

Policy Toolkit

THE CHALLENGE OF AIR AND PLASTIC POLLUTION

A Policy Toolkit for Greening Cities

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Highlights

- More than 76 per cent of survey respondents thought that air pollution in Dhaka city became much worse in the past 2 to 3 years
 - On average, individuals in Dhaka city were stuck in traffic for 46 minutes out of every two hours
 - On average, individuals in Dhaka city spent BDT 4,000 per year to diagnose and treat symptoms associated with air pollution
 - 73 per cent of respondents thought that plastic pollution in Dhaka city became significantly worse in the last 2 to 3 years
 - 57 per cent of respondents reported that their local neighbourhood exhibited extremely high levels of plastic pollution
 - 43 per cent of respondents acknowledged a tendency to discard plastic waste directly onto the streets
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1. Introduction

Air and plastic pollution pose a significant threat to Bangladesh. Bangladesh's cities lead the world in levels of air and plastic pollution. According to IQAir, Bangladesh was determined to have the most polluted air in the world in 2020 and 2021, while Dhaka had the worst air quality of any city in 2021 (IQAir, 2021). Regarding plastic pollution, Bangladesh was listed among the top ten countries in the world that released the most mismanaged plastic waste into the ocean in 2021 (World Population Review, 2023). This policy toolkit shows demonstrates that individuals in Dhaka are aware of both these problems, and they are a significant concern among residents.

Air pollution poses a significant challenge for the country in terms of both health outcomes and potential economic losses. Health problems associated with air pollution reduce life expectancy in Bangladesh by an average of 6.8 years (AQLI, 2023). The symptoms of this burden of disease have a significant

economic cost, too, through lost productivity and reduced academic attainment.

Plastic pollution is an equally concerning issue as it affects the well-being of the people of Bangladesh. The proliferating use of plastic products and the inadequate waste management system lead to substantial environmental damage. This involves the obstruction of drainage systems, causing massive urban flooding during heavy rainfall in Bangladesh and endangerment of the marine ecosystems. Additionally, incineration of plastic waste is hazardous for human health and micro and nanoparticles of plastic may also enter the food chain through contaminated fish, causing further health concerns for individuals. As one of the countries most exposed to the impacts of climate change, reducing pollution should be a priority for Bangladesh.

The CPD's Green Cities Initiative was set up to better understand the drivers of air and plastic pollution in Bangladesh's cities and develop workable policy

solutions. Since its establishment, the Green Cities Initiative has brought together scientific evidence and economic analyses, producing a series of reports, evidence papers, briefing notes, policy briefs, and events that have improved understanding of the problem among policymakers, journalists and members of the academic community.

In this policy toolkit, CPD's Green Cities Initiative has attempted to analyse public attitudes and behaviours associated with air and plastic pollution, complementing the existing work focused on structural and systemic factors.

The Green Cities Initiative surveyed 500 households in Dhaka to understand their perceptions of the pollution problem and their attitudes towards different policy solutions. This survey explored residents' perceptions of the scale of air and plastic pollution, their understanding of the causes and impacts of pollution and their willingness to change their behaviour or support policies to reduce pollution in the city. Based on the survey findings, this policy toolkit suggests policies including regulatory, economic, institutional, social, and international tools to address the problem of air and plastic pollution in the cities of Bangladesh.

The household survey findings show that air and plastic pollution are significant concerns for the residents of Dhaka. Around three-quarters of Dhaka residents believe air and plastic pollution have become 'much worse' in the past 2 to 3 years. Only 7 per cent of Dhaka residents believe air pollution has stayed the same or improved, while 9 per cent believe the same for plastic pollution. Levels of concern about both air and plastic pollution were consistent across men and women. All age groups reported worsening air pollution in the last 2 to 3 years. This was aligned with the reality as the air quality index (AQI) also suggests that air quality has worsened by 13 per cent since 2020. Although the AQI showed a minor improvement, dropping from 148.7 in 2019 to 145.1 in 2020, it significantly increased in the

following years, reaching 155.6 in 2021 and an alarming level of 163.7 in 2022, categorising the air quality as 'unhealthy'. The survey showed that the oldest cohort was most likely to report that plastic pollution had worsened.

