

THE GLOBAL
CLIMATE & HEALTH
ALLIANCE

CleanAir

NDC SCORECARD



CleanAir

NDC SCORECARD



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FOREWORD

We all feel better when we take a deep breath of fresh air. Yet few of us live where we can. We inhale harmful air pollution routinely, because governments fail to meet their obligation to provide a clean, healthy and sustainable environment. Action to reduce air pollution is essential, both to improve people's health today and to protect the climate for future generations. Without policies and investments to clean up the air we breathe by cutting emissions from burning fossil fuels, waste and biomass, it will be impossible to meet the world's climate targets. Clean air action is climate action.

As we approach COP28, it is clearer than ever that we are off track to deliver the Paris Agreement goal of limiting warming to well below 2°C, and preferably to 1.5°C. Failure to meet this target is a failure to protect humankind from climate-driven air pollution, and is the result of our continued dependence on fossil fuels.

This Scorecard gives credit to those countries that recognise the value of action for clean air, climate and health in their nationally determined contributions (NDCs). It shows what other countries can do to follow their lead and to maximise the benefits of climate action for people's health.

Finance for climate and clean air action will be vital in order to move from pledges to implementation, but we know that clean air action remains dangerously underfunded. Without adequate finance, NDCs will remain unimplemented. And we know the health savings generated by combined investment in climate and clean air, deliver rapid high returns. Integrated action on climate, clean air and health presents an unparalleled opportunity for people, planet and the public purse.

Jane Burston, CEO, Clean Air Fund.



EXECUTIVE SUMMARY

This new analysis examines the integration of air quality and health considerations into the most recently published nationally determined contributions (NDCs) from 169 countries and the European Union. NDCs are national climate plans submitted by governments as part of their commitment to the Paris Agreement on climate change. NDCs provide a snapshot of national climate priorities – though other detailed air quality plans are also prepared at national level.

As expectation builds around ambitious climate decision-making at COP28, including hopes for strengthened commitments to phase out fossil fuels, this Clean Air NDC Scorecard indicates whether or not connections are being made between health, clean air and climate action. The Scorecard reveals which countries are making links between climate action and healthy air, revealing global leaders on the issue, and which have overlooked a chance to drive ambitious climate action while also reaping health gains. Low- and middle-income countries (LMICs) lead the way.

The Scorecard further compares the integration of air quality considerations in NDCs to national air pollution mortality. It shows which countries recognise health, air quality and climate intersections, but have not yet been able to implement sufficient action to improve air quality and protect health. In many LMICs, lack of climate finance may be a leading cause of this disconnect. Additional international support is needed to realise these ambitions and maximise climate action for clean air and health.



KEY FINDINGS



170 NDCs were analysed: 14 of the 15 top-scoring countries are low- or middle-income countries (namely Colombia, Mali, Côte d'Ivoire, Nigeria, Pakistan, Togo, Ghana, Albania, Bangladesh, Cambodia, El Salvador, Honduras, Moldova, Sierra Leone, alongside Chile as the one high-income country).



Several African countries score highly, with 5 of the 8 countries scoring 9/15 or above being Mali, Côte d'Ivoire, Nigeria, Togo and Ghana.



6 countries scored 0/15, namely Bahrain, Nauru, North Korea, Palau, Saudi Arabia and Solomon Islands.



Less than a third of NDCs (51) refer to the health impacts of air pollution: 6 billion people live in countries where the synergies between healthy air and climate aren't yet recognised.



Only 1 in 10 NDCs refer to air quality and financial or economic considerations



LMIC countries have higher scores for the integration of air quality into their NDCs, with an average score of 3.5/15 compared to 2.9/15 for high-income countries.



164 out of the 170 NDCs refer to air quality to some extent, and the majority (119) consider at least two named health-harming air pollutants, but in many countries there is a disconnect between NDC mentions of air quality considerations and action sufficient to prevent air pollution mortality.



Only 32 NDCs refer to forward looking targets, monitoring or projections.

INTRODUCTION

Clean air action *is* climate action

The Global Climate and Health Alliance (GCHA) Clean Air NDC Scorecard assesses the extent to which governments' national climate commitments recognise and contribute to ensuring healthy air for communities around the world. These commitments are known as nationally determined contributions (NDCs). The 'clean air score' calculated by GCHA is based solely on analysis of each country's NDC, and not on other wider policies at national level or submitted to the UNFCCC. The Scorecard covers 170 NDCs – the most recent document submitted by 169 countries and the European Union; all governments to ever submit an NDC¹. Ensuring the integration of clean air considerations into climate policy protects human health, and in the majority of cases also mitigates climate change. This offers win-win solutions with high returns on investment.

Air pollution already causes 6.7 to 7 million deaths annually,^{2,3} including due to cardiovascular disease, stroke, respiratory conditions, and some cancers. Fossil fuel dependence is a major cause of both climate change and air pollution. Fossil fuel phase out is a public health and planetary health imperative.

