (%) | Overall air quality funding (\$bn) | Percentage of overall air quality funding (%) |
|---------|---|--|----------------------------|---|--|
| 1 | International Islamic Trade Finance Corporation | 1.7 | 32% | 0 | 0 |
| 2 | European Bank for Reconstruction and Development | 1.1 | 20% | 0.9 | 3% |
| 3 | Asian Development Bank | 0.7 | 13% | 4.7 | 15% |
| 4 | World Bank Group | 0.4 | 8% | 1.0 | 3% |
| 5 | European Investment Bank | 0.3 | 5% | 12.8 | 40% |
| 6 | Saudi Development and Reconstruction Program for Yemen | 0.2 | 3% | 0 | 0 |
| 7 | Development Bank of Latin America | 0.2 | 3% | 0 | 0 |
| 8 | Asian Infrastructure Investment Bank | 0.1 | 2% | 0.9 | 3% |
| 9 | Abu Dhabi Fund for Development | 0.1 | 2% | 0 | 0 |
| 10 | Inter-American Development Bank | 0.1 | 1% | 0.03 | <1% |
| | All top ten funders | 4.8 | | 20.3 | |

FUNDING FOSSIL FUELS CONTRAVENES MULTILATERAL DFIS' OWN CLIMATE COMMITMENTS.

While some of the top ten funders for fossil fuel prolonging projects, such as IsDB, JICA and OPEC Fund for International Development (OFID), have not explicitly committed to excluding fossil fuel investments from their portfolios, some have. The ADB, EBRD and the World Bank have all committed to aligning their operations with the goals of the Paris Agreement.

The firmest and most explicit commitment they have made is the 'phasing out' of coal-related projects, such as financing new coal power plants, thermal coal mining and/or coal-fired electricity generation. These commitments are positive, but there remains considerable ambiguity around funding of other mechanisms for the supply and consumption of fossil fuels. While MDBs have begun to adopt Paris Alignment screening criteria to assess the compatibility of projects with a country's NDC, 91 these criteria may still allow for the financing of fossil fuel-intensive projects that, while aligning with a country's current NDC, may not necessarily contribute to long-term decarbonisation goals. For example, fossil fuel-intensive transport systems (e.g. airports, highways) and the exploration, production and supply of fossil gas are examples of projects that continue to receive MDB funding, despite their commitment to align operations with the Paris Agreement. This highlights a potential gap between short-term NDC compliance and the broader long-term objective of transitioning to a low-carbon economy.

FOSSIL FUEL SUBSIDIES

Most fossil fuel subsidies are delivered through government domestic budgets. As these funds do not originate from international development organisations, they fall outside the scope of the report and are not addressed in detail.

Fossil fuel production can be subsidised through measures such as cash transfers or tax incentives (e.g. rebates or credits) and fossil fuel consumption can be subsidised through measures such as price caps, tax cuts or exemptions and direct support for the purchase of fossil fuel energy. Matching the upward trend of fossil fuel-prolonging funding by international development organisations, subsidies for fossil gas and electricity consumption have more than doubled, with oil subsidies increasing by around 85% in 2022.⁹²

International development funders can lead by example through institutional commitments not to fund fossil fuels, thus helping to shift domestic policy away from fossil fuel subsidies. Their continued funding of renewable energy will reduce the domestic demand for fossil fuels, whilst improving air quality, climate and health globally.