2. Survey findings related to air pollution

Cars and other vehicles were the leading cause of concern for residents.

Residents were most aware of vehicular pollution, with over 77 per cent believing motor vehicles were the city's most significant cause of air pollution. At least 75 per cent of people across all age groups, both men and women, pointed to vehicles as the leading cause of air pollution. The motivation to act on vehicular pollution was likely motivated by the high visibility of the problem within the city, which was experienced by many residents in the city's congestion. Fewer than 10 per cent of respondents saw construction sites or waste burning as the primary driver of air pollution. Less than 5 per cent of residents named brick kilns the leading cause of air pollution, with women and younger people least likely to identify this issue. Respondents, on average, wasted 46 minutes out of every 2 hours spent outside per day sitting in traffic congestion, equivalent to 276 hours per year. This represented a substantial economic loss of potential productive working time for the city, as this figure equates to almost seven working weeks per person lost to traffic each year, assuming a 40-hour work week.

Almost half of the private vehicle users surveyed said that improved mass transit would most likely encourage them to reduce their usage of private cars, and only around 10.9 per cent said that no measures would make them drive less. However, many Dhaka residents (almost 70 per cent of those surveyed) did not own private vehicles and already relied on buses, rickshaws, and walking for their commute. Individuals deemed other measures, including a fuel tax,

congestion charge, number plate restrictions and improved public awareness, were considered to be much less likely to change their driving habits. While 50 per cent of vehicle owners said they would be willing to pay BDT 12.5 carbon tax on fuel on average, it is possible that higher prices would reduce consumption given that 36 per cent of vehicle owners reduced their usage when the price of octane increased from BDT 89 to BDT 130 in 2022.

Individuals are experiencing adverse health and economic consequences of air pollution.

Approximately 67 per cent of respondents had experienced negative health symptoms attributed to air pollution in the past year, including respiratory problems, chest pain and eye irritation. The public health impacts of air pollution are significantly impacting Dhaka's productivity, demonstrated by the fact that the 500 survey respondents spent a total of 2,117 days absent from work and school due to health symptoms attributed to air pollution in the past year and approximately BDT 2.9 million was spent in the last year to diagnose and treat these symptoms, which equates to BDT 4,000 per person.

Deaths from numerous diseases associated with air pollution in Bangladesh have risen 9 per cent over the last 20 years (IHME & GBD, 2019). A report by the World Bank finds that children residing near persistent traffic and major construction activities experience a significantly higher occurrence of lower respiratory tract infections (The World Bank, 2022). If there were a scheme to improve air quality, 70 per cent individuals would be willing to pay BDT 239.4 per month to reduce child mortality due to air pollution.

Households overwhelmingly believed that solutions to air pollution would require a mix of personal behaviour change, government intervention, and government and private sector investment. Most residents agreed that multiple actors are responsible for reducing air pollution in the city, including Dhaka

City Corporation, the Ministry of Environment, Forest and Climate Change (MoEFCC), the private sector, private vehicle owners, and local communities. More than 33 per cent of respondents believed that combatting air pollution would be impossible without the collaboration of the private and public sectors.

3. Survey findings related to plastic pollution

In Dhaka city, there is a lack of awareness of responsible waste management practices.

According to the survey, around 79 per cent of Dhaka's residents did not engage in plastic waste segregation, with 78 per cent believing there was no need to do so. Other respondents stated that since waste collectors did not request them to segregate their plastic waste, they did not think doing so was necessary. Additionally, 63 per cent of the households stated that they did not recycle their durable plastic items, including food-grade containers and toiletries, and they disposed of them with their organic waste. A small percentage of individuals, roughly 4 per cent, admitted to disposing of their household waste indiscriminately in a convenient place instead of utilising appropriate channels. Regrettably, at least 43 per cent of the respondents admitted to discarding plastic waste directly onto the streets outside their homes, further burdening the waste management system.

