Toxic Electronic-Waste Campaign

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Introduction

The average lifespan of computers in developed countries, such as the United States, has dropped from six years in 1997, to two years in 2005. [1] Many of the 60 million computers that may be thrown away in America every year could be reused or upgraded, but consumers are often eager to trade in their old electronics for the latest device. In addition, some consumers find it cheaper to simply replace their old computer instead of repairing and updating it.[2] As a result, electronic waste (e-waste) is the fastest growing sector of municipal solid waste in the United States, and the US Environmental Protection Agency (EPA) expects it to double in the next five years. Nearly 133,000 PCs are discarded every day. At this rate, over 400 million computers will be discarded over the next three years.[3] Unfortunately, only about 10 percent of this e-waste is recycled, while the rest is either stored or thrown into landfills.[4] One report noted that if all the obsolete computers in the US were gathered, it would create a 22-story pile over an area the size of the city of Los Angeles.[5] Given this monumental amount of waste accruing daily, one is led to ask what the effects of this e-waste are. Is e-waste harmful to one's health? What is being done to decrease the amount of e-waste in the US? Does US e-waste affect other countries? Throughout this paper I will expose the harmful health effects of e-waste, discuss national and international regulatory response to e-waste, and explore the non-governmental organization (NGO) advocacy campaign against the growing problems with computer e-waste.

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[1] Greenpeace International, *Hi-Tech: Highly Toxic,* 2005.
[2] Alastair Iles, "Mapping Environmental Justice in Technology Flows: Computer Waste Impacts in Asia," 2004.
[3] Steve Tarter, "E-Waste Proliferating," 2005.
[4] The Monitor's View, "Saying 'So Long' to E-Waste," 2005.
[5] Computer Take Back Campaign, *The Problem* 2005.

Toxic E-Waste

Electronic waste includes up to one-thousand hazardous substances. Improper disposal or contact with these materials can lead to contamination of the surrounding ecosystem and have harmful health effects on humans.[6] A study conducted by Greenpeace International found that toxic heavy metals and organic compounds can be released from e-waste, particularly as computers are broken down during the recycling and disposal processes. Though many of these substances have harmful effects, I will highlight a few particularly dangerous materials: lead, mercury, plastics and brominated flame retardants.

Lead is a heavy metal often used in electronic goods in solders, glass of cathode ray tubes (in monitors), and lead-acid batteries. This highly toxic material can have irreversible effects on the nervous system, especially in children.[7] In the 315 million computers that became obsolete between 1997 and 2004, roughly 1.2 billion pounds of lead was present. If this toxin leaches into water supplies, it could cause serious health problems.

Mercury is a poisonous substance that is used in batteries, switches, and printed circuit boards. This toxin can cause brain and nervous system damage to humans. The amount in a single computer is small, but in the 315 million computers previously mentioned, over 400,000 pounds of mercury is present.

Plastics, which average 13.8 pounds per computer, mounted up to 4 billion pounds in 315 million computers. Polyvinyl chloride (PVC), a type of plastic, is particularly hazardous to the environment and human health as it creates hazardous dioxins and is difficult to recycle. Though PVC is currently being phased out of most products, it is still present in large quantities in landfills.

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[6] Iles, "Mapping Environmental Justice in Technology Flows: Computer Waste Impacts in Asia," 2004.
[7] Brigden *et al*, "Recycling of Electronic Wastes in India and China: Workplace and Environmental Contamination," 2005.

Brominated flame-retardants (PBDEs and PBBs, for example) are used in printed circuit boards as connectors and in plastic covers and cables to reduce flammability. PBDEs have been shown to act as an endocrine disrupter and may impede development in young humans and animals. PBBs are linked to increased risk of cancer in the digestive and lymph systems.[8] These substances are just a few of the hazardous materials found in computers. As more computers are disposed, the risks from these toxins, not to mention the sheer volume of space the computers consume, are likely to increase.