A BUILDING RELEASES FLAMES IN THE INDUSTRIAL AREA OF WITBANK, EMALAHLENI SOUTH AFRICA. CREDIT: GULSHAN KHAN / CLIMATE VISUALS

CASE STUDY: ESTABLISHING AN INTEGRATED REGIONAL APPROACH: AIR POLLUTION AND CLIMATE CHANGE MANAGEMENT IN GREATER CAIRO)

Problem

Greater Cairo (GC) encompasses the Cairo Governorate, part of the Giza and Qalyubia Governorates and other new urban communities, making it one of the largest and most influential metropolitan areas in the Middle East. As GC develops, traffic congestion, industrial power generation and slash-and-burn agriculture have become key sources of air pollution⁹³. Coupled with its dry climate and low-lying topography, GC experiences significant PM2.5 air pollution. In 2021, the average person in Egypt was exposed to a PM2.5 level of 18.24µg/m3 which is about 3.6 times higher than WHO air quality guidelines.⁹⁴

Solution

Over the years, GC has improved its air quality, especially through the transport sector. In 2012, Egypt opened its Metro Line 3 and extended it two years later. During the same period, to boost economic growth and address deepening socioeconomic inequality, the government of Egypt introduced reforms to its energy subsidies, which had accounted for 22% of the national budget in FY2013/14.95 As a result of these reforms, energy subsidy spending was reduced by 29% in the first quarter of FY2014/1596. The fossil fuel reforms raised fuel prices with the price of diesel soaring by 64%,97 disincentivising private vehicle usage.

Impact

This strategic combination of public investments and policy eventually led to a decline in private vehicle usage with an increase in public transportation usage, reducing PM concentration by approximately 4% by 2018 (World Bank, 2023). Despite these fossil fuel reforms, Egypt's fossil fuel subsidies remain relatively high, ranking within the world's top 20 in 2020⁹⁸. By implementing further fossil fuel reforms, Egypt can achieve greater air quality benefits as proven in the past.

Plans and potential for scale

To curb further air pollution, the World Bank's International Bank for Reconstruction and Development has committed \$200 million towards the Greater Cairo Air Pollution Management and Climate Change Project. Beginning in 2021, the six-year programme aims to reduce air and climate emissions from critical sectors including transportation and solid waste management and cultivate resilience towards air pollution in GC⁹⁹ 2024.

Abating emissions from short-lived climate pollutants (SCLPs), especially black carbon, is central to the project since they affect both air quality and climate change. As part of air quality monitoring efforts, black carbon and greenhouse gas (GHG) emissions reductions from public e-buses would be measured with an end target of 98% and 77% reduction respectively. The project also proposes the closing of substandard landfills because they emit black carbon and other SLCPs during waste burning¹⁰⁰.

Why this approach works

Beyond abatement measures, community engagement and empowerment are key elements of the project¹⁰¹. Community perception will be surveyed and assessed throughout the project's duration. For instance, the perception of security among users of public e-buses will be collected every three years. This bottom-up approach ensures that the project is consistently attentive and aligned to the needs of its stakeholders. Two community-based social marketing initiatives will be trialled alongside awareness raising to effectively address barriers to behavioural change towards pollution adaptation.

Collaborative and multi-sectoral

In addressing interconnectedness of air pollution and climate change, an array of actors were involved in the project¹⁰². An inter-ministerial taskforce was established within the government including the Ministry of Environment, Planning and Economic Development, International Cooperation, Local Development, Transport and Health and Population. Private capital will be used to finance approximately \$40 million for the tenth Ramadan Integrated Waste Management Facility while public capital will primarily fund the adoption of e-buses.



5. RECOMMENDATIONS

International development funding for air quality is neither 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.

For example, unlike other international development funding, very little air quality finance is given as grants. Instead, 92% of all air quality funding is provided as loans, with most provided at market rates. Because it brings additional cost burdens for low-income countries with high pollution levels, this reliance on loans can affect take-up of financial support and hamper progress.

The data shows that low-income countries receive a fraction of the funding going to upper middle-income countries. There are also significant geographic funding variations, which leave many regions with little or no support. These anomalies exacerbate regional inequalities.

To support progress, frameworks and systems must be established to enable more specific targeting, monitoring and reporting of air quality outcomes across all areas of development spending, including climate and health. The creation of a reporting marker for donors is an essential step in better capturing the full benefits of this finance and can bolster investment cases for future projects. Donors should also improve the transparency and level of detail in their reporting on fossil fuel-prolonging finance.

