In February 2002, the Basel Action Network (BAN), together with the Silicon Valley Toxics Coalition (SVTC), released the report, *Exporting Harm: The High-tech Trashing of Asia*. That report, and a subsequent BAN film of the same name, revealed to the public for the first time a disturbing fact—that about 80 percent of the electronic wastes collected in North America for “recycling” actually find their way, quite legally, to dangerously primitive, highly polluting recycling operations in Asia (see Photos). European recycling insiders have calculated the export figures for their own continent at 60 percent despite European Union (EU) laws banning such export. The report revealed that waste “recyclers” are often no more than waste “distributors,” involved in a very lucrative form of post-consumer, toxic-waste export toward which policy makers and electronics manufacturers have been content to turn a blind eye.

The investigation centered on the Guiyu region of Guangdong Province in Southern China, where displaced farmers from outlying provinces labor for about US$1.50 per day, burning wires, melting brominated flame-retardant impregnated plastics and lead-solder-laden circuit boards, and stripping chips and connectors with strong acid solutions on river bank ways, all taking place without basic protections against occupational disease and environmental contamination (see accompanying photographs).

Almost three years after the release of that report, nongovernmental organization (NGO) members and journalists have made follow-up visits to Guiyu, another scrap-processing center in the Taizhou city area, south of Shanghai, and e-waste-processing centers in India. Reports from these visits have revealed that, despite the initial shame and dismay expressed by the electronics and recycling industries, and the horrific images now well etched in the public’s mind following the release of the groundbreaking exposé, the use of Asia as a global dumping ground for electronic waste from developed countries appears to continue unabated. The exploitation of low-wage, desperate communities and workforces, under the green rubric of “recycling” continues to take its toll through devastating immediate and long-term ecological and human health impacts.
These ongoing exposés have alerted us to a “dirty little secret” of the high-tech industry. Not only did we all become aware of the previously unknown angers lurking inside of our electronic equipment, but also we discovered a tacit stratagem by the electronics industry to avoid both accountability and real downstream cost for its hazardous materials use and poor end-of-life design considerations. Free trade became a mechanism that allowed these liabilities to be shunted to unsuspecting, disempowered communities and desperate labor forces. This passive strategy of convenient exploitation to boost profits created a false economic system, where the bill for the damage done is neither presented to nor paid by those most responsible. And this exploitive trade is facilitated via the green gloss provided by cooptation of the word “recycling.”

Although some may be distressed that recycling’s good name has been thus sullied, it is important to realize that recycling, like any industry, can be dangerous and harmful to environments and populations, and this is especially likely whenever toxic materials are involved. Although it is abundantly clear that the true solutions to our toxics crisis lie not in recycling wastes downstream, rather in eliminating them through “green design” upstream, an industry addicted to convenient cost externalization to the weak and impoverished seeks different conclusions.

THE FOURTH R: RESPONSIBILITY
Woman in Guiyu, China, about to smash a computer monitor tube to remove copper. The biggest hazard from this activity is inhalation of highly toxic phosphor dust coating inside the tube. Monitor glass is later dumped in irrigation canals and along the river where it leaches lead into the groundwater, which is so contaminated that drinking water must be trucked in. December 2001. Courtesy of Basel Action Network

The industry hopes to reduce the problems inherent in this form of toxic trade to a matter of simply accomplishing the three R’s (Reduce, Reuse, Recycle) with “appropriate technology.” And although espousing this catch-phrase, it is inevitable that most of the emphasis is on recycling, less on reuse, and even less on waste reduction. Moreover, what is forgotten in this view is a vital fourth R: Responsibility. This includes the producer’s responsibility not to produce products that are toxic or that possess other environmental liabilities, and to take full financial responsibility for the entire life cycle of their wastes and products. It also includes the national responsibility to become self-sufficient in hazardous waste management, as called for in the Basel Convention) and to halt all exports of hazardous wastes from developed to developing countries as called for in the Basel Convention’s Ban Amendment. Finally, it includes consumer responsibility to hold corporations accountable for their actions, products, and wastes, as well as to ensure that they do not allow inappropriate disposal of their own post-consumer wastes.

