

Upgrading *Our* Electronics and Downgrading *Their* Environment: How E-Waste Recycling Has Made China Our Backyard Dumping Ground

Stephanie Tso*

INTRODUCTION

The city of Guiyu, China was a sleepy farming community not long ago before the city became the largest electronic waste (“e-waste”) repository on earth.¹ Since 1995, Guiyu has been completely transformed.² Aptly nicknamed an electronic graveyard, Guiyu has become infamous for its role as the epicenter for crude electronic recycling. Electronics, mostly from the United States, are frequently discarded to be recycled. However, instead of ending up in local recycling facilities in the United States, they are sold and shipped off to China where they are crudely broken, melted, burned, and stripped down to copper, tin, gold, and plastic bits to be resold in a second-hand market desperate for such raw materials.³ This is the “dirty little secret of the electronic age.”⁴

* J.D. Candidate (2013), Washington University School of Law; B.A. (2008), University of Oklahoma. I am ever so grateful to Elena Songster and Giovanna Gismondi, my professors at the University of Oklahoma who first introduced me to the environmental crisis in China and encouraged me to write and work towards publication on the topic of electronic waste. For their love and endless support, I thank my parents, Jim and Betty Tso, and my sisters Tiffany and Kathleen Tso. I also thank my friends for their encouragement and support in all of my endeavors, especially through law school. To my best friend and biggest cheerleader, Octavio Lares, I thank for his love, patience, and encouragement. Special thanks to the staff of the *Washington University Journal of Law & Policy* and to the various professors throughout my education who have inspired me to learn.

1. Tim Johnson, *E-waste Dump of the World*, SEATTLE TIMES, Apr. 9, 2006, available at http://seattletimes.nwsourc.com/html/nationworld/2002920133_ewaste09.html; *China's Electronic Waste Village*, TIME, Jan. 7, 2009, available at <http://www.time.com/time/photogallery/0,29307,1870162,00.html> (photographs by Chien-min Chung).

2. JIM PUCKETT ET AL., BASEL ACTION NETWORK AND SILICON VALLEY TOXICS COALITION, EXPORTING HARM: THE HIGH-TECH TRASHING OF ASIA 15 (2002).

3. See generally *id.*

4. *Following the Trail of Toxic E-Waste*, CBSNEWS (Jan. 8, 2010), <http://www.cbsnews>

Electronic recycling in Guiyu is generally set up as a family endeavor.⁵ Even children help by using small hands to sort out “tiny specks of wrong colored plastic chips.”⁶ In this small village, electronic components spill into backyards and onto streets.⁷ Rivers run black with toxins and ash, and the air is filled with acrid smoke from the open burning of circuit boards and computer wires.⁸ Workers with little to no protective clothing brush toner from discarded printers with their bare hands.⁹

It is easy to dismiss this distressing depiction as an isolated and remote matter to those living in the United States: however, it is important to remember that the source of the e-waste that litters this small village’s landscape comes from the homes of those living in the United States, thousands of miles away.¹⁰ Even though the problem of e-waste plagues only those far away, in this globalized world nothing is ever too far removed, and that which afflicts the backyard afflicts the home.

This Note posits that the creation of e-waste in the United States has risen at an increasingly unsustainable rate. Continuing to dump e-waste in the backyard of China cannot be a long-term solution to this problem. This Note seeks to evaluate the current legal regulations governing the issue as well as seek new solutions to the problem.

Part I traces the historical, technical, and geographical journey of e-waste from the United States to China. Part II examines the current legislation that governs e-waste. Part III analyzes the effects of the

.com/stories/2008/11/06/60minutes/main4579229.shtml.

5. Henry Fountain, *Recycling That Harms the Environment and People*, N.Y. TIMES, Apr. 15, 2008, available at <http://www.nytimes.com/2008/04/15/science/earth/15obrecy.html?ref=technology>.

6. JIM PUCKETT ET AL., *supra* note 2, at 21. “Many hundreds of bags await their eyes and fingers.” *Id.* Small plastic chips are separated by color so that a “clean colored remelt would be possible.” *Id.*

7. *Id.* at 17. “These people are not just working with these materials, they’re living with them. They’re all around their homes.” *Following the Trail of Toxic E-Waste, supra* note 4. For pictures and video of this devastation watch *60 Minutes: The Wasteland* (CBS television broadcast Aug. 30, 2009), available at <http://www.cbsnews.com/video/watch/?id=5274959n>.

