

Time to realize the global E-Waste Crisis

Basel Action Network shocked the world with photos from China

by Jim Puckett, Recycling Magazine No.07/2007

When the Basel Action Network (BAN) first traveled to Guangdong province in 2001 and brought back pictures showing for the first time what electronic waste recycling in China really looked like, people the world over were shocked. However, too often the response to the revealed cyber-age nightmarish horror show of the open wire burning, the acid leach process waste dumped in the river, the cooking of circuitry over coal fires etc., was to conclude that “China’s problem” could be solved simply by giving them better technology. China was clearly just too poor to properly manage our highly complex high-tech waste.

All we needed to do then was give China some good technology. In fact, if we were to do this, export of all of the world’s e-waste to China might be a good idea, due to their “competitive advantage” of a comparatively “dirt cheap” work force. We could provide them with e-waste processing jobs that are in fact close to the electronics supply chain – or so the thinking goes. This notion comes from well-meaning academics, industrialists, engineers and economists sitting in silicon towers, unaccustomed to the realities of developing countries, their informal economies and the distorted economics of cost externalization that drives these informal sectors. We feel compelled to explode this myth conclusively, so that our policies with respect to solving the e-waste problem become both reality- and values-based, and we don’t waste time on irrelevant, immoral technocratic fabrications doomed to fail.

Myth: Its all about technology.

Technology cannot solve problems that are fundamentally socio-economic. It is simply untrue that China as a country lacks the capacity to deploy the best technologies in the world. China is today, much like the world – a very large place where the rich are getting richer and the poor, poorer at a shocking and unsustainable pace. It is both a developing country and a developed country at the same time. It’s an economic engine more powerful than any on earth, churning resources into growth and wealth to benefit a minority today, while leaving a wake of social and environmental indebtedness for the vast majority for the long term. The vast majority of the population are displaced farmers, getting less than a dollar per day for the new jobs such as processing imported e-waste in the informal sector. This vast informal sector can get away with externalizing 100% of the environmental costs with the result being the toxic horror show we have documented. They therefore can actually make considerable profit from materials recovery and reclamation (steel, gold, aluminum, copper, plastic) from the mountains of imported electronic waste currently allowed to be trafficked today. A more appropriate technology that properly cuts and crushes cathode ray tubes in closed units, carefully removes mercury lamps from laptop screens, isolates brominated flame retardants, and sends the various fractions to the half-dozen environmentally sound downstream smelters on earth today, while properly managing unrecyclable residues, all the while providing maximal protection for workers, is going to have to pay for this care and diligence – the service of managing this high-tech trash.

If the state-of-the-art facility that internalizes costs, coexists with an informal sector that externalizes them, the informal sector will always come out on top of the competitive heap. So we can transfer all manner of wonderful technology to China, India or Nigeria, or they can create it themselves; it will not change much in the real world, as the vast global supply of e-waste will not arrive at its doors. What about command and control prohibition of the informal sector activities? Well China is not the police state the West imagines. But even if the Chinese government did manage to crack down on a desperate labor force often operating out of farmhouses over a vast territory, greater unemployment and thus unrest will result and due to the ease by which the free market finds the path of greatest profit, the waste

will simply be diverted to another informal sector – if not in China, then in another part of the world.

Myth: Managing Waste Provides Sustainable Jobs

Ok, just for the sake of argument, let's pretend we could wield a magic wand or an iron fist, and control the informal sector and make it disappear and prevent its relocation elsewhere. Wouldn't it be a good idea to take advantage of the cheap labor, and provide jobs for the relatively non-hazardous part of e-waste management – dismantling – and then employ high-tech in the more hazardous processing sectors? To answer this, it must be understood that there are no electronic waste recycling technologies that can prevent all risk and harm, and this is particularly a fairy tale in developing countries. Much as software designers understand the axiom of GIGO (Garbage in, Garbage Out), Hazard in, Hazard Out (HIHO) should be written on the foreheads of all hardware designers. The fact that electronic waste is hazardous waste means that the technologies that must deal with it at end-of-life involve substantial risk. Means exist to mitigate or contain those risks, but never perfectly, and never without considerable cost and an elaborate societal infrastructure too often taken for granted in developed countries.

The export of hazardous waste to take advantage of cheap labor in developing countries involves a plethora of hidden costs externalized either to the local environment or to the global commons. From the very start, the export by ship involves the burning of fossil fuels simply to take advantage of the gross disparity in wages found on earth today, and at the end inevitably involves the release or containment costs for toxic pollutants. In between there are a multitude of costs that must be borne by the recipient country or community. These include creation of state-of-the-art landfills or incinerators, development of a regulatory framework and management structure, proper governmental monitoring, and enforcement mechanisms and staffing, including occupational safety and health monitoring and expertise. There is a need for trade unions, right-to-know laws, a legal tort system and a national health system to provide a safety net for those exposed. This is the context, so often missing from the reality in developing countries, that escapes the thinking of those that think only in terms of technological fixes. If these safeguards are not adequately in place then the costs are borne by the damaged health of workers and the community as well as to the environment – costs that often become multi-generational and thus defy calculation.

Further, we must ask why on earth would we want to lower costs for hazardous waste recycling anyway? Lowering such costs works in direct contradiction to providing the most efficient and sustainable response to pollution and waste, and that is to minimize it at the source. As long as the global cost of recycling can remain low by exploiting low-wage workers, there will be less incentive to reduce waste and toxicity in our products through Green Design.

Myth: It's China's Problem

The inability to control imports and management of imported hazardous waste is not “China's problem” nor “India's problem” nor “Nigeria's problem” – it is our problem. It is our problem as a highly technological society that fails to ensure the liabilities and costs are internalized as close to the source as possible, and instead goes looking for global hiding places where our post-consumer toxic wastes can be “thrown” to that mythical place called “away”. “Away” is inevitably the place where we can maximize cost externalization with the real impact being human and environmental exploitation. It is not acceptable that areas of the world receive a disproportionate burden from the global toxic consumption simply because they are poor.

Economists tell us that cost externalities are inefficient. Policy makers extoll the principles of environmental justice, polluter pays, national self-sufficiency, proximity principles and many more for

wastes. We in rich developed countries have embodied these in the law starting with the Basel Convention and the Basel Ban Amendment. The fact that the export of toxic e-waste takes place in contradiction to our own principles and laws, speaks to this being our problem. Shame on us for pretending that somehow the export of poison equates to assisting the economy of the developing world while intentionally turning a blind eye to its myriad hidden costs.

To those that would look to export and advanced technology as a way to solve the problem of informal and primitive recycling and waste management in developing countries, we would ask you to get real and take upstream responsibility. Developing countries will never be able to manage even their own waste sustainably unless they can convert their informal sector, and that will never happen as long as it is so easily fed by our waste exports. As long as gross cost externalization is allowed via the global toxic waste export trade, the horror show will continue. The Basel Convention and its export ban is there for a reason. It's time for us all to become law-abiding global citizens.

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