

# GREEN CITIES IN BANGLADESH: POLICY RECOMMENDATIONS IN THE CONTEXT OF IMF'S RESILIENCE AND SUSTAINABILITY FACILITY (RSF)

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***POLICY RECOMMENDATIONS IN THE CONTEXT OF IMF'S  
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## EXECUTIVE SUMMARY

In early 2023, the International Monetary Fund (IMF) aptly suggested policy measures to Bangladesh for reducing pollution. IMF has approved of Bangladesh's request for a USD 4.7 billion loan in January 2023 with the aim of preserving its macroeconomic stability, protecting the vulnerable and promoting inclusive and green growth. The fund has been approved under the provisions of the Extended Fund Facility (EFF), the Extended Credit Facility (ECF), and the Resilience and Sustainability Facility (RSF) arrangements. RSF is particularly designed for combating climate change challenges and strengthening private climate investments. However, access to the fund will be ensured only if the reform measures stipulated by IMF are implemented. There are 11 reform measures (RM) under the RSF based on the Government of Bangladesh (GOB)'s 3 reform priorities. The reform priorities include: i) making infrastructure investments green and resilient; ii) strengthening climate fiscal management; and iii) mobilising private climate finance and enhancing financial sector resilience. IMF's reform measures focus on increasing climate resilience and reinforcing infrastructure to mitigate climate risks. The measures also complement the actions under ECF and EFF by assisting the government's efforts to address climate change-related issues, enhance resilience, and stimulate extra public and private investment.

Under this context, the Centre for Policy Dialogue (CPD) has come up with a set of policy recommendations for reducing air and plastic pollution in light of the reform measures suggested by IMF. The recommendations by CPD involve revenue raising options as a part of ECF and EFF while also emphasising infrastructure, climate fiscal management, and private climate finance in green cities as a part of RSF.

IMF has stipulated that Ministry of Finance (MoF) should adopt some tax revenue measures which should yield an additional 0.5 per cent of GDP in fiscal year (FY) 2024 budget. In this regard, CPD has recommended several policy tools that will not only help to mobilise revenue but will also instigate reduction in air and plastic pollution. CPD recommends the GOB to reinstate a 5 per cent supplementary duty on polythene bags and a new levy on single-use plastics which may include cutlery, plates, straws, food containers made of expanded polystyrene and other plastic products in FY2024. Moreover, the government may consider imposing a carbon tax on fossil fuels, increasing advance income tax (AIT) on private motor vehicles and introducing AIT on motorcycles in order to reduce air pollution from vehicular

emission. CPD recommends that a 3 per cent carbon tax on the fossil fuel price should be imposed from FY2024, and this could be gradually increased to 5 per cent and 15 per cent by 2025 and 2041 respectively to meet the government's target set out in the Eighth Five Year Plan. The AIT on fossil fuel-powered vehicles should be increased by 5 per cent to 50 per cent depending on engine size, in comparison to that imposed on hybrid and fully electric vehicles. Introduction of an additional AIT on motorcycles should commence from FY2024.

The measures suggested by IMF under the RSF, can be adjusted to include policy measures which advocate for less air and plastic pollution in urban areas of Bangladesh. To encapsulate the first priority area of making infrastructure investments green and resilient, CPD recommends considering the sources of air pollution while analysing the costs and benefits of public infrastructure projects and including them in the Green Book as a part of RM6. Moreover, the appraisal of major infrastructure projects should include an analysis of the costs of air and plastic pollution before making green and resilient infrastructure investments.

Furthermore, as per RM8, the government should revise the public-private partnership (PPP) policy framework to include guidelines which require the use of sustainable and eco-friendly materials during project implementation wherever possible, in lieu of single-use plastic products. The policy framework should also involve provisions for extended producer responsibility (EPR) to design products which are easily recyclable. It should also necessitate the inclusion of plastic recycling plants and proper channels for waste segregation involving plastic waste management, and effective collection of all plastic waste generated during a project to increase the pace of recycling. This may act as a criterion for project selection as per Nationally Determined Contribution (NDC) and National Adaptation Plan (NAP) as mentioned in RM9. Additionally, the new module used to register public assets under RM10 should be easily accessible by all and must be updated regularly.

According to reform priority 2 outlined by GOB, it is essential to strengthen the climate fiscal management to meet social and development objectives. This includes management of public finance, investment, and debt to achieve spending efficiency, good governance, and transparency. IMF proposed RM 1, 2 and 5 under RSF in correspondence with this priority area. RM 1 alludes adopting a public procurement policy paper, in response to which CPD recommends including issues related to air and plastic pollution. CPD recommends that the GOB should update the fossil fuel price monthly in line with international prices, and phase out subsidies on fossil fuels to address RM 2 which states that the government must adopt a periodic formula-based price adjustment mechanism for petroleum products. Additionally, in consideration of RM5, the MoF must maintain an emission database for the air pollutants and include it in the Medium-Term Macroeconomic Policy Statement.