E-Waste Campaign in the United States

In 2001, a coalition of organizations in the United States emerged to fight the battle against hazardous computer e-waste. The Computer Take Back Campaign (CTBC) involves 16 national advocacy organizations, such as Friends of the Earth, Basel Action Network, GrassRoots Recycling Network, and Silicon Valley Toxics Coalition. The goal of the CTBC is "to protect the health and well being of electronics users, workers, and the communities where electronics are produced and discarded by requiring consumer electronics manufacturers and brand owners to take full responsibility for the life cycle of their products, through effective public policy requirements or enforceable agreements."[9] The campaign seeks to achieve this goal through a number of strategies.

A primary campaign method is to pressure electronics producers to employ Extended Producer Responsibility (EPR), which would make the manufacturer responsible for its waste, internalizing its costs, and eventually phasing out the use of hazardous materials. EPR involves three principles. First, "Take it Back," meaning the producer should carry out electronics recovery, reuse, and recycle content, which would shift the financial burden of these tasks from

[8] Silicon Valley Toxics Coalition, *Just Say No-E-Waste Backgrounder,* 2005.
[9] Computer Take Back Campaign, *About the Campaign,* 2005.

taxpayer-funded programs to the manufacturer. Second, 'Make it Clean,' which means the producer should phase out the use of hazardous substances in their products. Third, 'Recycle Responsibly,' which mandates that producers use recycling companies with responsible practices and do not harm communities economically or socially.[10] CTBC uses legislation and policy, direct actions, and other strategies to achieve EPR.

E-Waste Legislation

Given that only 10 percent of computers are recycled, CTBC is supporting state legislation to create an effective system for environmentally responsible recycling and re-use of electronics. Suggested legislation would require producers to take back their products after consumers discard them, which can create a market incentive for manufacturers to make products with fewer hazardous materials and with a longer life span so that recycling will be cheaper and easier. CTBC hopes for national legislation, but is encouraging activists to press for regulation at the state level.[11] Currently, twenty-five states are considering bills that involve e-waste regulation, though Maine is the only state to pass legislation that includes a producer responsibility system. Massachusetts, Minnesota, California, and Maine have legislation to ban e-waste from landfills, which has increased recycling in those states. Producers are beginning to push for a national program to avoid different sets of regulations, but are requesting that all stakeholders share the responsibility of recycling and disposing of toxic materials.

In response to NGO and corporate demands, the US Congress is currently looking at two different e-waste bills. One would give tax incentives to companies and individuals who recycle, while the other would set up a "grant and fee" program coordinated by the EPA.[12] CTBC does not support either of these approaches to e-waste regulation. A recycling fee at the time of

[10] Computer Take Back Campaign, *About Us*, 2005.
[11] Computer Take Back Campaign, *Legislation & Policy,* 2005.
[12] The Monitor's View, "Saying 'So Long' to E-Waste," 2005.

purchasing, as California has implemented for monitors, is used to fund collection and recycling programs for the product. The CTBC thinks that if only consumers pay the fee, there is no incentive for producers to make products less toxic and easier to recycle. The tax credit would use taxpayer money, which creates an additional financial burden on already strained states, and CTBC does not think it would lead to creating more recycling. The CTBC, however, does promote a number of legislative components to be included in bills, such as labeling requirements and performance standards, that focus on making the producer take responsibility for the products they make.[13]

Producer Accountability

In 1999, the Silicon Valley Toxics Coalition began issuing a Computer Report Card to evaluate manufacturers based upon the information they give to consumers about environmental policies and features of their product, as well as the degree to which they implement CTBC's EPR principles. For four consecutive years, the report revealed that the US is behind other developed countries, such as the European Union, in implementing solutions to e-waste. The report also showed that some producers, such as Sony, Dell, and IBM, offered take back or recycling in other countries, but not in the US. Dell was one of the 16 companies given a failing grade. The investigation found the company offered a corporate take back program, but not one for individuals, and used prison laborers, who are not guaranteed health and safety rights from the hazardous materials, to recycle its products.[14]

As a result of the Dell findings and given that Dell controls the largest share of the US personal computer market and is the leading seller of computers to higher education institutions, the CTBC launched a campaign in 2001 called "Toxic Dude" to convince Dell to take back

[13] Computer Take Back Campaign, "Electronic Waste Recycling: A Toolkit for Legislators," 2005.
[14] Computer Take Back Campaign, "Fourth Annual Computer Report Card," 2003.