8. JIM PUCKETT ET AL., *supra* note 2, at 17–20 (“the village exists in a landscape of black ash residue which covers the ground and the houses of the village”).

9. *Id.* at 17.

10. *Id.* at 16 (“Due to the institutional labels, markings, maintenance stickers and phone numbers on the computers and peripheral units, it was very easy to determine the source of the E-wastes. Most of the material was clearly of North American origin. . . .”).

current legislation, as well as the deficiencies of such legislation. More attention should be paid by the legislative branch to deal with the mounting problem of e-waste and a more efficient and responsible system should be put in place to prevent rampant e-waste creation and exportation.

I. HISTORY: HOW E-WASTE GOT TO CHINA

The advent of globalization has broadened the world in which humans exist and has closed the gap in which humans interact. Globalization opens all participating markets for goods to flow freely from one country to another without the barrier of tariffs and taxes.¹¹ Unrestrained trade includes the ideals of “free entry to the market place and unrestrained global wage competition . . . in which one country in particular, China, has sought to improve its relative position by offering itself as a major source of cheap labor.”¹² In order for China to sustain economic growth to fund development, China must be able to compete in the open market and provide cheap labor and goods.¹³ China’s need to offer labor and goods as inexpensively as possible has caused local companies to cut corners, thereby producing negative effects for the environment in order to offer the lowest priced goods for export for American corporations.¹⁴ Thus, the low prices that corporations offer on Chinese-made goods do not account for the negative externalities paid for by the Chinese

11. *Recycle Globalization*, Merriam-Webster, <http://www.merriam-webster.com/dictionary/recycle> (last visited Feb. 8, 2012) (“the development of an increasingly integrated global economy marked by free trade, free flow of capital, and the tapping of cheaper foreign labor markets”).

12. Peter J. Hugill, *The Geostrategy of Global Business: Wal-Mart and Its Historical Forbears*, in *WAL-MART WORLD: THE WORLD’S BIGGEST CORPORATION IN THE GLOBAL ECONOMY 3* (Stanley D. Brunn ed., 2006).

13. ELIZABETH C. ECONOMY, *THE RIVER RUNS BLACK: THE ENVIRONMENTAL CHALLENGE TO CHINA’S FUTURE 63* (2004) (“[I]ntegration with the global economy, while providing some environmental benefits, has also contributed to China’s new status as a destination of choice for the world’s most environmentally damaging industries—petrochemical plants, semiconductor factories, and strip mining among others—and provided an insatiable global market for China’s resource-intensive goods such as paper and furniture.”).

14. See Charles Duhigg & David Barboza, *In China, Human Costs Are Built Into an iPad*, N.Y. TIMES, Jan. 25, 2012, available at <http://www.nytimes.com/2012/01/26/business/ieconomy-apples-ipad-and-the-human-costs-for-workers-in-china.html?emc=eta1>.

in the form of lower standards of living caused directly by environmental damage.¹⁵

In the drive to industrialize in the current globalized world, China offers cheap labor and relaxed environmental regulations, allowing for the opportunity of exploitation by developed nations like the United States.¹⁶ The United States benefits from the environmental degradation of China, and

in exchange, China contributes an unlimited supply of low-wage, competent, compliant workers. The foreign corporations are allowed to serve their markets from Chinese-based factories that operate under the most limited public regulation of labor, production, pollution, and health and safety standards.¹⁷

Because China is eager to industrialize quickly, it has lower environmental standards of which the United States takes full advantage.¹⁸ Paradoxically, this market exchange of cheap labor for

15. JIM PUCKETT ET AL., *supra* note 2, at 2 (“E-waste exports to Asia are motivated entirely by brute global economics. Market forces, if left unregulated, dictate that toxic waste will always run “downhill” on an economic path of least resistance.”). *See also* Duhigg & Barboza, *supra* note 14 (discussing the human and environmental hazards created in the process of manufacturing electronics: “This system may not be pretty, they argue, but a radical overhaul would slow innovation. Customers want amazing new electronics delivered every year.”).