The third reform priority for Bangladesh is mobilising private climate finance and enhancing financial sector resilience. Under RM3, an efficient Task Force on Climate-Related Financial Disclosures (TCFD) should be built comprising of policymakers, independent experts, academics, representatives of NGOs and CSOs, and representatives of the private sector. Moreover, Bangladesh Bank should conduct and publish a climate stress testing regularly for the overall financial system to fulfil the conditions of RM7. As per RM11, the policy on Green Bond financing including the annex on green taxonomy, needs to be revised by Bangladesh Bank. So that it is aligned with the investment areas which have been given precedence in the

NAP. Promoting sustainable finance for environment-friendly products is indispensable in order to replace plastic. Bangladesh Bank can facilitate advanced technologies through providing sustainable finance for better waste management infrastructure and efficient brick production technology to reduce plastic and air pollution.

Finally, to enable effective monitoring and evaluation of reform measures proposed under the RSF, a Citizen's Commission with clear objectives, a defined timeline, multi-stakeholder participation, total openness, full neutrality, and complete independence should be established. This commission will also ensure better understanding of the underlying causes of the apparent problems, and the development of more effective, credible recommendations for long-term solutions for greening both urban spaces and the economy at large.



# 1. CONTEXT: INCREASING AIR AND PLASTIC POLLUTION IN BANGLADESH

Although the majority of Bangladesh's population resides in rural areas, there is a noticeable shift towards urbanisation. The urban population has grown by 54 per cent since 2011 and currently exceeds 50 million (Bangladesh Bureau of Statistics, 2022). This transition can be beneficial for development, but it may also have negative environmental consequences. As more people move to cities, their carbon footprints increase, and the combined impact can be significant. The rise in population density leads to higher levels of pollution, particularly air and plastic pollution, in large cities in Bangladesh. Without appropriate policy measures, this situation may worsen, posing a threat to both human health, the country's economy, and the environment.

## 1.1. Air pollution: the problem

The air quality in the capital city, Dhaka, is in an alarming situation.

- Bangladesh was ranked fifth for having the most polluted air in the world in 2022 and second for having the worst air quality after Pakistan among the Central and South Asian countries (IQAir, 2022).
- Air pollution was the second largest cause of deaths and disability in Bangladesh in 2019 (The World Bank, 2022).
- Dhaka's average concentration of PM<sub>2.5</sub><sup>1</sup> was 94 µg/m<sup>3</sup> in 2022 (AirNow, 2023), which is approximately 6 times higher than the annual Bangladesh National Ambient Air Quality Standards (NAAQS) of 15 µg/m<sup>3</sup> and 18 times higher than the World Health Organization's (WHO) guideline of 5 µg/m<sup>3</sup> (DoE, 2005 and The World Bank, 2018).
- Life expectancy is 7 years lower on average in Bangladesh due to this pollutant (AQLI, 2022).

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<sup>1</sup>One of the key pollutants of the air is fine Particulate Matter (PM), known as PM<sub>2.5</sub> and PM<sub>10</sub>, which have an aerodynamic diameter less than 2.5 µm and 10 µm respectively. Fine particulate matter is the major source of mortality from respiratory, cardiovascular, and other types of diseases (Majumder, Nayeem, Patoary, & Carter, 2020).

- About 3.9 to 4.4 per cent of the country's GDP was lost annually due to lower productivity caused by poor air quality in 2019 (World Bank, 2022).
- The major drivers of air pollution in Bangladesh are vehicular emissions, brick kilns, construction activities, transboundary sources, biomass burning, and waste burning (Khatun, Saadat and Ashraf, 2023). Motor vehicles have increased by 300 per cent in Dhaka city since 2010 up to April, 2023 (Bangladesh Road Transport Authority, 2023). On the other hand, 58 per cent of brick kilns is illegally operated without any environmental clearance certificate (The World Bank, 2009).

Hence, the government must impose stricter laws and execute proper monitoring mechanisms to address the root causes of air pollution in Dhaka city and other parts of Bangladesh

## 1.2. Plastic Pollution: the problem

In addition to the severity of Dhaka's air pollution, it is critical to emphasise that urbanisation contributes significantly to the city's high levels of plastic pollution as well. For Dhaka city, the mismanagement of plastic waste is a major concern mostly due to the inadequate waste management system.

- In Bangladesh, waste is collected and recycled mostly by the informal sector. But the amount of plastic now being used and discarded is so large that it overwhelms these efforts, leaving Bangladesh with a major plastic pollution problem.
- Moreover, the waste collectors mostly separate plastic bottles as they are easier to clean and sell, and thus have a greater market value as opposed to other single-use plastic products. As a result, most of the single-use plastic items either get burned, dumped in landfills or along the side of the urban streets, or are thrown away in river channels and sewage systems.
- The problem has been exacerbated by the COVID-19 pandemic, which led to a massive increase in the use of polythene bags and other single-use plastics, such as plastic gloves. There also exists a lack of initiative from the consumers at the household level to separate their plastic waste from their organic waste which could increase the pace of recycling.
- Plastic waste clogs sewage systems in Dhaka city and gives rise to urban flooding. Plastic debris further breaks down into microplastics which



are often ingested by aquatic animals, causing internal damage.