computers from individual consumers. Since there are no federal or state producer responsibility laws, the campaign pushed for Dell to implement EPR principles. The campaign's goal in targeting Dell was that once this leading manufacturer created a take back strategy, other producers would follow in order to stay competitive in the computer market. The CTBC employed a number of actions targeting Dell and used student and campus pressure as a main tool to create change. CTBC member organizations urged activists to employ a number of grassroots tactics. Primary activities promoted by the campaign were letters to the editor requesting policy changes, e-mail sent to Dell through the feedback function on the producer's website, and a day sponsored by CTBC for people to call Dell's toll-free customer service line to ask for policy and product changes. The CTBC also urged students to get their university to pressure Dell to take back old computers from the institution. In addition, activists could gather signatures on postcards to send to Dell or conduct a public opinion survey about computer recycling and producer responsibility.[15] The CTBC also united student activists across the country. In December 2003, 150 college campus groups from every state sponsored an ad in the *Austin Chronicle* that called on Dell to take back old computers, phase out hazardous materials in its products, and employ environmentally superior recycling.[16]

Dell was responsive to the CTBC's tactics, though it took some time for the campaign's goal to fully be achieved. Beginning in late 2002, Dell utilized a public relations strategy to respond to CTBC's demands. In November 2002, Dell issued an e-mail advertising a consumer recycling program that allows consumers to pay only shipping costs to their nearest recycling center or donate it to the Christina Foundation. CTBC criticized these efforts by exposing the holes in Dell's strategy. For example, Dell uses an efficient direct sales model that would allow

[15] GrassRoots Recycling Network, "Dude, Why Won't They Take Back My Old Dell?" 2002.
[16] GrassRoots Recycling Network, *Recent Releases*, 2005.

for easy recovery but still requires the consumer to ship the old product back themselves, leaving the program substandard to those employed in Europe. In addition, Dell continued to use taxpayer subsidized prison labor for recycling without showing their contract provisions on safety and launched a very weak public awareness campaign on recycling options. The CTBC also criticized the EPA's "Plug into Recycling" program for backing the industry's shared responsibility strategy, which fails to hold producers responsible for the problems they created. The EPA's program is inferior to programs in Europe and Japan, both which have legislation to make producers financially responsible for their products.[17]

The CTBC Dell campaign ended in victory. After much criticism from the CTBC organizations, in 2003 Dell agreed to switch to commercial recyclers rather than using prison labor. Then, in 2004, Dell issued a letter that stated explicit examples of EPR policies implemented and plans for future programs. In addition, Dell and GrassRoots Recycling Network co-sponsored a national web-based video- and tele-conference for Michael Dell to discuss concerns and company plans with students directly.[18] Dell's website now lists recycling options that include a $10 consumer fee to have any computer model picked up directly at home, or free with the purchase of a new Dell. In addition, Dell says it uses the precautionary principle in evaluating hazardous materials, has plans to phase out the use of lead and brominated flame retardants by 2015, and has already banned the use of PVCs.[19] Other companies also have producer responsibility and take back programs in place in the US. HP, for example, offers free recycling for ink cartridges and a take back program with a $13-$34 fee for computers from any manufacturer.[20] The CTBC has recently launched a campaign against Apple, very similar to the

[17] GrassRoots Recycling Network, *Recent Releases*, 2005.
[18] GrassRoots Recycling Network, *Recent Releases*, 2005.
[19] Dell, 2005.
[20] HP, 2005.

previous one that targeted Dell. Apple currently takes back old iPods, but has no consumer take back program for other Apple products. This campaign began in 2005 and has yet to see significant results.[21]

The CTBC has worked hard to educate consumers about responsible producers and recyclers. On the CTBC and multiple member organizations' websites, a section allows users to find responsible recyclers in their area. For example, on the CTBC website there is a map of the United States, and after clicking on a state, a list of responsible recyclers are provided. CTBC identifies responsible recyclers as those who have signed onto their Electronics Recyclers Pledge of True Stewardship (E-Stewards Pledge). The Pledge was designed over four months of negotiations and consultations between recyclers and CTBC organizations and has the highest standards for environmental justice and e-waste in the world. The goal of creating the pledge is to provide consumers with a sustainable option for disposing of e-waste, create market forces for responsible recycling in the absence of national legislation, and to discourage "cheap and dirty" recycling methods.[22]