Without this greater context of responsibility, which implies upstream prevention rather than downstream exploitation and damage control, industries simply aim to apply the easiest “technofix.” Just as the industry was in blissful ignorance prior to Exporting Harm, its new strategy is yet more denial of the real face of exploitation. Instead of calling for greater responsibility to prevent such toxic-waste trade, the answer of industry and North American governments seems to be, “Let’s just give the Chinese better technology and then we can continue to send our wastes to them.”

This chapter explores the larger questions of why, regardless of technologies employed, efforts to utilize weaker economies to handle environmental problems are unjust and work at cross-purposes with environmental justice and economic sustainability.

ECONOMIC “LOGIC”
In 1991, then Chief Economist of the World Bank, Lawrence Summers, now president of Harvard University, stunned the world when his leaked memo proclaimed: “I think the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable and we should face up to that” (Summers 1991). He was vilified for making such a statement and rightly so, but what few analysts mentioned at the time was that in fact he was right—according to the dictates of today’s free market economics, that conveniently ignores certain real, but externalized costs, the logic of waste trade is impeccable. That is, as long as one can manage to get away with sending one’s liabilities to those who most likely will not be able to ever present a bill—such as those living in far-off, impoverished, and desperate communities, the flora and fauna in natural ecosystems, or future generations—the logic is just lovely.

However, if we were to employ a truer economic system (e.g., “ecological economics”) that is honest and values all things valuable—such as our health, our future, biological diversity, justice, morality, human rights, freedom—and properly accounts for what these are worth to us as human beings, the “export of harm” would fail all tests of economic “logic” and the final tally of the bill imposed by end-of-life electronics would be hefty indeed. And yes, this would be true even if “state-of-the-art” technofixes were employed for recycling in developing countries, as risks cannot be entirely eliminated via downstream technologies.

AN OBJECT LESSON IN GLOBALIZED EXPLOITATION

The lesson of e-waste trade exploitation is an object lesson in the fallacy of free trade and globalization, when such freedom of economic movement is belied by captive labor that, ironically, cannot likewise move freely across borders. With labor held captive behind national borders, globalization is a ballgame played on a field consisting of mountain ranges and death valleys—disparate economic realities—creating vast havens for the exploitation and pollution of peoples and resources. To better understand the object lesson, it is important to explore four of the fundamental reasons why the notion of exporting toxic waste from rich to poor countries is a fundamentally bad idea from both ethical and economic standpoints.

Hazardous waste recycling causes damage to human health and the environment from recycling hazardous wastes. Indeed, hazardous waste recycling is a dangerous practice anywhere on earth, even in rich, developed countries. To this day, BAN’s onsite visits to electronic waste processors in the United States reveal a very serious lack of concern and knowledge about the impacts of such hazards as brominated flame retardants and beryllium in fumes and dusts, as well as toxic cadmium and rare-earth, metal-laced phosphors released by broken cathode ray tubes (CRTs). And smelters, the final and weakest environmental link in any metals recycling operation, have been historically notorious in Europe and North America as major point-source polluters. Very few smelters still exist in North America because the costs of preventing pollution and protecting workers in accordance with legislation are enormous and the costs of upgrading facilities is not effective when weighed against using facilities in developing countries. If developed countries cannot handle the problem without substantial risk, it is no surprise that recycling hazardous electronic waste is going to be particularly dangerous in developing countries.

Weaker economies lack institutional and infrastructural capacities that are even more important for protecting workers and the environment than are technological factors. Social, legal, political, financial, and infrastructural factors are at least as important to protecting the populace and environment, as are technical criteria. These factors include adequate legislation, and the resources, people power, and political will to actually enforce such legislation, and monitor and inspect operations to ensure compliance and maintain technologies. They include the resources to create and maintain the infrastructure to provide emergency response, roads and services to ensure safe transport, and medical facilities to monitor and protect worker and community health.
These factors also include a public and workforce with the political freedoms to gain access to health and environmental risk information so as to be aware of the risks they face, to be able to redress environmental and occupational concerns through legal channels, and to protest hazardous working or living conditions without fear of retribution. In practice, these factors require the freedom of speech and expression and institutionalized trade unions, as well as tort and liability law. And all of these factors need to be robust enough to counter corporate power or governmental corruption.

