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**Special session on illicit trade in waste: environmental  
challenges and trade solutions**

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**Statement**

Delivered by

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**President of the Trade and Development Board,  
Excellencies,  
Distinguished Panellists,  
Ladies and gentlemen,**

**Good morning,**

Let me start by humbly asking you three questions- how many of you have heard the name 'Rickshaw'? When and where it was invented? What city is now known as the Rickshaw Capital of the World? Now, let me reflect on the answers- A rickshaw is a three-wheeled, pedal- powered vehicle which was first invented in Japan back in 1869. Sitting in 2024, when Dhaka is known as the Rickshaw Capital of the World for thousands of Rickshaws are plying on the streets of Dhaka, it is hard to believe Rickshaw was not our own invention at the first place. It has so deeply imbedded with our culture and society that last year UNESCO listed Rickshaw and rickshaw art as 'intangible heritage' of Bangladesh.

### **[Emergence of E-Rickshaw]**

With socio-economic development, the expansion of the electricity network, the increasing popularity of renewable solar power in rural areas and the development of new technologies, there has been a notable shift from pedal-powered to electricity-powered transportation. This transition is prominently observed in the widespread use of e-rickshaws, primarily powered by Lead-Acid batteries (LABs) in Bangladesh. The introductions of e-rickshaws, which are electric vehicles emitting zero emissions during operation, contributes significantly to reducing emissions in transportation. Particularly in countries like Bangladesh, where air pollution is a pressing issue, the widespread use of e-rickshaws plays an important role in reducing emissions and enhancing air quality in urban areas. It has got a lot of benefits to offer like reduced dependence on fossil fuels, cost-effective mode of transport, employment opportunities for unskilled and semi-skilled labour force, reduced noise pollution, and what not. Like many other South Asian and South East Asian countries it mushroomed both in urban and rural areas of Bangladesh so rapidly that within a span of less than a decade, the number of e-rickshaws rose to a figure ranging from 1.5 to 3 million. E-Rickshaw seemed to have been created a win-win situation for Bangladesh both in terms of development, employment as well as for fulfilling the commitments towards climate change and environmental degradation, until it started to show three-pronged problems in terms of road and transport management, electricity and energy consumption, and most crucially in terms of environment. How so?

### **[In terms of road and transport]**

E-Rickshaw can neither be classified as a slow-moving vehicle like traditional Rickshaw, nor can it be placed into the category of that of fast moving vehicle like car. Furthermore, it does not have adequate braking system which is required for a vehicle which can ply at 30/40 kmph per hour. Subsequently, it created so much chaos in our traffic management, be it urban road, rural road or even highways, still we are yet to find an optimum solution of the problem.

### **[In terms of electricity and energy consumption-]**

National Energy Grid of Bangladesh faced with severe load, as electricity demand increases during peak hours, primarily from 5 p.m. to 11 p.m., owing to a significant

disparity between power demand and supply. Study indicates that the more than a million e-rickshaws operating daily across the country consume a substantial 4660-megawatt hours of electricity per day from 6 p.m. to 6 a.m. Hence, the rising numbers of e-rickshaws each year pose a challenge to the national power system, raising concerns about macroeconomic implications and the sustainability of the electricity infrastructure.

**[Finally, the formidable challenge in terms of environmental and human health impact-]**

For decades, the demand for dc current in Bangladesh is fulfilled by Lead Acid Battery (LAB). LAB Battery has been in use in automobile, instant power supply systems as well as for generating electricity from solar panel. In fact, one of our LAB manufacturers, Rahimafrooz exports LAB to more than 70 countries. Since, the LAB is recyclable, the Government even provided license to 19 companies to recycle worn out LAB and resale it as ULAB (Used Lead Acid Battery) after chemically treating the same in compliance with the regulations imposed by the Department of Environment aimed at keeping the footprint on environment at the minimal level. As regulations dictate, to avail a new LAB, it requires for the user to return the old LAB. Thus, it is ensured that the LABs with finished lifecycle do not end up in the hand of unscrupulous and non-licensed business entity who would turn a blind eye to environmental protection in pursuit of profit maximization. Furthermore, total tax incidence (TTI) including Customs Duty, Value Added Tax as well as Supplementary Tax, on Lead related products like lead waste, LAB or ULAB ranges from 59% to 89%. This high value of TTI shows that the Government wants to keep the value chain of LAB and ULAB completely recycle based and hence discourages any more addition of Lead to the ecosystem. The mechanism was functioning well, until the rapid propagation of e-rickshaw in Bangladesh. Let me elaborate on this point now:

One e-rickshaw requires four to six dry LAB. One such LAB contains at least 70% lead, which represents approximately 14 kg-21 kg per battery, depending on the battery size. If we multiply this with the number of total e-rickshaws in Bangladesh then we are probably talking about 40 thousand to 50 thousand ton lead, making e-rickshaw responsible for generating 77% of total ULAB in Bangladesh. Because of their belonging to lower middle income or lower income group, there is a dire need by the e-rickshaw pullers to adopt the most cost-effective solution since the LAB needs to be replaced in every 8-12 months which involves a substantial amount of capital expense. This dire need ultimately got coupled with informal business entities and traders who recycle ULAB in the open air ignoring all the compliance procedure leaving negative and irreversible impact on the environment and human health.

