

RECYCLING magazine

Spring 2019

UK Great expectations **Nigeria** Local initiative ensures value for waste nylon
Food waste Changing an ineffective system **India** Achieving a lot with little effort
Russia Ready for Western standards of waste recycling **USA** Recycling in the age of changes
Nigeria Taking recycling to rural communities

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Source: Sennheiser

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Respecting safety, health and the environment

As we keep growing, our shadow is growing in proportion. We can't get rid of our own shadow, but have to deal with it consciously and responsibly to avoid harm to others and ourselves. It is equally true that the farther we move away from the sun (nature), our shadow continues to become larger. Knowingly or unknowingly, we have moved far away from nature and are still just talking or blaming one another rather than taking corrective steps. Very surprisingly, we also know for certain that our survival is only possible with a cleaner and greener environment, otherwise we may become extinct, but still we need a legal system (or "Danda-mental" approach) to remind us that there is no life without breathing clean air, drinking clean water and eating non-poisonous food.

By B K Soni, CMD, Eco Recycling Ltd

Despite of the mistakes being made by human beings, nature keeps applying its own recycling technologies such as earthquakes, tsunamis, glacial melting and global warming, etc. to maintain itself to the extent possible, but at a very high cost to the living. We shamelessly call these protective natural tools of recycling "natural calamities".

It is trendy to talk about the environment and climate change. Incidentally, lots of people have brilliant ideas to rectify the mistakes made by others and the same set of people keep making emotional statements such as "we need to take care of nature and natural resources, since we have borrowed them from our children." Such big statements have become part of our day-to-day lives along with theoretical, non-implementable, ineffective and impractical ideas. Above all, there are far too few people who really spend their time, money and efforts on bringing about change and the rest are interested in monetary gain only.

The word "green" is also being misused in several ways, such as walls painted with green paint, the installation of artificially green-coloured plants, etc. Some people also feel proud by planting a few "natural" trees, but use a disproportionate volume of paper (made from trees) on publicising the fact. There are thousands of ideas on offer, created by millions of people, but even then we could not move ahead an inch to resolve the problems associated with climate change, waste disposal, natural resource replenishment and equilibrium balancing to avoid natural calamities, and these are the very reasons why nature is showing its different sides across the globe.

The increasing consumption of electronics coupled with greater buying power, rapid changes in technology, the development of smart cities, automation and digitalisation, cashless transactions, the need for speed, etc. put together is leading to the faster replacement of EEE and correspondingly a quantum of WEEE. Although the ROHS directives may have contributed towards reducing Hazardous Elements (HE) contained in the new EEE, including mercury, cadmium, lead, chromium and other ozone-depleting substances, these will be found in the WEEE for many more years to come. Hazardous elements in EEE are a major concern while recycling WEEE. If not disposed of properly, e-waste is not only harmful to the environment, but also results in a loss of valuable resources.

As we all know, more than 95% of e-waste is collected and dismantled in an unscientific manner in our country and to curb this, the central government notified E-waste Management Rules, which became effective on 1st October 2017. These rules are based on the globally accepted Extended Producers Responsibility (EPR) concept, along with targets for producers to take back a certain percentage of the volume of

Source: Katharina Wieland Müller, pixelio.de



EEE placed in the market by end users and have them recycled at the authorised recycling facilities.

The above targets start from 10% and are scheduled to reach 70% in a certain number of years. The rules are silent about who is responsible for collecting and treating the remaining quantity over and above the target level, which is as high as 90% in the beginning and 30% if the 70% target is ever achieved. It is also unclear as to who will be held responsible for the remaining quantity beyond stipulated targets, if found in the unorganised market.

According to an estimate, more than 500,000 people work in e-waste collection and dismantling activities across India and time and again they have been recognised as the most effective medium of door-to-door collection, but not beyond that. There are several reasons to suggest restrictions on their role, which include:

- a. Informal waste workers spend almost 40% of their earnings only on medical expenses
- b. Generally, their life span is less than 60 years
- c. If the person lives beyond that age, he or she may be mostly bed ridden and is a liability for the next generation
- d. Children receive hardly any formal education
- e. Women are the worst sufferers in the family without a social life

If people in the informal sector do not stop their rudimentary techniques of dealing with the shadow of waste electronic equipment, they will continue to harm themselves along with their neighbourhoods.

The above facts are not exclusively known to the writer. Fortunately, 9 out of 10 stakeholders know this but anyone who invests in the appropriate solution gets discouraged because the Rules do not assure the required quantity of e-waste to sustain investment, in spite of the uninterrupted generation of WEEE. Furthermore, hundreds of dismantlers and refurbishers have become part of the organised supply chain of e-waste, while their solutions and infrastructure still remain a big question mark.