- Subsequently, this increases the risk of plastic particles entering the food chain, as people may consume fish contaminated with plastic which may have negative effects on human health.

The local government bears a substantial burden of managing plastic waste and a sizable portion of its funds are spent on waste management systems and cleaning up urban streets. According to a study in 2020, the estimated annual clean-up cost of plastic waste to the Government of Bangladesh was over USD 25 million (The Ocean Cleanup, 2022). Other effects that are harder to measure, such as the cost of days of work lost due to the health effects of plastic pollution, mean that the true figure for the overall cost of plastic pollution may be higher.

### 1.3. Current policy

The government has taken several steps in efforts to reduce air and plastic pollution. However, a lack of monitoring and enforcement has made these policies redundant and ineffective. Therefore, a much more prudent policy design is required with proper monitoring and evaluation to mitigate air and plastic pollution from cities of Bangladesh.

In this regard, the reform measures proposed by the International Monetary Fund (IMF) are quite timely and may be utilised as a foundation to implement effective policy measures which advocate for green cities free from air and plastic pollution.

## 2. INTERNATIONAL MONETARY FUND (IMF) LOAN – AN OPPORTUNITY FOR ACTION ON POLLUTION

To support the Government of Bangladesh, on January, 2023 the IMF granted a USD 4.7 billion loan, out of which USD 3.3 billion will be provided under the Extended Fund Facility (EFF) and Extended Credit Facility (ECF) arrangement, and an additional USD 1.4 billion will be provided under the Resilience and Sustainability Facility (RSF) (IMF, 2023a). The differences between EFF and ECF and RSF are further summarised in Box 1. Bangladesh is the first country in Asia to be granted support through RSF. This is an important development for the country. In this section we first present the wider context for

the IMF loan and then focus on its possible climate change and pollution related elements.

### 2.1. IMF Loan – the wider context

The objectives of Bangladesh's 42-month long IMF programme are to maintain economic stability, safeguard vulnerable groups, and foster inclusive and environment-friendly growth. Reforms will be made in light of fortifying the financial sector and updating the policy framework, while building climate resilience (IMF, 2023b).

Under this context, fiscal policy reforms are essential for creating budgetary space using modalities that encompass domestic revenue mobilisation. However, raising government revenue will require a multi-dimensional approach which includes tax policy reforms and tax administration reforms. Through a set of suggested reforms, it is expected that an additional 0.5 per cent of Gross Domestic Product (GDP) will be raised per year as tax revenue in the fiscal year (FY) 2024 and FY2025 and 0.7 per cent of GDP in FY2026, which will create sufficient funds for increased spending towards social issues and public investment (IMF, 2023b).

The other significant reform that is essential to create fiscal space is the rationalisation of energy subsidies. To prevent systemic subsidies for petroleum products, the IMF initiative will implement a periodic formula-based fuel price adjustment mechanism to allow the prices of petrol and diesel in Bangladesh to be determined partly through market forces

Bangladesh needs larger climate investments to meet its climate plans outlined in NDC and the Bangladesh Delta Plan (BDP2100). Less than 1 per cent of Bangladesh's GDP is currently invested annually in climate concerns, compared to the 3 to 4 per cent of GDP funding required over the next 15 years (IMF, 2023b). In this regard, the fund provided under RSF is anticipated to assist Bangladesh in meeting the additional climate financing needs, while playing a catalytic role in getting more support from the private sector to facilitate further finance for climate action. Bangladesh is confronting substantial socio-economic risks because of climate change and natural catastrophes, and the RSF will provide resources to address these weaknesses while also supporting a green economic recovery and maintaining foreign exchange reserves. Additionally, reform measures

### Box 1: Differences between ECF and EFF and RSF

- The ECF and EFF agreements seek to safeguard Bangladesh's economic stability and aid in the government's reform drive. In addition, the RSF will complement the investments made under the ECF and EFF to increase budgetary flexibility to tackle climate change, augment additional monetary resources, and ensure resilience against climate risks in the long term. This entails adopting a plan to enhance national revenue to sustainably boost social, development, and environmental spending. Developments made under the ECF and EFF agreement will prioritise areas which include: Alleviating debt while providing the financial space required for essential investment
- Improving the financial sector to systematise profitable ventures
- Increasing output and efficiency to create high-quality employment
- Improving the investment environment to support substantial financial necessities; and
- Upgrading financial, budgetary, and monetary structures in anticipation of Bangladesh's graduation from the Least Developed Countries (LDC) group.
- The RSF will assist ECF and EFF initiatives by providing additional financial support to foster green investments and mitigate the effects of climate change in Bangladesh. The key objectives under the RSF include: Allocating funds for BDP2100
- Increasing funding across industries that are climate-conscious
- Improving public investment management (PIM) and public financial management (PFM) policies to establish a conducive environment and improve the organisational framework
- Employing a range of funding mechanisms.