Following the UN climate change conference held in Paris in 2015, which culminated in countries signing the Paris Agreement, governments committed to submit voluntary climate pledges. These plans outline how each country will deliver on the emissions reduction goal of the Paris Agreement, limiting global temperature rise to well below 2°C, and preferably to 1.5°C. The Intergovernmental Panel on Climate Change (IPCC) stated in its latest synthesis report that “every increment of global warming will intensify multiple and concurrent hazards”⁴, and thus also the threat to human health. While adaptation is a crucial component of the climate response, there are already several regions that have reached their physical limits of adaptation. This means that ‘mitigation’, or emissions reductions, is key to avoid adverse

¹ The 27 member states of the European Union submit a joint NDC. France also makes its own submission in addition.

² Health Effects Institute, 2020. State of Global Air 2020. Data source: Global Burden of Disease Study 2019. IHME, 2020. [Online](#).

³ World Health Organization, n.d. Air pollution. [Online](#).

⁴ Intergovernmental Panel on Climate Change, 2023. Synthesis Report of the IPCC Sixth Assessment Report; Summary for Policymakers. [Online](#).

health impacts, or health ‘losses and damages’. Governments’ collective NDC commitments currently put the world on course for average global temperature rises in the range of 2.1–2.9°C this century, falling far short of the Paris target.⁵ These levels of warming would be catastrophic for human health.

Transitioning from fossil fuels to renewable energy not only provides an opportunity to address climate change, ambient air quality and health, but can address wider social determinants. Countries with a high score on the Clean Air NDC Scorecard will reap multiple benefits from implementing planned actions. The provision of reliable access to renewable energy sources can address both fossil fuel-driven air pollution outside and inside homes, as well as health impacts resulting from the burning of biomass as an energy source for cooking, heating and lighting, which also improves social determinants of health.⁶ Short-lived climate pollutants (SLCPs), including black carbon, methane and tropospheric ozone, both accelerate climate change and can impact health.⁷ Methane, the primary component of fossil gas (commonly referred to as natural gas), which is also emitted in coal and oil extraction, is a precursor for ground level ozone, as well as several toxic co-pollutants.⁸ Climate change itself also exacerbates the threat of air pollution, including through smoke from more frequent and severe wildfires, and through more severe dust storms – since reduced rainfalls and higher temperatures create drier ground,⁹ and the urban heat island effect is exacerbated, leading to higher ozone levels.¹⁰ In many settings, health benefits of cleaner air outweigh costs of climate action.^{11,12}

Finance is urgently needed to enable countries which recognise the benefits of integrated efforts on clean air, climate and health to take action. The recently launched State of Global Air Quality Funding Report reveals that just 1% of all international development funding (or \$17.3 billion) was expressly committed to targeting outdoor air pollution between 2015 and 2021.¹³ Only 2% of international public climate finance (\$11.6 billion) went towards tackling

5 UNFCCC, 2021. Nationally determined contributions under the Paris Agreement; NDC Synthesis report, by the secretariat. [Online.](#)

6 Health and Climate Network, 2022. A Just Energy Transition for a healthy fossil fuel free world. [Online.](#)

7 Climate and Clean Air Coalition, n.d.. Short Lived Climate Pollutants and Health. [Online.](#)

8 Global Climate and Health Alliance, 2023. Methane and Health. [Online.](#)

9 United Nations Environment Programme, 2023. As climate changes, sand storms wreak havoc on desert communities. [Online.](#)

10 United Nations Environmental Protection Agency, 2022. Heat Island Impacts. [Online.](#)

11 World Health Organization and World Bank, 2016. The Global Health Cost of Ambient PM2.5 Air Pollution. [Online.](#)

12 Markandya et al, 2018. Health co-benefits from air pollution and mitigation costs of the Paris Agreement: a modelling study. [Online.](#)

13 Clean Air Fund, 2023. State of Global Air Quality 2023. [Online.](#)

air pollution in that same period.

Health impacts are a key factor when negotiating climate friendly outcomes. The human right to health is recognised in the Paris Agreement,¹⁴ and the human right to a clean, healthy and sustainable environment is referenced in the COP27 cover decision.¹⁵ COP28 is set to incorporate a greater emphasis on health than ever before, with a dedicated Health Day offering an opportunity to bring the manifold links between health and climate change to the forefront, and for this to be reflected in policy-making. COP28 will also mark the conclusion of the first Global Stocktake, which tracks progress on the delivery of the Paris Agreement. The synthesis report of the technical dialogue of the first Global Stocktake refers to the significant health co-benefits of mitigation actions, for instance through air pollution reduction, as well as other co-benefits that can help achieve the UN sustainable development goals (SDGs).¹⁶ Recommendations emerging from the Global Stocktake will shape the preparation of the next iteration of NDCs, due to be submitted in 2025.



¹⁴ UNFCCC, 2015. Paris Agreement. [Online](#).

¹⁵ UNFCCC, 2022. Decision -/CP.27. Sharm el-Sheikh Implementation Plan. [Online](#).

¹⁶ UNFCCC, 2023. Technical dialogue of the first global stocktake. Synthesis report by the co-facilitators on the technical dialogue. [Online](#).