As waste collection is a fragmented process in Dhaka, working with the informal sector is imperative to improve the city's waste management system. Among the households surveyed, 44 per cent reported that their waste was gathered by city corporation representatives, while the informal sector was responsible for collecting 47 per cent of the household waste. Presently, waste collectors in the informal sector may be unaware of the need to separate all kinds of plastic waste before taking it to the secondary collection points or landfills. Moreover, it is most likely that they only separate plastic items which are

cleaner and more accessible to sort, such as plastic bottles. This further underscores the inefficiencies present in Dhaka's waste management system.

Respondents seemed more aware of the environmental risks of plastic pollution than the adverse effects of plastic pollution on human health, which may mean that they were exposing themselves to health risks. Most of the respondents were aware of the impact of plastic pollution on the environment, such as air pollution caused by burning plastic (74 per cent), plastic obstructing canals and plastic pollution in sewage systems, causing flooding (67 per cent) and leading to water contamination (62 per cent).

However, fewer people knew plastic may degrade into microplastics, endangering marine life. Only 40 per cent knew that microplastics can enter the human body through the food chain. While relatively few individuals stated eating food from plastic containers at home, over a third (34 per cent) reported regularly using plastic utensils. This poses a health risk, as numerous plastic containers and utensil additives may leak when exposed to heat.

Plastic pollution may have a significant effect on the quality of groundwater. This is because microplastics and nano-plastics are common contaminants of groundwater, and therefore, it remains uncertain whether Dhaka's existing conventional filtration systems can efficiently eradicate these minute particles. Apart from contaminating drinking water, microplastics and nano-plastics can accumulate in the food chain and release dangerous chemicals that may cause health hazards for individuals (Yuan, Nag, & Cummins, 2022). According to the survey, 54 per cent of the households among the lower socio-economic groups reported not treating drinking water. Therefore, they may be at an increased risk of exposure to pollutants in the water supply. However, even some filtration methods, such as water cylinders, may be ineffective in removing microplastics, which emit hazardous chemicals and can cause various illnesses. For instance, from the 500

households surveyed, 572 individuals had experienced waterborne disease symptoms in the last year.

Polythene bags are the most significant contributor to single-use household plastic consumption.

Plastic pollution in the urban centres of Dhaka can be attributed to the rampant use of polythene bags, which are the biggest contributors to single-use household plastic consumption. Households reported acquiring an average of 17 polythene bags per week during grocery shopping trips, indicating that the ban on polythene bags introduced in 2002 was not adequately enforced. Furthermore, the survey also revealed that households cumulatively had about 7,403 polythene bags and 9,727 cotton buds with plastic sticks. Households also possessed 2,656 plastic bottles, 817 dental floss items with plastic sticks, 384 plastic drinking cups, and 292 plastic wrappers. It is to be noted that these items are discarded after being used only once, thus providing a more vivid depiction of the substantial plastic waste generated by households. Yet, it is also essential to recognise that the overall generation of single-use plastic waste across all sectors of the economy is significantly higher.

The vast majority (82 per cent) of respondents expressed a willingness to reduce their plastic consumption if alternative materials were available. However, 47 per cent admitted to accepting new polythene bags even when they have their own shopping bags. As such, perhaps a charge on shopping bags may be a practical solution in cutting down usage, as 85 per cent of respondents refused to pay anything for a new shopping bag, reporting they would prefer to take their own bags. This supports the hypothesis that consumers will be more disinclined to take a new shopping bag due to the extra charge, reducing its demand, and may choose to carry their own shopping bags more frequently. This will consequently reduce the supply of shopping bags in the long run and eventually, may reduce the pace of waste accumulation on the streets of Dhaka city.