Furthermore, the RSF will be in alignment with the BDP2100 and the National Adaptation Plan (NAP). The programme also plans to generate an additional USD 8 billion using public green bonds as per the BDP2100, and green financing as per the Mujib Climate Prosperity Plan (MCPP).

**Source:** IMF Country Report No. 23/66: Bangladesh (IMF, 2023b)

will assist administrative reforms by allowing substantial climate investments, reducing challenges and obstacles, and enhancing the environment for investment to generate non-tax revenue sources for the government.

The RSF loan will be provided during FY2023-26 in six equal instalments conditional upon six periodic reviews with the aim of addressing 11 reform measures. These reform measures will assist in addressing the needs unique to Bangladesh, such as strengthening the coastal economy's resilience and supplementing it with sustainable treatments, reducing the risk and impact of floods and tropical cyclones, bridging the infrastructure gap, building climate change resilient facilities, and assisting climate change mitigation policy. The implementation of these changes will be aided by IMF capacity building as well as capacity building from other development partners (IMF, 2023b).

### 3. POLICY RECOMMENDATIONS FOR GREENING CITIES WITHIN IMF'S REFORM FRAMEWORK

This section provides CPD's policy recommendations for the Government of Bangladesh and the IMF as the reform framework is implemented. The section is divided into two sub-sections: the first covers revenue raising options (which link to the IMF's ECF and EFF) and the second covers issues around i) green infrastructure investment; ii) climate fiscal management; and iii) private climate finance. This is linked to the RSF. See Box 1 for a summary of the different elements of the IMF programme and loan.

#### 3.1. Revenue raising options linked to ECF/EFF relevant for green cities

As per the ECF and EFF arrangements, revenue mobilisation is considered a high priority within the

IMF programme IMF stipulates that tax revenue measures should generate an additional 0.5 per cent of GDP in the FY2024 budget (IMF, 2023b). In this regard, the government may adopt a number of fiscal measures which will not only raise tax revenue, but also reduce the effects of air and plastic pollution.

### ***Reinstating a 5 per cent supplementary duty on polythene bags and a new levy on single-use plastics***

The government may impose a small levy on single-use plastic items in FY2024 as a part of its new tax regime. Single-use plastic products may include cutlery, such as forks, knives, spoons, and 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.

The previous command and control approach that the government had taken in 2002 by banning polythene bags proved to be only partly effective. Despite the current restriction on polythene bags, the government lifted the 5 per cent supplementary duty on all plastic or polythene bags in FY2022 (MoF, 2022). Therefore, in addition to the levy imposed on single-use plastic, the government should reinstate the 5 per cent supplementary duty on polythene bags. Thus, it is more viable to implement a market-based approach through the measures and framework suggested by the IMF.

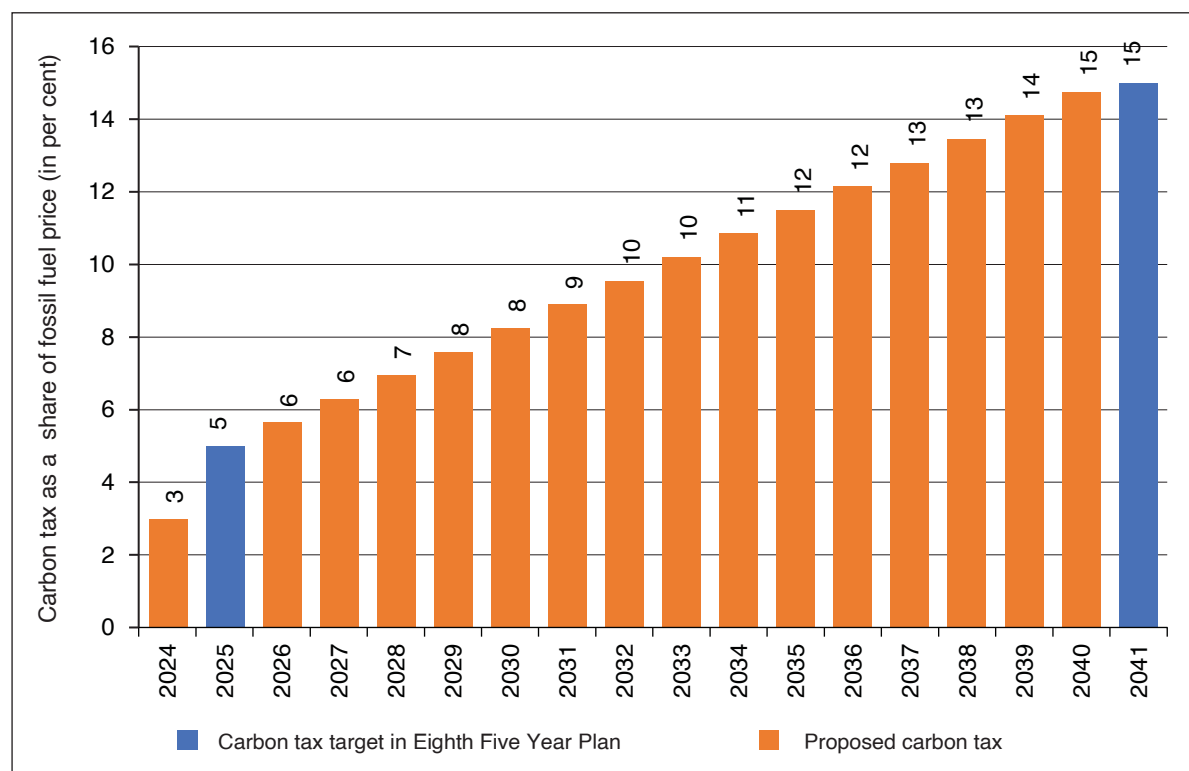
Imposing a tax on single-use plastic items will increase the cost of purchasing such products and subsequently reduce their demand. This may lead producers to invest in research and development to acquire an affordable, sustainable, and eco-friendly material to substitute for plastic and encourage consumers to adopt new practices in making a conscious effort to substitute their plastic products with environment-friendly alternatives. This reform will not only discourage the use of plastic items but also create a new stream for revenue mobilisation. Further research may be required to assess the potential revenue that can be generated from this kind of policy measure. Nevertheless, it is clear that at this juncture, the government may consider such a move, especially in view of the shrinking fiscal space.