METHODOLOGY

From 2021 to 2023, GCHA released iterations of the Healthy NDC Scorecard. The 2023 Clean Air NDC Scorecard focuses specifically on the issue of safe air and covers the most recent NDC submitted by each country as of 1 October 2023. This report details the methods used in the analysis of the Clean Air NDC Scorecard, provides an overview of results, and shares key messages and recommendations. For full details of country scores, please refer to the GCHA website.¹⁷

¹⁷ Global Climate and Health Alliance, 2023. Clean Air NDC Scorecard. [Online.](#)



Scoring categories

Points were allocated if the NDC includes mentions of:

1

HEALTH IMPACTS: The health impacts of air pollution, any quantification of this burden, and action by the health sector to respond to the associated diseases.

2

SOURCE SECTORS: Sectors named as sources for air pollution, and action within those sectors to improve air quality. Also including general reference to air pollution not covered by other categories.

3

AIR POLLUTANTS: Named air pollutants, and targets or efforts to monitor air quality.

4

ECONOMICS AND FINANCE: Discussions of the cost of air pollution, cost or budget for actions identified as improving air quality, or returns on investment from action to improve air quality.

Points were also allocated as:

5

BONUS POINTS: For mentions of WHO Air Quality Guidelines, the Climate and Clean Air Coalition or Breathe Life Campaign, the number of lives saved or other health gains through improving air quality, or discussion of inequalities or vulnerabilities in exposure to air pollution, or in air pollution related outcomes.

RESULTS

Of the 170 NDCs analysed, almost all (164) mention air pollution to some extent. Colombia and Mali lead on integration of air pollution considerations into their NDCs, achieving 12/15 possible points, followed by Chile, Côte d'Ivoire, Togo, and Nigeria with 10/15 points. Conversely, six NDCs scored 0/15 points, namely Saudi Arabia (which features in the top ten global emitters for total emissions and per capita emissions), North Korea (which has the highest rate of air pollution mortality globally), Bahrain (the second-highest per capita emitter of greenhouse gases globally), Nauru, Palau and the Solomon Islands.

GLOBAL COMPARISONS

- 14 of the 15 top-scoring countries are low- or middle-income countries (namely Colombia, Mali, Côte d'Ivoire, Nigeria, Pakistan, Togo, Ghana, Albania, Bangladesh, Cambodia, El Salvador, Honduras, Moldova, Sierra Leone, alongside Chile as the one high-income country). These countries show commitment to action for clean air, climate and health in their NDCs, and are poised to reap returns on investment in win-win actions.
- Several African countries score highly, with 5 of the 8 countries scoring 9/15 or above being Mali, Côte d'Ivoire, Nigeria, Togo and Ghana.
- Globally, results demonstrate vast room for improvement: the average score achieved in any NDC was 3.5/15 points.
- High-income countries are failing to capture clean air co-benefits and the opportunity to maximise the health gains of their climate commitments, with an average score of 2.9/15 points. Meanwhile, G20 countries which submitted an individual NDC (all except Germany and Italy) have a below average score, with a mean of 3.3/15 points.
- The top ten per capita emitters (Qatar, Bahrain, Brunei Darussalam, Trinidad and Tobago, Kuwait, United Arab Emirates, Mongolia, Oman, Australia, Saudi Arabia)¹⁸, many of which are major fossil fuel producers, scored an average of just 2.4/15 points, which is indicative of a lack of interest in connecting fossil fuel phase out to clean air and its potential health benefits.

¹⁸ Our World In Data, 2020. Greenhouse gas emissions. Which countries emit the most greenhouse gases each year? How do they compare per person? [Online](#).

- Meanwhile, the top ten total emitters (China, United States, India, European Union, Russian Federation, Brazil, Indonesia, Japan, Iran, Saudi Arabia) scored little better, with an average of 2.7/15 points.¹⁸
- In several countries with higher scores, including Mali, Cambodia, Pakistan and China, high levels of air pollution mortality exist. Increased finance could enable these countries to accelerate implementation of actions described. Meanwhile, potential donor countries most often fail to recognise these links in their own NDCs.
- The ten countries with the highest rates of air pollution mortality (North Korea, Solomon Islands, North Macedonia, Central African Republic, Bosnia and Herzegovina, Serbia, Vanuatu, Somalia, Nepal, Myanmar) achieved an average of 2.5/15 points, underscoring the public health impacts of failing to recognise the links between climate action and healthy air.

As in prior iterations of the Healthy NDC Scorecard,^{19,20} which assessed the integration of health into NDCs, low- and middle-income countries achieved the highest scores.²¹ In the Clean Air NDC Scorecard, low-income countries have the highest average scores, with a mean of 3.7/15 points. Lower middle-income countries closely followed, with an average of 3.6/15 points, while upper middle-income countries scored an average of 3.4/15 points. High-income countries secured an average of 2.9/15 points.

