

What do you do with the damaged battery or chargers of your cell phone? Where do you keep your fused bulbs and abandoned switches? What about obsolete computer accessories?

After stashing them in the corner of the house for a long time, these entirely discarded yet less expensive household and office appliances are usually destined for the dustbin alongside solid waste. On the other hand, comparatively expensive obsolete products, e.g. freezers, laptops, computers, electric fans, or ACs, are taken to the shops for repair. If they are considered irrecoverable, however, people are more likely to sell them to save up for a new one.

However, according to a 2016 study by Environment and Social Development Organisation (ESDO), every year Bangladesh generates roughly 1.24 million metric tons of e-waste from televisions, computers, mobile phones, CFL bulbs, mercury bulbs, thermometers, medical and dental waste, household electrical appliances and switches. In addition, 8.86 million metric tons of e-waste is generated through ship breaking and smuggling from India and Myanmar.

Since recycling e-waste is a lucrative business, hawkers and brokers usually sell it to different small businessmen of old Dhaka based on the category of waste. "Circuit boards, plugs or other accessories are sold to Nimtoli for further use, while the dismantled brass, copper

or iron is sold to Becharam Deuri or Dholai Khal for producing scrap metal for automobile factories. Plastics and damaged wires are sold off to the plastic businessmen of Islambag, in order to make toys for children or household products," says 35-year-old Mohammad Shipon, a plastic recycling businessman in old Dhaka's Islambag. "Sometimes, the damaged bulbs, batteries, chargers, plugs, etc. that are collected by waste-pickers are randomly sold off to businessmen who re-use the components and manufacture moulds," he adds.

Unfortunately, most of the time e-waste is handled by child workers. According to a 2014 study by ESDO, every year over 15 percent of child workers die in the process of recycling e-

waste and its after-effects. More than 83 percent of them are exposed to toxic substances, become sick and live with long-term illnesses.

When visited at Nimtoli, 12-year-old Mohammad Saju was dismantling electric fans, 15-year-old Nahid was busy removing circuit boards from cell phones, while 10-year-old Robiul was separating wires from a mound of different types of e-waste.

"I have been dismantling the plastics from obsolete electric fans for the past five years. Since this is the only source of income to support my family, I am bound to do this. I have never felt that it is harmful for my health," says Saju. Like him, most of the shops have child workers who work in a completely

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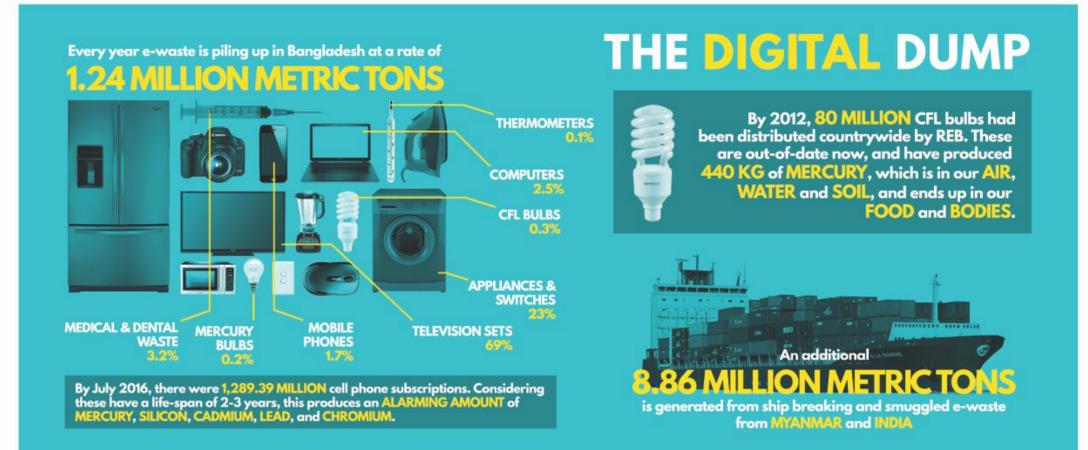
WHAT HAPPENS TO OUR E-WASTE?