### ***Imposing carbon tax on fossil fuels and advance income tax (AIT) on private motor vehicles and motorcycles***

In order to increase domestic revenue mobilisation and decrease air pollution, the government can use fiscal policy tools by imposing a carbon tax on fossil fuels which would be levied on fossil fuel used by motorists and also by reforming advance income tax (AIT) on private vehicles. The AIT for private motor vehicles may be increased from 5 per cent to 50 per cent on fossil fuel driven motor vehicles depending on the size of the vehicle's engine and electric motor. Moreover, AIT may be introduced on motorcycles to capture more people under the tax net along with reducing air pollution in the city.

Introducing a carbon tax will not only augment the tax revenue but also reduce the usage of fossil fuels resulting in a positive impact on the environment. Moreover, this additional revenue may be invested in the green energy sector of Bangladesh. A carbon tax is based on the 'polluter pays principle', which implies that those who cause pollution should pay for the environmental damages caused by them. In the beginning, a carbon tax equivalent to 3 per cent of the price of fossil fuels should be imposed from FY2024 (Centre for Policy Dialogue, 2023) with the aim of meeting the government's target of implementing a 5 per cent and a 15 per cent carbon tax on the price of fossil fuels by 2025 and 2041 respectively, as stated in the Eighth Five Year Plan (Bangladesh Planning Commission, 2020). The carbon tax can be increased gradually over the years (Figure 1), and built into a large revenue stream to fuel green transition of the economy. According to World Bank (2018), Bangladesh can raise up to 1 per cent of its GDP in carbon tax revenues.

It is high time to implement a proper mechanism to control the increasing number of fossil fuel driven vehicles in Dhaka. To mitigate air pollution caused by transportation, it is recommended that the government revise the current structure of AIT imposed on privately owned motor vehicles. Specifically, the AIT levied on fossil fuel-powered vehicles should be increased by 5 per to 50 per cent in comparison to that imposed on hybrid and fully electric vehicles, with the exact percentage differential being dependent on the engine and electric motor size of the vehicle (Table 1).

**Figure 1: Carbon tax as a share of fossil fuel price (in percentage), target and proposed**

Source: CPD illustration based on targets set out in the Eighth Five Year Plan (Centre for Policy Dialogue, 2023).

**Table 1: Proposed advance income tax (AIT) structure for the owners of private motor cars in FY2024**

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

Source: Source: CPD compilation.

**Table 2: Proposed advance income tax (AIT) structure for the owners of motorcycles in FY2024**

Type and engine capacity of motorcycle	Yearly AIT (in BDT)	26,250
A motorcycle with engine up to 100cc	1,500	55,000
A motorcycle with engine from 101cc to 150cc	3,000	90,000
A motorcycle with engine above 150cc	5,000	162,500

Source: CPD compilation.