TOP CLEAN AIR SCORERS COUNTRY FOCUS

Colombia has an overall clean air score of 12/15. Its NDC recognises the importance of protecting health (including respiratory health specifically) through air quality action, and of monitoring these gains. The NDC states that the integration of policies facilitating this monitoring will be formulated within the health sector. The NDC also refers to multiple air pollutants, including particulate matter and nitrogen oxides, and sets a goal to achieve a reduction of 40% in black carbon. Multiple sectors are identified as sources of air pollution,

¹⁹ Global Climate and Health Alliance, 2023. Healthy NDC Scorecard. [Online](#).

²⁰ Beagley et al, 2021. Assessing the inclusion of health in national climate commitments: Towards accountability for planetary health. [Online](#).

²¹ In the Healthy NDC Scorecard this may have been due in part to the fact that many links between health and climate change are related to adaptation: High-income countries often opt to submit a standalone National Adaptation Plan (NAP) rather than integrating adaptation considerations into the NDC, potentially leading to lower scores in some cases because NAPs were not included in the analyses. Since the links between climate and air quality relate primarily to mitigation however, almost all air quality related mentions would be expected to be included in NDCs. The exclusion of NAPs from the analysis for the Clean Air NDC Scorecard therefore has little to no contribution to the low number of high-income countries with high clean air scores.

including agriculture, electricity generation, industry, and transport. In the transport sector, Colombia intends to augment the modal share of bicycle usage by 5.5% by the year 2030 across all cities, improving mobility and air quality for citizens. Colombia also refers to inequalities and vulnerabilities related to air pollution, as well as quantifying lives saved using the CaRBonH tool.²²

In its respective NDC, which also achieved 12/15 points, Mali notes that black carbon contributes to negative impacts on human health, and that PM2.5 impacts cardiovascular and respiratory systems. It plans to form a technical team to monitor SLCPs as they relate to human health. In addition to SLCPs, the NDC refers to multiple other air pollutants. Interventions to improve air quality are mentioned in several sectors. The NDC mentions a price tag to reduce air and water pollution linked to pesticides and other harmful products. Mali also refers to the Climate and Clean Air Coalition, and notes that improvements in air quality could avoid 2.4 million premature deaths by 2030.

Other leading clean air scores include Chile, Côte d'Ivoire, Nigeria, Pakistan and Togo with 10/15 points; Ghana with 9/15 points; and Albania, Bangladesh, Cambodia, El Salvador, Honduras, Moldova and Sierra Leone with 8/15 points.

HEALTH IMPACTS

Within the health impacts category, less than a third of NDCs (51) refer to the health impacts of air pollution, quantify the burden, or specify any action within the health sector relating to the provision of care for pollution-related health impacts, or public health actions. Fossil fuel dependence is a leading driver of climate change, air quality and health impacts – recognising these interlinkages is a first step towards the healthy and just transitions across sectors needed to protect air quality and human health. Among the countries scoring 0/15 points in the health impacts category are high emitters Australia, the European Union, Indonesia and Saudi Arabia.

AIR POLLUTANTS

Air quality targets are key for protecting human health. While the majority of NDCs (119) consider at least two named health-harming air pollutants, only 32

²² World Health Organization Regional Office for Europe, 2023. Climate Change Mitigation, Air Quality and Health (CLIMAQ-H). [Online](#).

refer to forward-looking targets, monitoring or projections. This highlights the need for advances and greater consistency in monitoring practices.

SOURCE SECTORS

Little more than a third of all NDCs (62 of 170) refer to actions to reduce air pollutants in specific sectors. Transportation emerged as the most frequently mentioned source sector, while only two NDCs (Jordan and Venezuela) linked actions in the healthcare sector with improved air quality. Power generation, a major source of fossil fuel-driven air pollution in many countries, was only mentioned as a source of pollution in 21 NDCs. Coordinated action across sectors is necessary in order to improve air quality and protect health. Cambodia scores highly with regards to cross-sectoral action, which includes urban planning tools for climate change mitigation and air pollution reduction, plus risk analysis for electricity infrastructures to improve air quality.

ECONOMICS AND FINANCE

Only 17 of all 170 NDCs mention costs or budget considerations, or returns on investment linked to air quality. For example, Togo specifies the costs of actions, including its green mobility programme and the promotion of modern bioenergy for cooking, with US\$43.7 million required to implement the latter. Financial considerations are crucial for ensuring the commitments outlined in NDCs are implemented.

BONUS POINTS

Only 20 countries achieved points in the bonus points category. This reflects the absence of references in most NDCs to the World Health Organization (WHO) Air Quality Guidelines or the Climate and Clean Air Coalition (CCAC), or to calculating the number of lives saved or other health gains through air quality action. The CLIMAQ-H tool developed by the WHO in 2023 (formerly the CaRBonH tool mentioned above²²) can be used to calculate the health and economic gains associated with air quality improvements from mitigation actions, and thus returns on investment. Of the 20 NDCs which achieved points in the bonus category, only 10 refer to air pollution impacts in vulnerable populations. South Sudan specifically refers to introducing improved cooking stoves to improve indoor air quality and protect the health of women, who are disproportionately exposed to indoor air pollution.