Analysis of the National E-Waste Campaign

The CTBC campaign against e-waste in the United States created a new cognitive frame for activists and the public. According to the campaign, the problem of e-waste build up and hazardous materials from computers is not the responsibility of those who purchased the equipment; rather, it is the responsibility of the producers who use toxins and do not have a program to take them back. The name of the Dell campaign, "Toxic Dude," also helped frame the issue and peg the responsibility for hazardous materials on Dell. Many producers, such as Dell, already offered take back programs in Europe, so Americans knew that pressing for EPR

[21] Computer Take Back Campaign, *About the Campaign*, 2005.
[22] Computer Take Back Campaign, *The Solutions*, 2005.

was a realistic solution. CTBC employed a variety of tactics in their campaign. Information politics was a major component of the fight against e-waste. CTBC exposed many facts about hazardous material in computers and practices of producers of which the consumers were unaware, such as the recycling deficiency in the country. The campaign relied on the Internet and media to inform its audience. CTBC also used leverage politics by pressuring powerful actors, such as computer producers and state legislatures, to create change. After exposing Dell's practices through information politics, CTBC used material and moral leverage by having consumers attack their prestige as a leading producer. Since many activists were potential future consumers, Dell risked losing market sales if they did not change their practices for the growing number of environmentally conscious consumers. The campaign used future votes as leverage to force the issue of e-waste onto the agenda of state legislatures. CTBC also used accountability politics on producers that employed take back strategies and used less toxic materials in other countries, but not the United States. CTBC exposed producers' gaps between policies, which helped to embarrass producers and take steps toward closing that gap.[23]

Transnational E-Waste Campaign

Computer e-waste is a problem that does not solely affect the United States, but nearly every country in the world. Much of the e-waste that is meant for recycling or disposal in rich states is traded to developing countries. Of the ten-percent of obsolete computers that are recycled in the US, fifty to eighty percent is sent to poorer countries. For example, in 2002 alone, the US exported up to 10.2 million old computers to Asia, most of which were sent to China.[24] In addition, the United Nations Environment Program (UNEP) estimates that twenty to

[23] Keck, Margaret and Kathryn Sikkink, *Activists Beyond Borders*, 1998: 16-28.
[24] Iles, "Mapping Environmental Justice in Technology Flows," 2004.

fifty million tons of electronic waste is generated world-wide every year.[25] Given our increasingly globalized world in consumption and production, resources, energy, and health effects, among other things, it is especially difficult to regulate the flow of technology and materials in the international economy.

International Regulation of E-Waste

In 1994, 65 countries met in Switzerland for the Basel Convention, where they created a full ban on the transfer of hazardous wastes said to be destined for recycling or recovery from the rich, developed countries of the Organization for Economic Cooperation and Development (OECD) to non-OECD member states. The ban effectively closed the loophole through which almost 90% of hazardous waste from industrialized countries was exported to poor, developing states. The ban was fought by a handful of industrialized countries such as Australia, Canada, and the United States, and the United States has yet to ratify the ban. The solidarity of non-OECD countries was crucial in developing language in the Basel Ban to create a total ban on hazardous wastes with no exceptions.[26] The Basel Ban was an amendment to the 1989 Basel Convention, which was criticized for legitimizing the trade of hazardous waste instead of prohibiting the practice. The amendment was developed through a unique coalition of European countries, developing states, and the NGO, Greenpeace International. The Ban is still under considerable attack from influential industrialized states, and many of the parties do not live up to the Ban's standards.[27]

Some countries and regions have also passed legislation addressing e-waste. The European Union has taken the lead in reducing e-waste by making producers responsible for the

[25] Puckett *et al*, *The Digital Dump: Exporting the Re-Use and Abuse to Africa*, 2005.
[26] Puckett, Jim and Cathy Fogel, "A Victory for Environmental Justice: The Basel Ban and How it Happened," 1994.
[27] Basel Action Network, 2005.