**Table 3: Proposed measures under IMF's ECF and EFF arrangements and corresponding recommendations for green cities by CPD**

Revenue mobilisation measure (ECF and EFF)	CPD's recommendations for greening cities through reducing air and plastic pollution
<p>MoF adopts tax revenue measures yielding an additional 0.5 percent of GDP in the FY2024 budget</p> <p>Target date: End-June 2023</p>	<p>With the goal of reducing plastic pollution, the government should consider bringing single use plastic products under taxation in FY2024. Such single-use plastic products may include cutlery such as forks, knives, spoons, and 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.</p> <p>The government should also reinstate the 5 per cent supplementary duty on polythene bags.</p> <p>Bangladesh should implement a carbon tax equivalent to 3 per cent of the price of fossil fuels starting from FY2024.</p> <p>The government should reform the 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 and fully electric vehicles, based on the size of the vehicle's engine and electric motor. Similarly, introducing an AIT on motorcycles depending on the size of the motorcycle's engine will not only augment tax revenue but also reduce air pollution.</p> <p>Source: Authors' compilation based on information from IMF country report for Bangladesh (IMF, 2023b).</p>

Source: Authors' compilation based on information from IMF country report for Bangladesh (IMF, 2023b).

Furthermore, it is recommended that the government contemplate the implementation of an additional AIT on motorcycles commencing from FY2024, in conjunction with the existing AIT on private motor vehicles (Table 2).

A summary of the proposed measures under the ECF and EFF arrangements and the corresponding CPD's recommendations for green cities is presented in Table 3.

### **3.2. Green cities infrastructure, climate fiscal management, and private climate finance-related recommendations linked to RSF**

Within the RSF framework, the IMF has suggested 11 reform measures based on 3 priority areas identified by the GOB (Table 4). These priority areas include i) making infrastructure investments green and resilient;

ii) strengthening climate fiscal management; and iii) mobilising private climate finance and enhancing financial sector resilience.

### ***Reform priority 1: Making infrastructure investments green and resilient***

It is important for the government to work in coordination with the private sector to leverage sufficient climate finance to adapt measures and policy frameworks to increase climate resilience and foster green cities. As per the eighth reform measure (RM8), the government needs to adopt a revised public-private partnership (PPP) policy and framework which will incorporate probable climate risks and thereby establish necessary guidelines. This reform measure (RM) compliments RM9 which mandates that the government should issue a circular regarding the project selection criteria. In this regard, the guidelines should include measures or initiatives that require the use of sustainable materials wherever possible during project implementation, as opposed to single-use plastic products. This may act as a criterion for project selection as per Nationally Determined Contribution (NDC) and NAP as suggested by RM9. The guidelines should also explicitly mention the proper channel for waste segregation involving plastic waste management, including the effective collection of all plastic waste generated during the project to increase the pace of recycling. In addition, the new PPP policy framework requires parameters for extended producer responsibility (EPR) including mandates to design products which are sustainable and recyclable. The policy framework should also include requirements for plastic recycling plants which will enable the reuse of any plastic waste generated through production in an attempt to minimise plastic pollution. Such a policy framework will facilitate the reduction of single-use plastic waste accumulating in water bodies and drainage systems in Dhaka city.

The government will issue an update on the green book based on the guidelines for formulation, processing, approval, and revision of development projects in the public sector with regards to RM6. The green book must consider the sources of air pollution, for example, illegally operated brick kilns, or buildings or roads without a proper storage and transportation system for construction materials, while analysing the costs and benefits of the infrastructure projects. It must be noted that, improper plastic waste

management in the construction industry may block the drainage system and result in flooding. Hence, the appraisal of major infrastructure projects should analyse the costs of air and plastic pollution and take adequate measures for sustainable implementation and consistent monitoring to make green and resilient infrastructure investments.

### ***Reform priority 2: Strengthening climate fiscal management***

The success of Bangladesh's climate strategies depends on the implementation of the Climate Fiscal Framework (CFF), which will also set the groundwork for sensible, inclusive PFM procedures that take climate change into account. Therefore, the government needs to adopt a sustainable public procurement policy paper as per RM1, with an accompanying action plan to involve climate and green components. The government needs to procure green technologies for project implementation to ensure sustainable operations, and thereby reduce air and plastic pollution. Green procurement generates demand for sustainable products, albeit with an increase in public expenditure. However, the funds provided under the RSF along with the measures suggested to increase domestic revenue mobilisation, will substantiate a rise in public investment. It is important for the government to influence the utilisation of efficient technologies through green procurement policies to ensure the production and usage of eco-friendly alternatives to single-use plastic items. This will incentivise consumer choices and will help phase out single-use plastic products. The government will also adopt an action plan along with the paper, which should mention proper monitoring and control plans against illegal brick kilns and usage of polythene bags. In addition, the public procurement policy paper should be accessible by citizens and experts so that they may provide their own suggestions regarding the procurement process.

It is necessary to adjust the fossil fuel prices in Bangladesh based on international fossil fuel prices on a monthly basis to fulfil the requirement of RM2, which suggests adopting a periodic formula-based price adjustment mechanism for petroleum products. Simultaneously, the subsidies on fossil fuels should be phased out in FY2024. According to RM5, the Ministry of Finance (MoF) will maintain a Medium-Term Macroeconomic Policy Statement (MTMPS) demonstrating the macro-fiscal risks from climate

change. It is necessary to add an emissions database of the air pollutants in the MTMPS to keep track of emissions and implement policy actions accordingly.