4. Policy tools for reducing air pollution

Dhaka City has suffered from severe air quality challenges for a long time. Solving this problem will take a holistic approach, including government policy, public awareness, and community involvement. Some policy recommendations to address air pollution include the following:

Regulatory tools

Phasing out fixed chimney brick kilns by 2028:

Although individuals surveyed were most aware of vehicle pollution, brick kilns are, in fact, the largest contributor to air pollution in Dhaka. Fixed chimney brick kilns are the most rudimentary brick kilns that produce the greatest air pollution. Unfortunately, fixed chimney brick kilns are the most common form of brick kilns in Bangladesh. The Government of Bangladesh (GoB) should pass a regulation which requires the phasing out of all fixed chimney brick kilns in Bangladesh by 31 December 2028 and completely shifting all brick manufacturing to less polluting forms of brick kilns, such as Improved Zigzag Kilns, Hybrid Hoffman Kilns, and Vertical Shaft Brick Kiln. Setting a concrete goal and a well-defined target

will urgently motivate brick manufacturers to adopt more environment-friendly manufacturing processes.

Phasing out coal-based powerplants: The GoB should immediately stop approving any new coal-based powerplants and gradually decommission and phase out all existing coal-based powerplants, including the Rampal powerplant near Sundarbans, which are apprehended to destroy the ecosystem.

Formulating and implementing construction site regulations:

Construction sites should be subject to regulation to guarantee the appropriate storage, covering, and transportation of building materials. Furthermore, the government must establish a comprehensive regulatory framework and implement appropriate dust control measures to manage and regulate dust stemming from construction operations effectively.

Economic tools

Exempting VAT for renewables: The government should fully implement the commitments of the Renewable Energy Policy 2008. VAT exemption exists for solar panels and batteries, but there are no exemptions for solar inverters, which are a crucial component of solar power plants. Moreover, the

Table 1: Proposed advance income tax structure for the owners of private motor cars

Type and engine capacity or electric motor power of motor car	AIT for hybrid, fully electric vehicles, and hydrogen vehicles (in BDT)	AIT for conventional fossil fuel vehicles (in BDT)
A car or a jeep, not exceeding 1500cc or 75kw	25,000	26,250
A car or a jeep exceeding 1500cc or 75kw but not exceeding 2000cc or 100 kW	50,000	55,000
A car or a jeep exceeding 2000cc or 100 kw but not exceeding 2500cc or 125 kW	75,000	90,000
A car or a jeep exceeding 2500cc or 125 kw but not exceeding 3000cc or 150 kW	125,000	162,500
A car or a jeep exceeding 3000cc or 150 kw but not exceeding 3500cc or 175 kW	150,000	210,000
A car or a jeep exceeding 3500cc or 175 kW	200,000	300,000
A microbus	30,000	36,000

Source: Authors' compilation.

Table 2: Proposed advance income tax structure for the owners of motorcycles

Type and engine capacity of the motorcycle	Yearly AIT (in BDT)
A motorcycle with an engine of up to 100cc	1,500
A motorcycle with engine from 101cc to 150cc	3,000
A motorcycle with engine from 150cc to 200cc	5,000
A motorcycle with an engine of 200cc and above	9,000

Source: CPD compilation.

import duty on inverters (HS 85044090) was raised to 37 per cent in the budget of fiscal year 2022. An extensive policy considering VAT exemption on all types of equipment in a renewable power plant, especially solar power plants, should be considered.

Offering incentive tariff to renewables: According to the Renewable Energy Policy 2008, an incentive tariff can be considered for electricity generated from renewables. This policy allows electricity generated from renewable sources to be priced 10 per cent higher than the highest purchase price of electricity generated from fossil fuel sources.