It is estimated that there are few hundreds informal ULABs recycling operations across the country which account for 50% of the battery supply in the country. The improper recycling practices involve breaking open battery cases, contaminating the environment with acid and lead dust, and smelting recovered lead in primitive outdoor furnaces that release poisonous fumes. Lead is a neurotoxin that harms children's neurological development, causing comas, hearing loss, convulsions, and even death. A study of the economic impacts from lead exposure estimates that each year Bangladesh loses US \$15.9 billion dollars in GDP from reduced lifetime earning potential among the exposed population.

**[So what we are doing nationally?]**

Our approach towards E-Rickshaw was hinged mostly on the road management and electricity supply management. But, from development perspective we cannot ignore the low barriers to entry into the sector, increased income opportunity for the lower income people as well as compounding impact on the backward and forward linkages associated with the sector. Our Government also understands that investments in lead exposure reduction programs in Bangladesh would likely yield significant returns on investment, resulting in a more productive, healthier and resilient population.

In this regard, Lithium-ion (Li-ion) batteries stand out as a viable option, providing higher energy density and a longer lifespan compared to lead-acid batteries. With efficiencies of at least 95%, faster charging capabilities, and better performance in harsh conditions, Li-ion batteries surpass lead-acid batteries in various aspects. While lead acid batteries may be initially less expensive, the prolonged life cycle of Li-ion batteries makes them a more economically sound choice. To that extent, the Government is planning to initiate a project where the Government will “provide” lithium-ion batteries to replace LABs.

From regulatory point of view, in 2021, the Ministry of Environment of Bangladesh issued an order on battery recycling under the Bangladesh Environment Conservation Act, 1995. The Ministry also published the Hazardous Waste (e-waste) Management Rules, 2021, under the Bangladesh Environmental Protection Act, 1995. The Rules outline the role and responsibility of various stakeholders in the supply chain and management of e-waste, including manufacturers, retailers, buyers/sellers, exports, imports, stockpile, disposal, repair and recycling and transportation.

From financing point of view, Bangladesh Bank has set up revolving fund for green products with the aim of building a sustainable future for the country (Bangladesh Bank, 2022). Customers can access this refinance option through banks/financial institutions to raise funds at a lower cost and bring sustainability to their business. Such financing arrangements can effectively be utilized to replace ULAB in E-Rickshaw sectors.

It is also heartening to see that entrepreneurs are also thinking about the sustainable solution of this particular problem as we have observed that few startups are trying to scaling up their operations offering Lithium-ion battery based solution. For example, one start up in Bangladesh offers instant Lithium Battery swapping service for the E-Rickshaw puller on a daily subscription basis. Another one offers to convert traditional E-Rickshaw charging garages into grid-friendly net-metered solar garages, providing smart Pay As You Go or PAYG-tech integrated lithium-ion batteries for improved battery tech and leasing models which has the potential to lower down the initial financial barrier towards owing a e-rickshaw.

### **[International Collaboration]**

As for global cooperation in recycling ULAB, I would like to highlight the followings:

**First**, Globally our efforts towards containment of such pollution should not be made in silo. To elaborate, the rapid growth of illegal lead battery recyclers in Bangladesh can be indirectly traced to a large LAB exporter country’s ban on imports of 24 different recycling materials, including batterie. This very example underscores the significance of having appropriate forum and framework through which member states can be effectively engaged in finding the optimal solutions;

**Second**, Multilateral development banks (MDBs) have financial instruments that can be made viable for this specific case. The commitments from MDBs under the co-financing

model as loans, grants, guarantees, technical assistance (TA), and equity investments in various public sector projects need to be effectively utilized.

**Third,** The importance of the circular economy cannot be underscored enough towards achieving a sustainable future. However, ULAB scenario in our country shows that even if the very essence of circular economy is maintained, it can altogether go wrong. This dimension need to be properly considered in developing circular economy based value chains specially.

**Fourth,** Innovative financial instruments under green financing need to be developed to incubate and scale up startups who can offer solutions to such problems;

**Finally,** The developed countries with effective ESM (Environmental Sound Management) in place, should come forward to recycle ULAB in the spirit of burden sharing in tackling the triple planetary crisis;

**[UNCTAD Event]**

Last but not the least, we appreciate UNCTAD's efforts, in particular Madam Miho Shirotori and her team, in organizing a workshop titled 'Unified Policies and Healthier Journeys' on April 3, 2024 in Dhaka to share insights from research in finding potential solutions. I also wish to appreciate the presence of Professor (Assistant) Amrita Kundu as a facilitator during the workshop. We are pleased to note that the event gathered a number of stakeholders from various sectors including government agencies, NGOs, international development organizations, financial institutions, and academics to collaborate on solutions. We take note of the 8-point policy recommendations as resulted from the workshop. We hope that future iterations of such study will also discuss the role of international community, effective utilization of international financial instrument, just and fair transition, ethical disposal of e-waste, capacity building in the field of ESM, among others.

**I thank you, Mr. President.**

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