AIR POLLUTION MORTALITY

Several countries stood out when comparing clean air scores to national air pollution mortality, including India and China. India, which has a mortality rate of 119.9 per 100,000 population, received 2/15 points, demonstrating the urgent need for strengthened policies. Meanwhile, China achieved a higher score of 7/15 points, but continues to experience an air pollution mortality rate of 129.9 per 100,000 population, making clear that commitments must be accompanied by continued translation to action. Among countries with some of the highest clean air scores, such as Mali, Côte d'Ivoire, Nigeria, Pakistan and Togo, air pollution mortality is above 80 deaths per 100,000, demonstrating the need for implementation of policy objectives, for which the provision of international finance will be essential.

Looking beyond high emitters, North Korea and Solomon Islands carry the highest air pollution mortality rate of all countries analysed, with both achieving 0/15 points. In Solomon Islands, this is driven by household air pollution, as most households do not have access to electricity and use solid fuels for cooking. These disconnects suggest a substantial blind spot when it comes to governments making the connection between air pollution, climate change, and health, even when health impacts are significant.

More commentaries on individual country scores are available on the GCHA website at bit.ly/CleanAirNDCs.

CONCLUSIONS

Overall, although the vast majority of NDCs mention air quality to some extent, there is considerable scope for improvement, even among countries with a relatively high clean air score. Given the multiple intersections between air pollution and climate change – from fossil fuel dependence as a common driver, to the worsening of pollution by climate change, and the respective compounding impacts on human health – these results demonstrate the need to elevate clean air as a priority in climate policy-making at the national, regional, and global level, including in WHO and UNFCCC processes.

RECOMMENDATIONS

The findings of the Clean Air NDC Scorecard confirm the need for greater recognition of, commitment to, and action on the issue of air quality as it relates to climate change, in order to capture the full benefits of climate action for peoples' health and economies. Recognition of the health benefits of climate action will strengthen the investment case and inform smarter policy decisions and climate commitments. This can help secure additional necessary investment, for example, from international financial institutions. Climate change and air pollution have common drivers, and climate change further exacerbates air pollution, making an integrated response vital. As such, air quality considerations should be deeply integrated into NDCs, and complemented and supported by wider action at both the national and international level. Action to improve air quality and mitigate climate change offers enormous and largely untapped economic value through health benefits. In many settings, health benefits of cleaner air outweigh costs of climate action.^{11,12}



Health and air quality in NDCs



Governments should recognise links between air pollution, climate change, and health in their NDCs, and acknowledge fossil fuel dependence as a primary driver of these challenges.



Governments should move towards air quality targets in line with the World Health Organization Air Quality Guidelines in order to protect the health of populations, and invest in air quality monitoring for health-harming pollutants.²³



The health impacts of air pollution, and health gains of cleaner air, should be quantified in NDCs, to make the case for action and investment.



Governments should specifically seek to capitalise on the health gains of cleaner air, to strengthen the investment case for climate action.

²³ World Health Organization, 2021. WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. [Online.](#)



The cost or budget for air pollution-related actions should be included in NDCs. Where relevant, unconditional actions feasible with domestic finance, and additional conditional actions possible with international finance, should be described.



The CLIMAQ-H tool (formerly the CaRBonH tool²²) should be used to calculate the health and economic gains associated with air quality improvements from mitigation actions, and thus returns on investment.

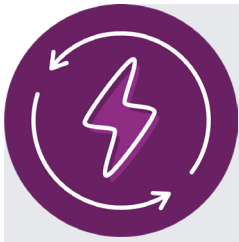
Cross-cutting action for healthy air



Governments must dramatically reduce air pollution emissions by phasing out fossil fuels. This is a public health imperative, especially the reduction of levels of short-lived climate pollutants (SLCPs) such as black carbon, and other health-harming air pollutants.



Governments should implement interventions in food systems and waste management to reduce methane emissions (and thus ground level ozone production), waste burning, and land clearing to ensure benefits to air quality.



Governments, in collaboration with partners from across society, should ensure healthy and just transitions to renewable energy in line with the Paris Agreement.

- Carbon capture and storage (CCS) with continued use of fossil fuels is not a healthy solution^{24,25}. CCS and other touted ‘solutions’ such as geoengineering and co-firing coal with ammonia have not been proven to work at scale, and in any case would not prevent the health impacts of air pollution from fossil fuel combustion, nor the air pollution impacts of fossil fuel extraction.
- In the near term, methane mitigation strategies should be employed as part of fossil fuel operations to reduce fugitive emissions, including through leak detection and repair and the prevention of venting, with prioritisation of facilities located near population centres.
- Fossil fuel subsidies should be ended and taxes on polluters and sources of pollution increased, while ensuring access to affordable energy for all by reinvesting subsidies in renewable energy. All fossil fuel subsidies are inefficient because of the damage to health and climate that they cause, and should be phased out. Data shows that every dollar of fossil fuel subsidies from G20 governments causes six dollars of health costs²⁶. Redirection of health-harming subsidies can support air quality action with a double dividend for climate and health.
- Following approaches for tobacco and other unhealthy products in many countries, advertising restrictions should be implemented for fossil fuels and fossil fuel dependent products, such as those produced by the automobile and aviation industries.