**Reform Priority 3: Mobilising private climate finance and enhancing financial sector resilience**

Building climate resilience will require financial sector resilience. Bangladesh Bank will play a role in adopting guidelines on informing climate-related risks to the banks and financial institutions according to the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) as per RM3. This task force should be comprised of all relevant stakeholders such as policymakers, independent experts, academics, representatives of non-government organisations (NGOs), representatives from civil society organisations (CSOs), and the representatives of the private sector. Bangladesh Bank will also conduct and publish a climate stress testing for the overall financial system under the conditions of RM7. Moreover, it will also update the guidelines on stress testing for the financial institutions considering climate change. These reports should be published in a timely manner for effective results.

Financial intermediaries are of vital importance in mobilising private funding for climate action, but they are subject to significant transition and economic risks. It is essential for Bangladesh Bank to generate

private investment and foster green finance through reform measures to accommodate expenditures catered to increase climate resilience and mitigate the adverse effects of climate change. Therefore, as per RM11, the Bangladesh Bank is required to revise the policy on Green Bond financing, especially the annex on green taxonomy which should be aligned with the investment areas which have been given precedence in the NAP. Bangladesh Bank should employ more effective initiatives to promote sustainable finance for environmentally friendly products which can substitute plastic materials. These alternative products like jute shopping bags, jute packaging bags, cane-made furniture, biodegradable waste bags, reusable grocery bags, biodegradable garden pots, compostable cutlery, compostable plates, stainless steel or bamboo thermal water bottle, reusable coffee filter, reusable, non-plastic food containers, biodegradable toilet towels and tissues, compostable and biodegradable baby diapers, reusable coffee cups, recycled floor mats, compostable bowls, and other recyclable goods (Bangladesh Bank, 2020). Furthermore, Bangladesh Bank can offer long-term financing to support cutting-edge technologies for improved waste management to lessen plastic pollution, and also offer funding for effective brick manufacturing technology to lessen air pollution. In addition, it is also important for Bangladesh Bank to provide green financing for ventures or projects aimed at improving the recycling of plastic waste and the production of recyclable products.

**Table 4: Proposed reform measures under IMF’s RSF and corresponding recommendations for green cities by CPD**

Proposed reform measures for Bangladesh: under IMF’s RSF	CPD’s recommendations for greening cities through reducing air and plastic pollution
<p>RM1: Government to adopt a sustainable public procurement policy paper and an associated action plan to integrate climate and green dimensions</p> <p>Target date: End-September 2023</p>	<p>The sustainable public procurement policy should include suggestions regarding issues related to air and plastic pollution.</p> <p>The government needs to incentivise the sustainable procurement of efficient technologies to produce products that are sustainable alternatives to single-use plastic items. This will influence consumer choices and help to phase out single-use plastic.</p> <p>The associated action plan should mention proper monitoring and control plans against illegal brick kilns and usage of polythene bags.</p>

(Table 4 contd.)

(Table 4 contd.)

<b>Proposed reform measures for Bangladesh: under IMF's RSF</b>	<b>CPD's recommendations for greening cities through reducing air and plastic pollution</b>
	The public procurement policy paper should be accessible by citizens and experts so that they may provide their own suggestions about the procurement process.
RM2: Government to adopt a periodic formula-based price adjustment mechanism for petroleum products  Target date: End-December 2023	The fossil fuel price in Bangladesh should be updated monthly in line with international prices and subsidies on fossil fuels should be phased out starting in FY2024
RM3: Bangladesh Bank to adopt guidelines for banks and financial institutions on reporting and disclosure of climate-related risks in line with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD)  Target date: End-December 2023	The task force should be comprised of policymakers, independent experts, academics, representatives of NGOs and CSOs, and representatives of the private sector.
RM4: Government to adopt a national disaster risk financing strategy while integrating social assistance measures  Target date: End-June 2024	Multistakeholder dialogues between the government, private sector representatives, and international development partners should be organised for exploring blended finance options to fund projects aimed to reduce air and plastic pollution in cities of Bangladesh.
RM5: MoF to adopt and implement a methodology for embedding climate change in the Medium-Term Macroeconomic Framework (MTMF), through analysing macro-fiscal risks from climate change and publishing it in the Medium-Term Macroeconomic Policy Statement (MTMPS)  Target date: End-June 2024	MoF should keep track of emissions and include it in the Medium-Term Macroeconomic Policy Statement. The emissions database should be updated regularly and be available online publicly.
RM6: Government to issue a circular on an update to the Green Book to include supplementary guidance on sector-specific methodologies that integrate climate considerations in the appraisal of major infrastructure projects starting from two key sectors  Target date: End-December 2024	The Green Book must consider the sources of air and plastic pollutions while assessing the infrastructure projects. This should also be monitored in a regular basis.
RM7: Bangladesh Bank to conduct and publish climate stress testing for the overall financial system and update the Guidelines on Stress Testing for banks and financial institutions to include climate change considerations  Target date: End-December 2024	The guidelines on stress testing for banks and financial institutions should be published in a timely manner.