It would be naive to expect that most of these factors exist with sufficient force in most Southern countries where we currently find our digital detritus falling to rest, particularly because they often do not adequately exist in the global North. Even when the will exists to institutionalize these factors—the requisite resources likely do not. And without these infrastructural safety nets in place, who ends up paying the bill for the damage done? If I am a poor ex-farmer in China, India, or elsewhere, and I get cancer, where can I turn to seek compensation or assistance.

The toxic-waste trade to lower-wage communities is contrary to the principles of environmental justice and national self-sufficiency. Even if we could magically transport all of the infrastructure, laws, policies, clinics, legal recourse, and the best available technology, along with the electronic waste as a nifty package deal, and the recipient country were magically able at that point to maintain relatively low wages in relation to those in developed countries, the export of such wastes to those low-wage communities still would be an affront to the principle of global environmental justice.

In a nutshell that principle states that no peoples should be disproportionately burdened from environmental harm simply due to their economic, racial, or other status. It is ironic that the principles of environmental justice, first developed in the United States to apply to impoverished, marginalized, and minority communities within the U.S. borders, and embraced by Democratic and Republican administrations alike, perversely, does not seem to apply once toxic waste is traded across U.S. borders.

And, such exports still would undermine the fundamental obligation of the Basel Convention, which calls for all nations to become self-sufficient in their hazardous waste management, to minimize transboundary movements of hazardous waste and to minimize the generation of hazardous wastes.

Even more explicit than the text of the original treaty, in 1994, the Basel Convention passed a decision banning all exports of hazardous wastes from countries that are members of the Organization for Economic Cooperation and Development (OECD) to non-OECD countries. This ban was adopted as a proposed amendment to the Basel Convention the next year applying to OECD and European Union countries, and it is now garnering ratifications for its full entry into the force of law. This ban is a complete prohibition, created with the understanding that regardless of the levels of technology employed, economically motivated waste trade, which takes advantage of low-wage countries, cannot be considered environmentally sound management.

Such exports externalize real end-of-life costs, creating an economic disincentive for upstream solutions (i.e., green design/toxics elimination). The final and perhaps most compelling reason for prohibiting the international electronic waste trade is the fact that its continuance creates a subsidy for inefficient and destructive product design. For as long as the dumping of electronic waste on weaker economies is legal and its costs remain external to the ledgers of its industrial creators, the electronics industry will not be forced to pick up the tab for the true end-of-life costs of their products. The effect will be that the importing country ultimately will pay that bill, either with its
citizens’ health or in exorbitant post-contamination clean-up costs, whereas those responsible for creating the problems in the first place lose all incentive to solve them at the source through green design.

PROFITS LEAVE THE INDUSTRY IN DENIAL

Leaders in the recycling industry, in government, and certainly in the electronics manufacturing industry continue to argue that strict export controls and a policy of environmental justice or national self-sufficiency in hazardous waste management are unnecessary. Rather, in their view, exporting toxic waste is acceptable, as long as developing countries are given the proper technology.

The U.S. government, for example, recently claimed that export is part of its e-waste management strategy for its national electronic-waste tidal wave. The U.S. Environmental Protection Agency’s (EPA) electronic waste expert, Robert Tonetti, claims that once a minimum, global standard of technological criteria is established, waste exports should be able to proceed. The EPA’s recent “Plug-In to E-cycling Guidelines” ignores the fact that the rest of the world must adhere to Basel Convention obligations and waste definitions and fails to forbid the export of hazardous e-waste in accordance with Basel Ban (Basel Decisions II/12 and III/1). It also fails to recognize that Basel Parties cannot trade in waste with a non-Party unless a special bilateral agreement is first signed between the two countries. Thus it is currently illegal for countries like Philippines, China, India, Vietnam, and so forth that are Basel Parties to receive hazardous electronic wastes from the United States. The current situation where the United States knowingly contributes, via its free electronic waste trade policies, to promoting and facilitating illegal imports on the part of developing countries, is outrageous.