²⁴ Global Climate and Health Alliance, 2022. Cradle to grave: The health harms of fossil fuel dependence and the case for a just phase-out. [Online.](#)

²⁵ McCarthy & Nadeau, 2023. Carbon capture isn't the climate change health benefit the world needs. [Online.](#)

²⁶ Health and Environment Alliance, 2017. Hidden price Tags: How ending fossil fuels subsidies would benefit our health. [Online.](#)

- In order to enable a just energy transition in low- and middle-income countries, developed countries must deliver on their international finance commitments. The 2020 US\$100 billion target agreed by developed countries to support climate action in low- and middle-income countries is well overdue. In addition, the State of Global Air Quality 2023 report¹³ confirms the urgent need for funding to address clean air.



Governments should invest in monitoring systems and research to develop projections for air pollution and air pollution-related diseases. Evidence that can demonstrate the health gains of more ambitious targets, or health costs of inaction, can help to strengthen the investment case for ambitious action.



Representatives from across sectors of government should strengthen intersectoral collaboration between ministries to maximise climate mitigation, air quality and health gains in decision-making across sectors. In addition to fossil fuel phase out, this includes replacing diesel and gasoline-powered vehicles with cleaner alternatives and public transportation, investment in infrastructure that supports active travel modes such as walking and cycling, and electric vehicles in both the public and private sectors^{26,27,28}.

²⁷ Woodcock et al, 2009. Public health benefits of strategies to reduce greenhouse-gas emissions: urban land transport. [Online](#).

²⁸ Maizlish et al, 2013. Health Cobenefits and Transportation-Related Reductions in Greenhouse Gas Emissions in the San Francisco Bay Area. [Online](#).

²⁹ Global Alliance on Health and Pollution, 2020. Estimated Relative Benefits of Interventions. [Online](#).



Future COP Presidencies, with support from national governments, should hold a climate-health ministerial on an annual basis to support intersectoral coordination at the international level. The inaugural Health Day and climate-health ministerial to take place during COP28 on 3rd December 2023 should be the first of yearly meetings.



Governments should tailor air pollution actions to meet the needs of the most vulnerable populations, including babies and children, older people, people living with chronic diseases, and marginalised communities, from the local to the global level.



At COP28 and beyond, aligned with the formal inclusion of health in the programme, governments should integrate air quality and health considerations into decisions made throughout negotiations, including as part of the Global Stocktake outcomes, the Just Transition Work Programme, the Mitigation Work Programme and the COP28 Cover Decision.

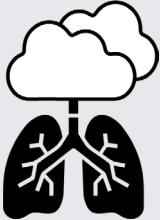


Support an ambitious World Health Assembly (WHA) Resolution on Climate Change and Health at WHA77 in 2024, and on Air Pollution at WHA78 in 2025.

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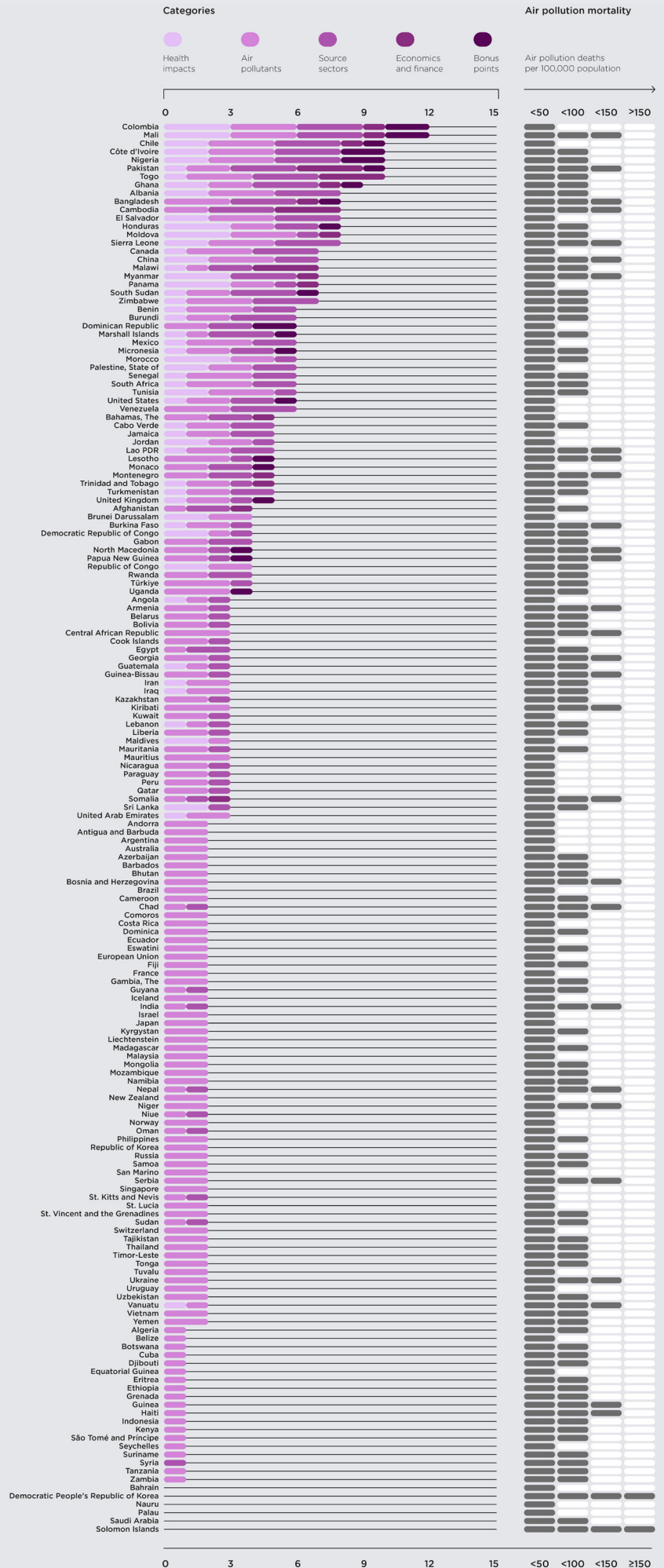
Are national climate commitments enough to provide clean air?