Therefore, at the present time, no impactful change has been noted between the regulated and unregulated scenarios except that a few thousand tonnes of e-waste have been collected and processed by the formal entities, who are equipped with the necessary technologies and infrastructure to handle such complicated material in an appropriate manner.

If we seriously analyse the reasons for this lack of success, we will find the following:

1. Huge capital investment in recycling facilities to meet environmental standards compared with negligible investment in formal or informal dismantling setups makes formal recycling businesses unviable.
2. Revenue expenses of recyclers as compared to the family-driven business of a Kabadi are not at all comparable and hence it is not possible for a formal stakeholder to compete.
3. A number of EEE producers and bulk consumers consider WEEE as a revenue source rather than taking responsibility towards creating a cleaner environment.

4. The lack of a reverse logistics network drives the small generators to the present informal market.
5. Currently, there are hundreds of authorised dismantlers and recyclers in the country with a total annual installed capacity of 500,000 MTPA. This present capacity is far beyond the targets laid down in the Rules and discourages serious investors.
6. All the above factors encourage cutthroat competition amongst formal recyclers and dismantlers and also make some of the heavily invested and environmentally friendly facilities unviable.

There is no shortcut to a fully compliant, environmentally friendly solution as long as the major stakeholders do not play their respective role sooner and more effectively:

1. Policymakers and regulators: Stricter implementation of the law, financial incentives, control of informal activities.
2. EEE producers: Provide collection centres and reverse logistics networks or pay the appropriate fees for actual collection and proper recycling.
3. Bulk consumers should choose to hand over or sell to organised facilities.
4. PROs: must coordinate between various stakeholders, regularly audit different facilities and service providers and keep track of target achievement with the producers for an update to the regulator.
5. Recyclers must deploy environmentally friendly technologies and effectively deal with hazardous elements in accordance with the law.

Dismantlers, refurbishers and collectors must become linked with the recyclers and the movement of e-waste must be verified with documentary evidence.

To put a leakage-proof and environmentally friendly system in place, we need to integrate informal e-waste collectors with the formal recyclers. To go in this direction and to achieve the desired result, we need to implement Rule 12 of the E-waste Management Rules, 2016. Under this provision, skills development for those engaged in dismantling and e-waste recycling activities has been made mandatory and the state governments need to facilitate such centres with their support.

It may not be out of place to mention that to provide the above service, Ecoreco Enviro Education Pvt Ltd (a subsidiary of Eco Recycling Ltd and a funded partner of NSDC) has developed various courses and started a training centre in the best interest of the informal workers and new aspirants who consider e-waste recycling as an opportunity to serve the environment and also build career.

The final but equally important submission is that we should restrict awareness, education and training campaigns to the individuals and organisations responsible for handling these climate-related issues and not burden the entire population of the country with the awareness of one more problem. If we restrict as suggested, we could save the billions of dollars spent on raising the awareness of the 1.3 billion public and deploy the same money to develop infrastructure for the disposal of hazardous elements.

Let's work together to develop "E-waste Mukta Bharat; Swachh Bharat".

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RECYCLING magazine Trends, Analyses, Opinions and Facts for the Recycling Industry




UK MPs call for bold national plastic packaging plan
A Policy Connect report says that a zero plastic 'waste' export goal is needed to boost UK investment and jobs, cut emissions and to protect marine life

From the editors desk

Dear readers,


a recent report by the Basel Action Network shows that quite a significant number of e-waste is shipped from the EU to other parts of the world in a - let's say maybe not totally legal matter. And the UK are rethinking the way they treat their plastic waste - maybe in a legal, but not in the environmentally best way. These are just two examples showing that even in the EU, who claims itself as the front-runner in environmental matters, still needs to do a lot of work. It seems like the European Commission is pushing, but not all countries seem to be on the same track. Maybe it would help to remember everyone from time to time that circular economy includes the term "economy". It is not just an environmental concept, but also a concept for economical growth. That usually should be enough for every country to get more involved.

Kind regards,




Michael Brunn
Chefredakteur
michael.brunn@recyclingmagazin.de

LATEST INDUSTRY NEWS



European Parliament steps forward to stop burning EU funds
Zero Waste Europe reports that today the



Region	Market Size by 2025
Europe (Excl. UK)	\$115 BN
China	\$135 BN
USA	\$100 BN
Other	\$150 BN

Waste Heat to Power Market to exceed \$30 bn by 2025
According to Global Market Insights, the waste heat to power market size will surpass