(Table 4 contd.)



(Table 4 contd.)

<b>Proposed reform measures for Bangladesh: under IMF's RSF</b>	<b>CPD's recommendations for greening cities through reducing air and plastic pollution</b>
<p>RM8: Government to adopt an updated PPP policy and framework that integrates climate-related risks and develop relevant guidelines</p> <p>Target date: End-June 2025</p>	<p>The PPP policy and framework should include guidelines that require the use of sustainable materials that are environmentally friendly during project implementation wherever possible, as opposed to single-use plastic products.</p>
<p>RM9: Government to issue a circular on the adoption of an annex to the Green Book that specifies selection and prioritisation criteria for major infrastructure projects that are aligned with the NDC and the NAP</p> <p>Target date: End-June 2025</p>	<p>The measures proposed for RM8 may act as a criterion for project selection as per NDC and NAP.</p>
<p>RM10: Government to establish a public asset register module of the Integrated Budget and Accounting System (iBAS++) and will incorporate information on climate-related risks and vulnerability of new public assets to the module</p> <p>Target date: End-December 2025</p>	<p>The new module should be publicly accessible and be regularly updated with accurate data.</p>
<p>RM11: Bangladesh Bank to update the Policy on Green Bond Financing, particularly the annex on green taxonomy to be fully aligned with the NAP's strategic and investment priorities</p> <p>Target date: End-December 2025</p>	<p>Bangladesh Bank can provide sustainable finance for eco-friendly products for the trading sector which are recyclable and are sourced from natural resources such as</p> <ol style="list-style-type: none"> <li>1. Jute-made products such as shopping bags and packaging bag</li> <li>2. Cane made products such as furniture</li> <li>3. Biodegradable waste bags</li> <li>4. Reusable grocery bags</li> <li>5. Solar lanterns</li> <li>6. Biodegradable Garden pots</li> <li>7. Compostable cutlery (forks, spoons, knives and tasters)</li> <li>8. Compostable plates</li> <li>9. Portable solar charging stations</li> <li>10. Stainless steel or bamboo thermal water bottles</li> <li>11. Rechargeable batteries</li> <li>12. Reusable coffee filters</li> <li>13. Solar powered phone chargers</li> <li>14. Reusable, non-plastic meal prep containers</li> <li>15. Biodegradable toilet towels and tissues</li> <li>16. Compostable and biodegradable baby diapers</li> <li>17. Solar powered outdoor speakers</li> <li>18. Reusable coffee cups</li> <li>19. Recycled floor mats</li> <li>20. Compostable bowls</li> <li>21. Recycling and recyclable goods</li> </ol>

(Table 4 contd.)

(Table 4 contd.)

Proposed reform measures for Bangladesh: under IMF's RSF	CPD's recommendations for greening cities through reducing air and plastic pollution
	<p>Bangladesh Bank can provide sustainable finance to facilitate advanced technologies for better waste management to reduce plastic pollution and also provide funding for efficient brick production technology to reduce air pollution.</p> <p>Bangladesh Bank can provide green finance to projects or initiatives to better recycle plastic waste and manufacture recyclable goods.</p>

**Source:** Authors' compilation based on information from IMF country report for Bangladesh (IMF, 2023b).

#### 4. CONCLUDING REMARKS

Pollution is an unintended consequence of human economic activity which has now permeated as a slow poison into the natural environment, the human body, and back into the economy itself. With rapid urbanisation, air and plastic pollution has become a key concern in Dhaka city. In this regard the effort made by the IMF to provide support to Bangladesh under the ECF, EFF and RSF arrangements is welcomed and very much appreciated. These measures will further enable the government to strengthen their existing policies and substantiate strategic steps required for Bangladesh to transition into a greener and cleaner economy. However, it is also important to highlight that Bangladesh must first build the capacity to enable itself to implement the reform measures stated by the IMF. This includes modernising the tax system and administration by supporting it with skilled human resources and efficient technologies to increase transparency and

revenue generation. Additionally, the tax regime proposed needs to be implemented in phases while raising awareness among citizens to make them well informed of the detrimental effects of air and plastic pollution.

Multistakeholder dialogues between the government, private sector representatives, and international development partners may be useful for exploring blended finance options to fund projects aimed to reduce air and plastic pollution. A Citizen's Commission with clear objectives, a defined timeline, multi-stakeholder participation, total openness, full neutrality, and complete independence should be established to allow for more efficient monitoring and evaluation of reform measures proposed under the RSF, better understanding of the underlying causes of the apparent problems, and the development of more effective, credible recommendations for long-term solutions for greening both urban spaces and the economy at large.

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