Implementing environment surcharge: The Finance Act of 2014 set a 1 per cent surcharge on the goods produced by industries polluting the environment. This environment protection surcharge should be fully implemented.

Introducing carbon tax: Bangladesh can implement a carbon tax equivalent to 3 per cent of the price of fossil fuels starting from the next fiscal year to gradually meet the government's target set out in the Eighth Five Year Plan, which aims to implement a 5 per cent carbon tax on the price of fossil fuels by 2025 and 15 per cent carbon tax on the price of fossil fuels by 2041.

Phasing out fossil fuel subsidies: In accordance with the International Monetary Fund (IMF) recommendations, the government should phase out fossil fuel subsidies starting the next fiscal year. Initially, all fossil fuels may be sold at the international

market price, which may be updated monthly. The government can redirect the funds allocated to fossil fuel subsidies to develop green energy.

Encouraging hybrid, electric, and hydrogen vehicles: To reduce air pollution originating from the transport sector, the government should reform the advance income tax (AIT) structure on private motor vehicles so that the AIT on fossil fuel-driven motor vehicles is 5 per cent to 50 per cent higher than the AIT on hybrid, fully electric, and hydrogen vehicles, depending on the size of the engine and electric motor of the vehicle (Table 1).

Introducing advance income tax for motorcycles: Besides the AIT on private motor vehicles, the government should also consider imposing a small AIT on all motorcycles (Table 2).

Institutional tools

Introducing computerised emissions testing of automobiles: The Bangladesh Road Transport Authority (BRTA) should consider implementing computerised emissions testing for all vehicles. Fitness certificates should be issued only to vehicles that pass computerised emissions testing.

Improving air quality monitoring: The Department of Environment (DoE) should establish more air quality monitoring stations next year. These may initially be in every ward of Dhaka city and eventually nationwide. Such a network of air quality monitoring

stations should publicly display the air quality parameters on large screens and publish air quality data online in real time.

Promoting non-motorised transport: Dedicated cycling lanes and pedestrian-friendly infrastructure should be developed wherever possible to encourage walking and cycling as alternative modes of transportation.

Creating and protecting green spaces and urban planning: Green spaces in established cities like Dhaka and Chittagong should be protected from encroachment. Burgeoning towns nationwide should be designed with at least one-third of urban built-up areas reserved for green spaces. All city corporations nationwide should be instructed to develop more parks, green spaces, and urban forests to absorb pollutants and provide oxygen.

Social tools

Increasing public understanding of air pollution: It is vital to generate widespread public understanding and disseminate information to our country's citizens on the detrimental impacts of air pollution on human well-being. The GoB should launch nationwide public awareness campaigns to educate citizens about the health risks of air pollution and the importance of reducing their contributions.

Broadcasting and publishing air quality indicators with weather forecasts: The Ministry of Information and Broadcasting should instruct all television and radio stations to broadcast air quality indicators with weather forecast reports.

International tools

Tackling pollution at the regional level: Transboundary air pollution must be addressed via talks among policymakers of neighbouring countries. The GoB should collaborate with neighbouring

countries to address transboundary air pollution issues and establish regional agreements for air quality improvement.

5. Policy tools for reducing plastic pollution

Like many other cities, Dhaka faces the complex problem of reducing plastic pollution, which can only be met by a mix of regulations, public awareness initiatives, and sustainable alternatives. Some policy recommendations to address plastic pollution include:

Regulatory tools

Enforcing the ban on polythene bags: The GoB should strictly enforce a ban on polythene bags. Polythene bag manufacturing equipment should be seized and destroyed. All retailers offering polythene bags should be fined heavily. Once polythene bags are entirely out of the market, there will be a conducive environment for alternatives to flourish.

Promoting polythene alternatives: Alternatives to polythene bags, such as paper bags, cloth bags, and bags made of other sustainable materials, should be sold to consumers at a nominal price to make it more feasible for all retailers to adopt and provide them to customers. The provision of free shopping bags should be prohibited by law to encourage consumers to carry their own bags and reuse bags.