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continuously pressuring the government to undertake immediate steps, there is hardly any institutional preparedness from the side of the government. Since the ICT Division aims to introduce effective use of modern technologies in important sectors, Mohammad Atiqul Islam, Deputy Director (Planning), Bangladesh Hi-Tech Park Authority informs that they are working with Re-Tem Corporation, a Japanese e-waste management company, to build an e-waste dumping plant in Bangladesh.

"They have already worked on building primary awareness on the current e-waste situation in Bangladesh, in association with Japan International Cooperation Agency (JICA) and New Energy and Industrial Technology Development (NEDO). We have provided them five acres of land at the Kaliakoir Hi-Tech Park for the plant," says Islam.

On the other hand, Quazi Sarwar Intiaz Hashmi, Additional Director, Department of Environment (DoE) informs that they have been working on creating a separate legal framework for the e-waste management from 2012. "We have put up the draft guideline online for feedback from the public. Afterwards, it will be sent to the law



Source: Bangladesh Telecommunication Regulatory Commission (BTRC) and Environment and Social Development Organisation (ESDO) INFOGRAPHIC BY AMIYA HALDER

WHAT HAPPENS TO OUR E-WASTE?

NILIMA JAHAN

"After buying damaged computers or laptops, we first separate the parts that can be re-used—be it a hard disk, monitor, CD-ROM, keyboard, or battery. However, we usually sell the parts like damaged wires, casings, plastics, headphones, or other accessories to the hawkers or brokers," says Foyez Ahmed, Sales Executive at Dreamland Computer in BCS Computer City, popularly known as IDB Bhaban. "The parts that remain unsold for a long time, are simply thrown out," he adds.

The fact is that Bangladesh has been introducing more and more electrical and electronic products over the years, but in proportion to that, we have had no significant institutional preparedness or strict policies for disposing of the ever-growing volume of waste, popularly known as e-waste. As such, e-waste ends up in landfills with solid waste. Improper disposal means that heavy metals in e-waste like lead, chromium, cadmium, mercury and so on, end up in the soil, water and air, and eventually in our bodies through the food we eat.

It is sad but true that there are no specific facts and figures by the government on how much e-waste is generated in the country every year. But if we look back, over eight crore Compact Fluorescent Light (CFL) bulbs were distributed countrywide by the Rural Electrification Board by 2012. These are out-of-date now. Assuming that each CFL bulb contains an average of 5.5 mg of mercury, eight crore of these have produced 0.44 metric tons of mercury, which has spread into the environment. On the other hand, according to statistics by BTRC, the total number of cell phone subscriptions reached 128.939 million by the end of July 2016. If we assume these phones have a lifespan of two-three years, these phones generate an alarming amount of e-waste in the form of mercury, silicon, cadmium, lead, chromium and more.



PHOTO: KAZI TAHSSIN AGAZ APURBO

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unprotected environment, without knowing of the deadly health hazards. Dr. Rashid-e-Mahbub, Chairman of National Health Rights Movement, informs that though e-waste does not create any immediate health hazards, those who are directly handle them for an extended period of time are at a high risk of developing different health complications. "They are exposed to lead and inhale mercury on a regular basis. This is extremely harmful for the lungs and can have long-term negative health effects," says Mahbub.

However, though environmentalists and private organisations working to protect the environment are

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BEING VAT SMART

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Since the announcement of the new budget, one of the main concerns of consumers countrywide has been the imposition of a flat 15 percent value added tax (VAT) rate on most goods and services. Starting from July 1, non-air-conditioned restaurants will prove costlier as VAT rates go up from 7.5 to 15 percent.

VAT has now become the largest source of revenue for the government, even more so than revenue from income tax and import duties. But does the VAT that consumers pay even go where it is supposed to?

"Certain businesses—restaurants, sweetmeat shops, and branded stores in particular cheat on paying the VAT received during transactions to the National Board of Revenue (NBR)," says Zakir Hossain, deputy project director of the VAT Online Project, NBR. However, another challenge in ensuring effective VAT collection comes from the consumers themselves.