RECOMMENDATIONS TO GOVERNMENTS

- Government departments and agencies such as the UK's Foreign, Commonwealth and Development Office (FCDO) and Germany's Federal Ministry for Economic Cooperation and Development (BMZ), US Agency for International Development (USAID) and others need to play a greater role in financing outdoor air quality projects. They need to bring their expertise in global health, climate and sustainable development to this agenda and their grants and concessional loans will help to balance out the overreliance on market rate loans. In parallel, these departments and agencies should also consider air pollution impacts across their investments in core development areas such as child health, agriculture and economic development to strengthen existing investments in these areas.
- Governments should look to increase their grant-making for outdoor air quality, helping to address the over-reliance on loan financing for air quality projects. This should include core baseline activities needed for action on air quality, such as grant-making towards air quality monitoring systems.
- Governments should put financing for air quality on the agenda at major international meetings such as the G7, G20 and COP29. They need to ensure that cover texts and communiques reflect the latest evidence on the urgent need to address the connection between air quality and the climate crisis. Governments should also use these moments to announce new air quality initiatives and financing.

- In 2024, countries are expected to set the New Collective Quantified Goal on Climate Finance (NCQG). The objective is to set a path to meeting climate finance needs to 2030 and beyond** to avoid devastating climate impacts and losses and damages. The NCQG text should encourage countries to maximise the co-benefits of all climate investment, especially across air quality, to ensure that constrained public resources deliver good value for money and avoid neglecting issues such as air pollution that contribute to warming and exacerbate climate impacts.
- Donor governments should ensure that finance instruments offering low-cost funding for air quality such as the World Bank's International Development Association (IDA) are properly resourced.
- Governments that are members of the Organisation for Economic
 Development and Co-operation's Development Assistance Committee
 (OECD-DAC) should advocate for the creation of a new DAC marker to
 better track and report Official Development Assistance for air quality. This
 work should form part of a wider effort to develop shared metrics that
 make it easier and more rewarding for existing development finance to go
 to clean air projects.
- All countries should assess their financing needs and mitigation goals with respect to air quality, especially black carbon and other short-lived climate pollutants, in their development of Nationally Determined Contributions (NDCs). Resources such as the NDC 3.0 Navigator can support this effort.xxi
- Countries should adopt a data-driven approach to air quality management by investing in air quality monitoring and data to understand the economic impact of air pollution. Government actions have a higher chance to be effective when backed by comprehensive, location specific data, better emissions monitoring, and updated inventories.
- Many international development funders are among the governments
 with highest levels of fossil fuel subsidies. To uphold credibility on the
 global stage national governments should phase out ineffective fossil
 fuel subsidies and use the money to invest in clean air instead. Creating
 such win-win conditions would not only reduce costly health and air
 pollution impacts but also free up finance to invest in national air quality
 improvement and other development goals.

RECOMMENDATIONS TO BILATERAL DEVELOPMENT FINANCE INSTITUTIONS

- Establish a new group or forum where technical experts responsible for air quality management in bilateral DFIs can come together to share experience and best practice. This group should aim to produce a tracking framework for air quality finance, drawing on progress made on tracking principles and taxonomies for climate finance.
- More bilateral development banks should make concerted efforts to provide
 a greater share of their lending as concessional loans, recognising the vital
 role concessional finance can play in achieving air quality improvements,
 particularly in blended finance settings.
- Development finance institutions and governments should ensure that
 efforts to reform the international financial architecture result in lending
 that is fit to address the air quality crisis as well as the climate crisis and
 mounting debt crises. As well as a general expansion of lending and an
 increased proportion of concessional finance, this reform should result in
 increased use of derisking instruments such as credit guarantees for air
 quality and climate alike.
- Bilateral DFIs should centre equity in the development of clean air strategies and solutions by targeting funding towards populations disproportionately affected by air pollution including women and children. They should also ensure that funding reaches underserved regions such as Africa and Latin America where some countries will face significant challenges addressing the health consequences of air pollution due to weaker health systems.