Developing a national framework for Extended Producer Responsibility (EPR): The GoB, in consultation with the private sector and experts, should establish and implement a national framework for EPR that requires producers and manufacturers to take responsibility for the entire lifecycle of their plastic products, including collection and recycling.

Phasing out single-use plastic by 2028: The GoB should pass a regulation which requires phasing out of single-use plastic products by 31 December 2028.

Such single-use plastic products may include, inter alia, forks, knives, spoons, chopsticks, plates, straws, beverage stirrers, sticks to be attached to and to support balloons, food containers made of expanded polystyrene, beverage containers made of expanded polystyrene, and cups for beverages made of expanded polystyrene. Setting a concrete goal and a well-defined target will urgently motivate manufacturers to develop environmentally friendly alternatives to these single-use plastic products.

Promoting sustainable materials: To promote sustainability in Bangladesh, regulations mandating a minimum amount of recycled materials in product packaging should be formulated.

Making government offices plastic-free: The GoB should lead by example by making all government offices and agencies plastic-free zones and implementing policies to eliminate single-use plastics in government operations.

Economic tools

Introducing a plastic tax: To reduce plastic pollution, the government should consider bringing plastic products with less than 30 per cent recycled plastic under taxation. Such a measure will encourage plastic recycling and reduce the use of virgin plastic.

Reinstating 5 per cent supplementary duty on plastic bags: The 5 per cent supplementary duty on plastic bags which was withdrawn in fiscal year 2023 should be reinstated immediately.

Increasing customs duty on plastic waste: The relatively low customs duty on plastic waste must be raised. This will raise the cost of importing plastic waste, causing plastic makers to find their raw materials domestically and boosting domestic plastic recycling.

Investing in technology to support the recycling of multi-layer plastic (MLP): Bangladesh requires the

appropriate technology to recycle MLP. If firms acquire such technological support, the usage of virgin plastic resin may potentially decline substantially.

Investing in technology for pyrolysis: Pyrolysis may regenerate petroleum from plastic waste for fuel. This is important because it will raise demand for all plastics and lessen Bangladesh's dependence on imported petroleum. It is crucial to note that such a procedure requires advanced equipment and might be costly to scale up.

Providing low-interest loans to plastic recycling industries: Bangladesh Bank should instruct commercial banks to offer low-interest loans to encourage the growth of plastic recycling industries and innovation in plastic recycling technologies.

Institutional tools

Establishing recycling centres: The GoB should establish waste recycling centres, initially in all wards of all city corporations and eventually nationwide. These recycling centres should provide trash-to-cash schemes to incentivise waste collectors to collect more waste and increase overall recycling of waste. The government should aim to leverage the network of these recycling centres to create a market for single-use plastic waste.

Improving links between recyclers and manufacturers: Links between the local recycling shops and manufacturers need to be established and strengthened nationally to increase the collection of polythene bags and PET bottles.

Engaging the informal sector: Municipalities should formalise the informal sector by providing resources and training to separate plastic garbage from homes and secondary collection sites. The city corporation has the means and capacity to teach trash collectors to separate plastic waste.

Monitoring and reporting: The government should establish a system for monitoring and reporting plastic pollution levels, including regular assessments of rivers, water bodies, and public spaces. Such data should be shared with the public and stakeholders to maintain transparency and accountability.

Social tools

Launching public awareness campaigns: The government should launch educational campaigns to raise awareness about the environmental impact of plastic pollution and promote responsible plastic use. Such campaigns should engage schools,

community-based organisations, non-government organisations, and the media in spreading the message.

International tools

Taking joint initiatives: The budget should allocate additional funding for the Joint Rivers Commission to establish a bilateral plastic waste reduction initiative with India. The Government of India should also contribute to this initiative with funding and technical and logistical support to ensure the reduction of plastic waste in the 54 transboundary rivers shared between Bangladesh and India.