How judiciously do consumers ask for a VAT receipt or check the electronic receipts for VAT details when paying the bill? "There is just not a practice of requesting VAT receipts or *challan* in this country and this is a big drawback," explains Hossain. Often, especially small stores and restaurants actively encourage customers to opt out of VAT by not issuing a receipt. If a customer requests a receipt, he or she is then charged the 15 percent VAT in addition to their bill.

Fariya Rahman, 23, a resident of Chittagong, eats out on average five times per week. After the new imposition of 15 percent VAT on restaurants, she started being aware and asking for VAT receipts after transactions which charged VAT. "Of the two places I asked, one gave me a handwritten blue *challan* and the other said they had run out of the paper for receipts. Usually, such places which provide handwritten receipts do not charge VAT," says Rahman.

However, it is now illegal for restaurants to issue blue *challan* as the manual system of receipts has long allowed restaurants and other business to get away with tax evasion. The government has introduced measures to ensure VAT is going into government coffers instead of being pocketed by businesses.

Since 2009, it has been mandatory for 11 types of

businesses to use Electronic Cash Register (ECR) machines and Point of Sale terminals in Bangladesh. These measures are applicable for hotels, restaurants, sweetmeat shops, jewelry stores, beauty parlours, furniture outlets, community centres, stores in shopping malls, department/general stores, wholesale shops, and retailers.

This is not however the blue receipts of the past. For businesses using ECRs, consumers can simply check that their receipts show a VAT registration

In August 2016, the VAT Audit, Intelligence and Investigation Directorate of the NBR found Star Kabab and Restaurant to have evaded Tk 4.63 crore during raids on its 11 outlets earlier that year. The raids were undertaken following allegations of the business dodging taxes via phone and online over time.

Typical of many restaurants in the city, Star Kabab often issued informal receipts or no receipts at all despite having ECRs available. Under section 37 of the VAT Act of 1991, non-compliance can elicit

For businesses using ECRs, consumers can simply check that their receipts show a VAT registration number or Business Identification Number (BIN). For the VAT Smart consumer, the validity of the BIN can be checked on the NBR website or via the VAT Checker app. Easily downloaded, the latter can make finding cases of VAT fraud even easier as consumers can also directly complain to the NBR using the app.

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However, VAT evasion is still commonplace by shopkeepers who use non-government ECRs or display the machines but claim that these are out of order, according to Hossain. NBR is providing a further 50,000 ECRs to eligible businesses around the country in August-September of this year.

Many shops informally provide handwritten receipts if requested. In these cases, Hossain recommends that consumers still receive their *challan*, though invalid, following a transaction. "This way, we can eventually catch such retailers for evading or reducing VAT on official receipts," emphasises Hossain.

legal action by the NBR. Following the raids, the amount of VAT paid by Star Kabab increased according to the NBR. However, customers that *Star Weekend* spoke to at Star Kabab claim that they still do not receive ECR receipts but rather those printed on or handwritten on their own store receipts.

The VAT system is now automated under the Value Added Tax and Supplementary Duty Act 2012. Originally intended to come into effect in 2015, it faced significant backlash from stakeholders, especially the business community. It is finally set to be implemented from July 1 this year.

"The new law is simpler, there is less distortion because a single rate is applied, and scope for tax evasion is reduced," says Zahid Hussain, Lead Economist of the World Bank in Bangladesh, about digitisation of the VAT system. The World Bank funds and provides technical assistance to the VAT

regulatory body, DoE assists the city corporations and is working on the dumping plant.

Since most of the e-waste is handled and dumped in old Dhaka, Khan Mohammad Bilal, Chief Executive Officer of Dhaka South City Corporation (DSCC) was asked about their disposal. Bilal answers he knows nothing about the Japanese company, and that DSCC is currently busy dealing with the solid wastes of fruits. "We have kept it (e-

waste) in consideration and have started to discuss doing something feasible," says Bilal.

The government's 'delayed response' to e-waste management and the nonchalant of consumers when disposing of appliances can produce considerable damage to our environment in the decades to come. Therefore, there is no alternative but to make a change today, before it is no longer within our capacity to manage. ■