RECOMMENDATIONS TO MULTILATERAL DEVELOPMENT FINANCE INSTITUTIONS

Strengthen the case for action on air pollution, address the barriers to low funding levels and integrate air pollution across climate and health portfolios:

- Work directly with in-country actors, including national governments, national delivery partners, local banks, businesses and communities, to make the economic case for investment in clean air, including recognising clean air as an asset.
- Address the barriers that prevent countries from accessing international finance for air quality. Multilateral development banks (MDBs) should assess current recipient-side barriers and support countries with funding and technical assistance to develop investment cases and to design, implement and scale projects that target air quality improvements. These institutions should also consider establishing dedicated project preparation facilities that can deploy concessional resources to improve the volume and quality of air quality projects on their books.
- Integrate air quality considerations across all thematic portfolio and funding decisions, especially for future investments in climate and health to

- optimise solutions and outcomes. Such an approach will mean that future funding delivers a stronger impact. Toolkits are being developed for MDBs to help them integrate air quality considerations into project development and should be utilised once published.
- Work together through joint MDB working groups to develop and enhance monitoring and tracking systems that fully account for air quality. As climate finance tracking processes, including the Common Principles, evolve the ability to track co-benefits such as air quality should be considered.

Adopt a multi-pollutant approach and seek opportunities for near-term gains by addressing short-lived climate pollutants:

- Adopt a multi-pollutants approach in the development of individual projects where the changes in emissions of all greenhouse gas (GHGs) and all air pollutants are considered. This will provide a more complete picture of the impacts on both climate and health.
- Given the very limited scale of funding for black carbon and other short-lived climate pollutants (SLCPs), alongside scaling up financing for methane, multilateral DFIs should play a leadership role in accelerating funding in this critical area. Through better integration of SLCPs into their existing climate projects and by working with countries to significantly accelerate funding for projects, they can help reduce emissions from high-polluting sources of black carbon, including heavy duty diesel vehicles, forest fire management, clean lighting and open waste burning. This approach also presents a way to deliver clean air, with near-term benefits for climate and social justice.

Ensure that the international financial architecture is fit for purpose:

Multilateral DFIs should ensure that efforts to reform the international
financial architecture result in lending that is fit to address the air quality
crisis as well as the climate crisis and mounting debt crises. As well as a
general expansion of lending and an increased proportion of concessional
finance, this reform should result in increased use of de-risking
instruments such as credit guarantees for air quality and climate alike.

Phase out funding for fossil fuel-prolonging projects:

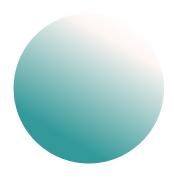
Publish roadmaps detailing how individual institutions will meet
commitments to reduce funding for fossil fuel-prolonging projects. Make
just transition a central pillar of funding commitments and investments,
recognising that it is critical for achieving economic development and
climate protection in tandem, particularly for vulnerable communities.
Multilateral DFIs must assess all projects in fossil fuel-prolonging sectors
against their own commitments to reduce fossil fuel funding, and publish
evidenced reasoning for any projects that are taken forward despite their
stated commitments.

Multilateral DFIs should also prioritise climate-positive development
through their investments, using their successes as evidence that fossil
fuels need not be the default source for economic development. They
should improve transparency in the publication of data on funding for
fossil fuel-prolonging projects and re-calibrate existing commitments and
investment policies to reduce and/or halt funding for additional fossil fuelintensive sources and uses beyond coal.

RECOMMENDATIONS TO MULTILATERAL CLIMATE FUNDS

- Climate funds should target and track air quality across their portfolios, using air quality metrics alongside climate ones to evaluate project success.
- Climate funds should ensure that concessional finance and blended finance are deployed in a coordinated manner to establish and grow markets for less established air quality and climate solutions in recipient countries.
- Climate funds should increase internal awareness of the mitigation and adaptation potential of addressing SLCPs including black carbon and ensure that financing targets these benefits where possible.







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