Down to Earth
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Of Electronic Revolution and Sustainability

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While promoting computer literacy and Internet access in developing countries, multinational technology companies are inadvertently contributing to a public health crisis. Several initiatives backed with billions of dollars in new investments, are focused on getting the Internet to one billion new computers in remote villages without access to electricity. Companies at the forefront of these initiatives are telling customers to rely on power from car batteries, made of lead, that can be charged at the nearest town.

Relying on lead batteries to power computers without considering where they come from or where they end up is far from a model of sustainability. Throughout Asia, South America, and Africa, battery makers and recyclers are spewing out tonnes of lead into the environment that has already resulted in the poisoning of 120 million people.

India and other developing countries already face a crisis with regard to lead poisoning and batteries account for the largest share of this exposure. We are also witnessing widespread environmental contamination from lead and other hazardous materials in the disposal of used computers.

Intel, Advanced Micro Devices, Microsoft and others have launched campaigns with names like “World Ahead”. These are being marketed as international development programmes intended to raise educational standards in the Third World. Unfortunately, this development comes at the cost of the children that they purportedly try to serve. As these companies compete to deliver 21st century technology to the next billion computer users, they will be relying on 19th century technology to provide electric power. This self-proclaimed “sustainable” technology reliant on lead batteries will further contribute to a health

epidemic that already affects three times more people than hiv/aids and takes away educational opportunity of millions.

Low-level lead exposure in children causes brain damage, learning deficits, a decline in school performance, and a resulting loss in lifetime earnings. It is quite ironic that efforts to sell computers to these communities are linked to educational initiatives to train teachers and bring technology into schools. At the same time, hardly any efforts are being made to control the millions of pounds of lead pollution that these programmes will create.

While many western countries have banned lead components in electronics, and some, including the European Union and Japan, have begun asking manufacturers to take back their products for proper recycling, developing countries have no such laws in place. In addition to batteries, computers contain toxic metals and other hazardous materials which when discarded endanger health and pollute the environment unless recycling programmes are in place — these programmes are costly.

More alarmingly, these programmes will generate millions of spent batteries that will end up being melted down in residential areas, contaminating air, soil and water. Backyard smelting of lead batteries is a common enterprise in most developing countries and environmentally sound recycling technologies are virtually nonexistent. Our experience in India has shown that even "registered" recyclers have a long way to go to meet international standards.

The hazardous path

In addition to the hazardous path batteries take after they become waste, most manufacturers of new lead batteries in developing countries are poisoning their workers and surrounding communities. A review of published studies from 15 developing countries shows that the blood lead levels among battery workers are far more than the permissible levels in the us. Average exposures to children residing near these plants are approximately four times the acceptable level.

If technology companies really want to support educational opportunity and connectivity in villages around the world, they must launch a simultaneous effort to purchase batteries from factories that meet minimum standards and take responsibility for the collection of used batteries for proper recycling. These efforts must also be combined with take-back programmes to collect and transport electronic waste from remote areas to modern recycling facilities that have yet to be established. Without this infrastructure in place, sustainability will never be achieved.

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