life cycle of their products through EPR. The EU became increasingly concerned with the hazardous materials from e-waste that ended up in landfills, incinerated, or improperly recovered. Thus, EU member states drafted legislation on Waste from Electrical and Electronic Equipment (WEEE Directive) which requires producers to improve product design and take back old equipment to avoid the generation of waste. In general, EU member states welcome the legislation designed to hold producers accountable and unlike the US, do not favor a voluntary approach to the e-waste problem. Producers have been responsive to the WEEE Directive, and computer companies such as IBM and Dell have implemented take back programs and are beginning to design cleaner products.[28]

Exposing the E-Waste Crisis

To determine the hazards and amount of e-waste in developing countries, NGOs and individuals have conducted extensive studies and compiled the findings into reports for the public, private, and governmental sectors. The first report to document the international trade of e-waste to Asian countries was *Exporting Harm: The High-Tech Trashing of Asia*, prepared by Basel Action Network and Silicon Valley Toxics Coalition in 2002. Researchers exposed the harmful working conditions of thousands of Asians who extract valuable parts from dumped computers. In some areas, workers would use their bare hands, propane torches, and open acid baths to recover small amounts of gold, copper, and lead, among other materials. Left over computer parts were improperly disposed of, sometimes in waterways or burned in the open, which exposed local communities to air pollution with toxic substances and contamination of water sources. Many of these computers came from the US, but also from other developed nations.[29]

[28] Silicon Valley Toxics Coalition, *Just Say No E-Waste Backgrounder*, 2005.
[29] Basel Action Network and Silicon Valley Toxics Coalition, *Exporting Harm*, 2002.

In 2005, two reports confirmed the continued export of e-waste from industrialized countries. Greenpeace International, in *Recycling of Electronic Wastes in India and China: Workplace and Environmental Contamination*, studied workplace and other dumpsites associated with e-waste recycling in China and India. Researchers found numerous toxic metals and chemicals, such as lead, cadmium, and PCBs, from computers in the workplace of recycling facilities and in nearby communities as well as inadequate safety conditions for workers.[30] Additional research has also highlighted the harmful health effects from e-waste in India. With 4.5 million computers imported by India this year alone, much of the country's poor try make their meager earnings from extracting materials from old computers. Despite using unleaded fuels for the past five years, Indian hospitals are seeing patients with 10 times the expected level of lead in their blood, which creates extreme risk to the nervous system and maintenance of intellectual capacity. These conditions are contributed to e-waste recycling and inefficient policing by Indian districts' Pollution Control Board, as well as lack of clarification on e-waste trade in the national law.[31] Local officials and companies often ignore existing rules that address e-waste. One undercover story noted that brokers would tape $100 bills inside of the shipping container to bribe customs agents during inspections.[32] The trade of old computers can be very profitable for recycling companies and producers with take back programs. One study cited that it costs $2 in India to recycle an old PC, whereas the fee is $20 in the US.[33] Situations such as these in poor countries make the fight against e-waste challenging.

The Digital Dump: Exporting Reuse and Abuse to Africa, conducted by Basel Action Network, highlights the transfer of used computers to developing countries, such as Nigeria, to

[30] Brigden K. et al, *Recycling of Electronic Wastes in India and China*, 2005.
[31] Simmons, Dan, "India's Poor Tackle Toxic E-Waste," 2005.
[32] Richard Black, "E-Waste Rules Still Being Flouted," 2004.
[33] Kishore K. Wankhade, "UNEP Recognizes the E-Waste Problem in Asia-Pacific," 2004.

build the country's Information Technology (IT) sector. While the trade of these hand-me-down computers is justified as a "win-win" situation, with rich countries getting rid of out-of-date computers and poor countries receiving free technology, the report suggests that as many as seventy-five percent of the computer imports are considered beyond repair and are discarded in the receiving country. Nearly 400,000 computers arrive in Nigeria every month, which is creating a build up of toxic e-waste in a country largely unaware that this problem is growing. The report noted, "While closing the 'digital divide,' we are opening a 'digital dump.'" Many of the computer imports have not been pre-tested for functionality, and thus, it is unclear whether their trade is considered illegal under the Basel Convention. Given the large quantities that have been observed being dumped or burned, however, these exports should be considered illegal trade of hazardous wastes under the Convention. Nigeria has a decree from 1988 prohibiting all imports of hazardous wastes without consent from the government and has ratified the Basel Convention, yet lack of implementation and regulation make it possible for this transfer to continue.[34] In addition, the market incentive to continue exporting e-waste is high. As one American business man stated about the issue, "I could care less where they go. My job is to make money." Another US recycler commented, "You get paid to pick it up, and you get paid by people who want to take it away."[35]