Likewise, most industry bodies, including the Electronics Industries Alliance (EIA), refuse to denounce the toxic-waste trade. In a statement following the release of “Exporting Harm,” the EIA stated:
“to facilitate sustainability, exporting in a globalized economy needs to be a viable option. . . . internationally, EIA is working with governments through the OECD to develop internationally recognized guidelines for the environmentally sound management of scrap PCs. We hope this initiative will help governments ensure that recycling facilities operating within their borders are properly regulated and held to high environmental, health and safety standards.” (EIA 2002)

Even the recycling industry associations, such as the International Association of Electronic Recyclers (IAER), the Institute for Scrap Recycling Industries (ISRI), and the Bureau of International Recycling (BIR), refuse to take a stand in support of a ban on the export of hazardous electronic wastes to developing countries.

LAGGARDS AND LEADERS

Unfortunately, too many of the aforementioned “waste distributors,” benefiting from (and exploiting) the positive greening effect of the word “recycling,” have joined the ranks of these national and international recycler associations and now represent a large part of their membership. These waste-trading interests have found undue representation within such organizations such as the BIR, the ISRI, and the IAER. As a result, these organizations have used their members’ money to lobby for deregulation, particularly as it regards defining wastes to be regulated and legislating their uncontrolled transfer from rich to weaker economies (e.g., as is now being sought in the Basel Convention).
The good news is that Europe has stepped forward with a model of a two step solution to the e-waste crisis: First, close off the cheap and dirty dumping grounds (they have banned hazardous waste exports and e-waste landfilling). Second, require producers to take responsibility for all e-wastes at end of life and to phase out the use of toxics in such products. This is a model to which North America and the rest of the world aspires.

In the meantime the good news in North America is that a growing number of recyclers and waste management officials at the local level are now beginning to take a stand against these economically distorting cost externalizations that are robbing legitimate recyclers of domestic markets and preventing the proper buildup of a domestic infrastructure to safely manage hazardous wastes at home. In 2003, North American recyclers, joining together in a series of press conferences, made the surprising announcement that in lieu of governmental action, they were going to voluntarily uphold the social and environmental waste management criteria developed by BAN, SVTC, and the Computer TakeBack Campaign (CTBC), requiring of themselves a standard of diligence far exceeding those of legal mandates. In doing so, these recyclers are very likely to incur greater business costs than their competitors.

The new alliance was forged through the creation of a document known as the “Electronic Recycler’s Pledge of True Stewardship” crafted by BAN and SVTC after many months of consultation with electronic waste recyclers. This pledge calls for, among other things, a full closure of the cheap and dirty cost externalization sinks for electronic wastes that are the most common destinations today: export, landfills, and prisons. As of this writing, the pledge has more than 30 signatories.1 The intention of this effort was never to reward the status quo, but to find an elite group of concerned businesses willing to change business as usual forever.

By distinguishing the industry leaders from the laggards, and then directing those consumers—including institutions, government agencies, and original equipment manufacturers who are willing to pay a little more to do the right thing—we can work to create a growing market for responsible recycling, using market forces in lieu of adequate legislation in the United States. There are plans to convert the pledge into a certifiable program with third-party verification.

CONCLUSION

The toxic e-waste trade is an affront to the principles of environmental justice, as it targets the poor with toxic, unsustainable jobs and waste. The export “solution” also contradicts the “polluter-pays principle” and the principle of “waste prevention,” as it allows very real environmental costs to be externalized by those responsible for creating them. Whenever a government allows costs to be externalized, in this case via export, it creates an unfair subsidy for industry to continue creating polluting products and wastes. This pollution subsidy then stifles the innovation desperately needed worldwide to implement preventive solutions upstream through green designs that avoid pollution in the first instance.

We all must do our part to reaffirm the principles of environmental justice and the Basel Convention’s obligations to achieve national self-sufficiency in waste management through waste prevention and minimization. It is time for environmentalists, governments, and the private sector to unite in the resolve to once and for all pull the plug on the horror show that is the toxic waste trade, rather than find yet more excuses for perpetuating it.

NOTE

1. For an up-to-date list of signatories of the Electronics Recycler’s Pledge of True Stewardship, see www.ban.org/pledge/Locations.html.