#CleanAirNDCs

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Full details available at
bit.ly/CleanAirNDCs



Air pollution mortality data from State of Global Air and European Environment Agency

Colombia



National air pollution mortality

Air pollution deaths

15700

Air pollution death rate
(deaths per 100,000)

32.9

Source: State of Global Air



Clean Air NDC Scorecard

Are national climate commitments enough to provide healthy air?

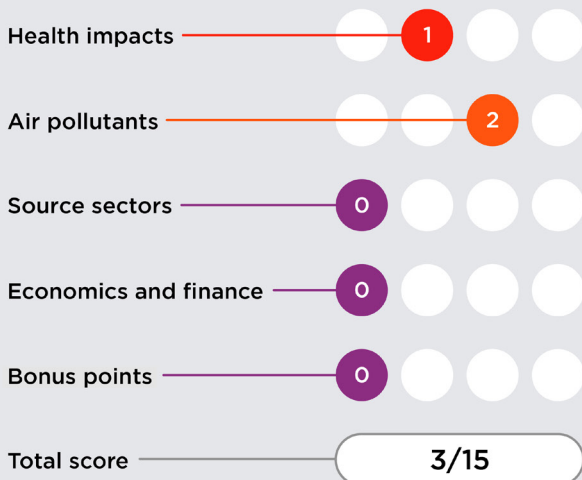
Nationally Determined Contribution published 30/12/2020

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United Arab Emirates



National air pollution mortality

Air pollution deaths

3360

Air pollution death rate
(deaths per 100,000)

36.4

Source: State of Global Air



Clean Air NDC Scorecard

Are national climate commitments enough to provide healthy air?

Nationally Determined Contribution published 11/07/2023

Full details:
bit.ly/CleanAirNDCs

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ANNEXE:

METHODOLOGY AND CLEAN AIR SCORING FRAMEWORK

Each NDC was assigned a total score, out of a total of 15 points across five categories (the ‘clean air score’). Each category has a total of 3 points available. Points were only awarded in any category if mentions of air quality were explicit, or implied beyond reasonable doubt. The breakdown for points allocation across each of the five clean air scoring categories is described below in this annexe. Given the established links between air quality and human health, it was not necessary for health considerations to be made explicit in all scoring categories, though points were specifically awarded for this in the ‘health impacts’ and ‘bonus points’ categories.

All NDCs were downloaded from the UNFCCC NDC Registry.³⁰ If no NDC was ever formally submitted, the intended nationally determined contribution (INDC) was used where available. NDCs which were not in English were first translated into English with Google Translate. NDCs were analysed in Adobe Acrobat, with a search for the following word stems:

allerg asthma BC bike biomass black birth breath burn CaRBonH cardio CCAC CH4 CLIMAQ cook COPD cycl electri fluor heart HFC inhal kerosene lighting lived LPG lung methane modal monoxide nitro NF3 NO2 N2O NOx O3 ozone particulate PM0 PM1 PM2 pneumonia pollen pollut pregnan pulmonary SLCP smog smoke SF6 SO2 SOx stroke sulfur sulphur respiratory toxic VOCs volatile walk wood

If any results for the search terms above were found in lists of acronyms at the start of an NDC, then a search for the relevant acronym was also conducted in addition, as well as the following short phrases:

active transport; air quality; clean air; fresh air; safe air; of air; of the air; of atmos; of the atmos

Rather than using a search string in Adobe, the NDC of Iraq was analysed section by section, as the full document was not compatible with Google Translate. The versions of the NDCs of Mali and Nigeria available on the UNFCCC

³⁰ UNFCCC, 2023. NDC Registry. [Online.](#)

NDC registry were scanned from an original document and incompatible with Adobe Optical Character Recognition, so were analysed manually. Libya is a Party to the Paris Agreement but has not submitted an NDC.