International Organizations Fight E-Waste

A number of organizations are working together to fight the international trade, or "Toxic Trade," of e-waste. Basel Action Network (BAN) is the only organization that focuses solely on international e-waste problems for human rights and a healthy environment. BAN serves as a definitive source of information on toxic trade, participates in international policy advocacy

[34] Puckett *et al*, *The Digital Dump: Exporting Re-use and Abuse to Africa*, 2005.
[35] Iles, "Mapping Environmental Justice in Technology Flows: Computer Waste Impacts in Asia," 2004.

(with organizations such as OECD and UNEP), conducts research, and participates in e-waste reduction campaigns. As previously mentioned, BAN is a member of the CTBC. It also promotes E-Stewardship and works to promote the ratification of the Basel Ban.[36] In the international grassroots campaign, BAN works mainly with two other non-governmental organizations: Greenpeace International and Toxics Link. Together, they work towards the same goals of making producers responsible for their products and stopping the toxic trade of e-waste by sharing information, pressuring and working with the same corporations and governments, and educating the public and private sector about the problem of e-waste.[37] Greenpeace International, founded in 1971, is a global non-profit organization that campaigns against worldwide threats to biodiversity and the environment. It is involved in a wide variety of issues, one of which focuses specifically on trade of toxic waste and electronic toxic waste. Greenpeace also employs a wide variety of campaign tactics, such as direct action, public education, and public policy change.[38] Toxics Link is an organization based in India that was formed to provide credible information about e-waste in the country and provoke discussion on solutions to the problem. This group supports grassroots efforts in civil society, works to influence e-waste policies and management with the Government of India, and reaches out to the industry and technical experts with e-waste solutions.[39]

Given the lack of accountability and implementation of national and international e-waste laws, the international e-waste campaign pushes for EPR as a primary solution to the problem. One of the most effective campaign strategies has been to educate each party involved in the trade of e-waste, including consumers, schools, corporations, and governments, about the

[36] BAN, *About BAN*, 2005.
[37] Sarah Westervelt, "Re: Information Request," 2005.
[38] Greenpeace International, 2005.
[39] Toxics Link, 2005.

harmful effects of irresponsible trade. This has been done through methods such as direct outreach, educational films, and investigative reports. These groups also offer extensive information about electronics producers and their progress in take back programs, recycling, phasing out hazardous materials, and other environmental issues.[40] BAN e-waste project coordinator Sarah Westervelt said, "We ask people to imagine a world where all the toxic waste ends up in developing countries, being burned in open air fires, being dumped in their rivers, being thrown into their ditches." The campaign focuses on environmental justice as a main theme. That is, everyone, regardless of ethnicity, wealth, or religion, is entitled to a clean and healthy environment. In addition, the Toxic Trade campaign tries to influence countries to ratify and enforce the Basel Convention, as well as empowers developing countries to fight against computer imports that were not pre-tested for functionality. The recycler's Stewardship Pledge, discussed previously, has also been used to promote compliance with international laws and environmental justice principles. The campaign not only focuses on grassroots efforts, such as direct action and public education, but has also done considerable work with policy makers and corporations to draft language for responsible recycling and disposal of e-waste.[41]

The campaign against international trade of e-waste has encountered resistance from a variety of interests. The United States, a large exporter of e-waste, has yet to ratify the Basel Convention, which would limit the trade of hazardous wastes such as old computers. Westervelt stated that the US Environmental Protection Agency has done little to limit the export of toxic waste, despite the fact that this trade is illegal under international law once the shipments are outside of US territory if they are sent to a country that is party to the Basel Convention. "Also, exporters who are making lots of money and are not breaking US laws sometimes flaunt their

[40] Greenpeace International, 2005.
[41] Westervelt, "Re: Information Request," 2005.

federal endorsement." In addition, lawyers and lobbyists have been hired by some corporations to fight any trade restrictions on toxic waste because "they say it's a 'commodity' because a developing country is willing to buy the toxic waste in order to reclaim a few materials and dump the rest."[42] The EPA, however, claims that they are working with the OECD countries to create a program that will provide a greater assurance that e-waste exports will be environmentally sound.