6. Conclusion

Across both air and plastic pollution, residents' high levels of concern are not matched with necessary behaviour changes to reduce their contribution to the problem. Awareness of the problem has not yet developed into action. This points to the need for government and private sector action to enable people to make more environmentally friendly choices. Sufficient investment in sustainable alternatives, including an affordable and comprehensive public transit system and a well-organised waste management system, will be necessary to encourage people to play their part in reducing air and plastic pollution within Bangladesh's cities.

To motivate individuals to change their habits, these "carrots" may need to be matched with "sticks" to discourage people from continuing their old behaviours. Options should be explored, including measures to discourage private vehicle use and methods to ensure a ban on polythene bags can be well enforced. While consumer behaviour change will be a vital part of a transition to a greener city, we must not lose sight of the limits of individual behaviour. Alongside these policies, the Government of Bangladesh must continue working with the private sector to tackle industrial issues such as irresponsible construction practices and investment in sustainable alternatives to fossil fuels.

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Dhaka has been plagued with hazardedously high levels of pollution for many years. Such pollution is anticipated to have detrimental effects on human health and delimiting effects on economic growth. CPD's Green Cities Initiative aimed to understand the drivers of air and plastic pollution, as well as the impacts of such pollution on human health, the environment, and the economy. In doing so, the CPD Green Cities Initiative aimed to raise the salience of air and plastic pollution in the mainstream development discourse and promote policy changes that will ultimately reduce air and plastic pollution.

The CPD Green Cities Initiative was designed to have two phases. In the first phase, knowledge outputs were produced mainly through desk research and stocktaking of secondary literature and data. In the second phase, the knowledge outputs were based on a primary survey of 500 households in Dhaka city, along with secondary data and literature.

In the survey of households, more than 76 per cent thought that air pollution in Dhaka city became much worse in the past 2-3 years, and 73 per cent had the same notion for plastic, demonstrating a high public awareness of the problem. Additionally, data collected in the survey was able to quantify some of the economic and health impacts of air pollution in the city, including that, on average, individuals in Dhaka city spent BDT 4,000 per year to diagnose and treat symptoms associated with air pollution, and that residents wasted an average of 46 minutes stuck in traffic for every two hours spent outside in the city. The survey also found a low level of awareness among residents about mitigating their contribution to plastic pollution. Just 37 per cent of residents practiced recycling, and 43 per cent admitted to discarding plastic waste directly onto the streets. Based on the survey findings, this study suggests policies, including regulatory, economic, institutional, social, and international measures, to address the problem of air and plastic pollution in the cities of Bangladesh.

CPD's Green Cities Initiative has disseminated findings to policy stakeholders through various means, including two public dialogues and knowledge outputs, including two evidence papers, three briefing notes, two reports, and two infographics. Relevant government ministers and policymakers have attended dialogues, and a critical meeting was held with the Mayor of Dhaka North City Corporation to disseminate the project's findings. In addition to planned outputs, the CPD Green Cities team produced a time-sensitive special report in advance of the budget on the opportunities provided by the IMF's Resilience and Sustainability Facility with specific policy recommendations for the government. In addition to engaging policymakers, the CPD Green Cities Initiative also conducted a student research poster exhibition and contest on air and plastic pollution, as well as a student photography exhibition and contest on air and plastic pollution, to reach academic stakeholders. Additionally, CPD's Green Cities Initiative has conducted a journalist workshop to meet the critical goal of raising public awareness. This has built a network of informed journalists who publish findings related to air and plastic pollution regularly. Furthermore, CPD's Green Cities Initiative also partnered with a leading Bangla language newspaper in the country to disseminate the project's conclusions through four articles and two Facebook Live videos.

This policy toolkit contains a summary of the key findings from CPD's Green Cities Initiative, as well as the major policy recommendations for reducing air and plastic pollution.



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