Each search result was assessed to determine whether a point should be allocated according to the scoring framework provided below. Analysts coordinated to ensure consistency with regards to the allocation of points. In addition to the clean air score based on the five categories, data on the disease burden linked to the total burden from outdoor and indoor air pollution is provided. For the scorecard of each country, two figures are provided, namely the number of deaths due to air pollution in the country in 2019, and the number of air pollution deaths per 100,000 people in the population. Air quality data for all countries except Liechtenstein is taken from the Health Effects Institute (HEI) 2020 State of Global Air Report, for which details are available via the State of Global Air website.³¹ For Liechtenstein, data from the European Environment Agency was used.³²

Notes and caveats

NDC content provides an overall snapshot of government priorities relating to climate change, and this analysis serves as a barometer for the extent to which the intrinsic links between air quality and climate change are recognised and being addressed. The clean air score calculated by GCHA is based solely on analysis of each country's NDC, and not on other wider policies at national level or submitted to the UNFCCC.

By their nature, NDCs primarily refer to future plans and targets. While commitment is a prerequisite for ambitious action, air quality – and hence human health – will only benefit if these commitments are delivered. If an NDC was submitted purely to provide an update on an emissions target, rather than as an update of the entire content of the NDC, as is the case for Argentina and India's most recent submission, then both the most recent NDC and the prior NDC were analysed. Points were awarded for both existing and planned measures.

³¹ Health Effects Institute, 2020. State of Global Air: How We Estimate Burden of Disease. [Online](#).

³² European Environment Agency, n.d. Liechtenstein - Air pollution country fact sheet. [Online](#).

Scoring framework

HEALTH IMPACTS

1

POINT

2

POINTS

3

POINTS

One point was awarded for mention of a health related impact of air pollution (either a named disease or general health impacts). An additional point was given for a mention of a health related impact of air pollution. An additional point was allocated for a mention of action in the health sector to respond to the health burden of air pollution, or for monitoring the health impacts of air pollution.

AIR POLLUTANTS

1

POINT

2

POINTS

3

POINTS

One point was awarded for mention of a health-harming air pollutant. An additional point was given for mention of an additional health-harming air pollutant. An additional point was allocated for targets or monitoring for air quality, or for a named health-harming air pollutant.

NOTES: For the allocation of points in all categories of the Clean Air NDC Scorecard, air quality needed to be explicitly mentioned, or implied beyond reasonable doubt. Mentions that implied air quality links beyond reasonable doubt included “clean cooking” or “electric vehicles improve progress towards SDG3”.

For the health impacts category, points were only allocated where a health condition was linked to air pollution, not simply for naming a disease which is more widely known to be exacerbated by air pollution.

NOTES: Because methane itself does not directly impact human health, it was assumed that mentions of methane in NDCs were in relation to the impact of methane on warming, rather than air pollution impacts, unless links between health and methane emissions were made, in which case a point was allocated. No point was given if an air pollutant was mentioned only to state that it was not included in the NDC, unless good reason was given. With regard to monitoring, points were only given if the text suggested ongoing monitoring, or suggested a target, or made projections, rather than if levels of pollutants were given for one single year.

SOURCE SECTORS

1

POINT

2

POINTS

3

POINTS

One point was allocated for each sector named as a source of air pollution. To receive more than one point, an action had to be identified in the second and third sectors mentioned, rather than simply naming them as a source. A point was also allocated for mention of an action or strategy to improve air quality across sectors.

ECONOMICS & FINANCE

1

POINT

2

POINTS

3

POINTS

One point was allocated each time a cost or budget was specified for an intervention with air quality benefits, or for mention of returns on investment, or the cost of air pollution health impacts. Multiple points were available for each type of mention, up to a maximum of three points in total for this category.

BONUS POINTS

1

POINT

2

POINTS

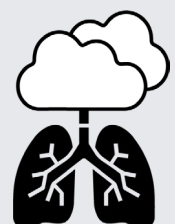
3

POINTS

One point each was given for: a mention of the Climate and Clean Air Coalition (CCAC); a mention of the WHO Air Quality Guidelines; quantifying number of lives saved or other health gains through acting on air pollution; and recognising or addressing inequalities or the specific vulnerabilities of some populations to air pollution.

NOTES: Sectors that were tracked were agriculture; electricity generation; forestry and land use; healthcare; household (energy or ventilation); industry; transport; urban planning; and waste. In addition, general mentions of air pollution or improved air quality as a result of climate action were allocated a point in this category.

NOTES: A point for cost or budget was allocated if air quality was mentioned as part of overall investment needed for multiple actions, not only if air quality actions were included as standalone sum. General mentions of air pollution costs, without mention of a quantified financial cost (whether a health related cost or otherwise), were also allocated a point. If an action was given a point in the sectors category because the air pollution link was explicit (or very strongly implied, beyond doubt), but a mention of air pollution was not repeated in the section of the NDC referring to a cost or budget for the action, a point was still allocated. Points were allocated across these criteria whether the NDC referred to domestic or international finance or impacts.



CleanAir

NDC SCORECARD

2023