Some individuals even refute the idea of harmful e-waste. The president of an electronics export company asserts that nearly every component of old electronics can be reused. "There's no such thing as a third-world landfill, he says. If you were to put an old computer on the street, it would be taken apart for the parts."[43] Organizations such as BAN may not disagree with the demand for the parts, but are particularly concerned with the health of people in these countries because of hazardous e-waste materials.

Analysis of International Campaign

The organizations working together to fight e-waste offer an example of a transnational advocacy network with a common goal and strategically linked activities to achieve that goal. The campaign challenges people to think about global consequences of irresponsible disposal of electronics and act locally to promote legislation and responsible producers. They frame the issue in terms of environmental justice to show that the problem is affecting the health and environment of innocent people, and they link these effects back to consumers, producers, and governments. The campaign uses information politics as a core tactic. Organizations share information with each other and also educate others on the problems and solutions of e-waste. In particular, the campaign draws attention to the individuals affected by toxic trade, who are often

[42] Westervelt, "Re: Information Request," 2005.
[43] Laurie J. Flynn. "Poor Nations Are Littered With Old PC's, Report Says," 2005.

overlooked for the trade profits of corporations.[44] These groups have also served as an expert in international meetings to address the trade of e-waste. For example, Toxics Link was a part of the expert group in a meeting on e-waste management in Asia at the UNEP office.[45] The e-waste campaign has also used material leverage through the E-Stewardship recycling pledge, which creates a market incentive for producers to employ take back programs and make products with less hazardous materials. Moral leverage has also been an effective way to create change in corporations and government legislation. Once the hazards of e-waste are exposed and linked to the actor, policy change often follows so that the actor can maintain its reputation. After a policy change has occurred, the campaign follows up to ensure the corporate accountability.[46] Some corporations, such as Dell and HP, have remained accountable for their take back programs and promises to reduce toxic materials by continuing a close dialogue with the NGOs to address policy concerns, learn more about international law, and develop environmentally sound programs.[47] This campaign has made considerable progress in setting the agenda for regulation of e-waste, changing the discourse of e-waste trade to focus on environmental justice, and influence producers and governments to change their practices.

Conclusion

Computers contain a significant number of hazardous materials which can have dangerous health and environmental consequences. The US and other developed countries discard thousands of obsolete computers every year, which is creating problems domestically as well as within poorer countries. NGOs have pushed this issue onto the national and international agenda and are fighting for responsible solutions. Though legislation can provide a step toward

[44] Keck and Sikkink, *Activists Beyond Borders*, 1998: 6-22.
[45] Wankhade, "UNEP Recognizes the E-Waste Problem in Asia-Pacific," 2004.
[46] Keck and Sikkink, *Activists Beyond Borders*, 1998: 22-25.
[47] Westervelt, "Re: Information Request," 2005.

limiting harmful e-waste trade, it often involves weak language or poor implementation. Thus, NGOs focus their efforts on promoting extended producer responsibility (EPR) to increase the recycling of old computers and reduce hazardous materials in the products. The e-waste campaign has successfully educated thousands of consumers, policy makers, and producers on the issue, which is a significant step in achieving positive change. Victories include producer take back programs, consideration of state and international legislation on e-waste, and the identification and promotion of responsible producers and recyclers while shaming those who remain irresponsible. Despite these successes, the fight against e-waste has a considerable amount of progress to be made before the problem is resolved. Millions of computers are still exported to developing countries, producers still include hazardous materials in products and/or do not offer take back programs, many governments do not live up to Basel Ban standards, and millions of people are exposed to harmful materials from e-waste every year. NGOs are not giving up the e-waste battle and will continue to work with producers, recyclers, regulatory officials, and other actors until the harmful disposal of obsolete computers is stopped.

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