16. Melanie Hart & Jeffrey Cavanagh, *Environmental Standards Give the United States an Edge Over China: Chinese Citizens Still Facing Health Threats We Addressed Decades Ago*, CTR FOR AM. PROGRESS (Apr. 20, 2012), <http://www.americanprogress.org/issues/green/news/2012/04/20/11503/environmental-standards-give-the-united-states-an-edge-over-china/> (positing that although the Chinese government “issues fairly stringent environmental standards and regulations,” enforcement by local-level governments is less than zealous). Additionally, “it is certainly true that many companies send their operations to China to take advantage of low labor costs and lax environmental regulations to increase profit margins . . .” *Id.*

17. PAT CHOATE, *HOT PROPERTY: THE STEALING OF IDEAS IN AN AGE OF GLOBALIZATION* 172 (2005).

18. ECONOMY, *supra* note 13, at 59. Moreover, “China’s fast-growing economy drives the nation’s demand for raw materials, and one way that this demand is met is by importing used electronic products.” U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-1044, *ELECTRONIC WASTE: EPA NEEDS TO BETTER CONTROL HARMFUL U.S. EXPORTS THROUGH STRONGER ENFORCEMENT AND MORE COMPREHENSIVE REGULATION* 17 (2008) (citing ASIA-PACIFIC REGIONAL CENTRE FOR HAZARDOUS WASTE MANAGEMENT TRAINING AND TECHNOLOGY TRANSFER, *REPORT ON THE SURVEY OF THE IMPORT AND THE ENVIRONMENTALLY SOUND MANAGEMENT OF ELECTRONIC WASTES IN THE ASIA-PACIFIC REGION* (2005)). This allows supply and demand to work in synchronization creating “[a] free trade in hazardous wastes

cheap products makes living standards in the United States better while in turn lowering living standards in China.¹⁹

Not only does the United States use China as a source of low-cost labor and a haven of lenient environmental regulations, the United States further benefits from “recycling”²⁰ its electronic waste products within China.²¹ Electronic waste or e-waste “encompasses a broad and growing range of electronic devices ranging from large household appliances such as refrigerators, air conditioners, hand-held cellular phones, personal stereos, and consumer electronics to computers.”²² Electronic products that are sent in and even paid for to be recycled by companies are often “very quickly placed on container ships bound for destinations like China.”²³ This sort of environmental exploitation takes advantage of developing nations’ more relaxed environmental regulations in order to keep developed nations clean.

In 2006, more than 300 million electronic devices were removed from American households, and it is estimated that 50 to 80 percent of that e-waste ends up in countries like China.²⁴ The pace at which electronics become obsolete and discarded has shortened

leav[ing] the poorer peoples of the world with an untenable choice between poverty and poison.” JIM PUCKETT ET AL., *supra* note 2, at 2.

19. JIM PUCKETT ET AL., *supra* note 2, at 2 (“[T]oxic effluent of the affluent will flood towards the world’s poorest countries where labor is cheap, and occupational and environmental protections are inadequate.”).

20. Although the word “recycle” here is technically applicable, I choose to refer to the action here in quotations to separate the word from its more socially accepted idea of environmental responsibility. *Recycle Definition*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/recycle> (last visited Jan. 26, 2012) (“to return to an original condition so that operation can begin again—used of an electronic device”).

21. JIM PUCKETT ET AL., *supra* note 2, at 2–3.

22. *Id.* at 5.

23. *Id.* at 1. E-waste for recycling is also exported to Asian countries such as India, Indonesia, and Cambodia, although an estimated 90 percent of what is exported to Asia in fact ends up in China. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 19–20; JIM PUCKETT ET AL., *supra* note 2, at 11–12. West African countries are also importers of e-waste for reuse to bridge the “digital divide,” however, it is reported that as much as 40 percent of the shipments of electronics to Africa are “junk”—nonworking units, that are typically “dumped and left for scavengers.” U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 6, 10, 21. For more information on the digital divide see PEW INTERNET AND AMERICAN LIFE PROJECT: DIGITAL DIVIDE, <http://www.pewinternet.org/topics/Digital-Divide.aspx> (last visited Oct. 17, 2011).

24. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 1; JIM PUCKETT ET AL., *supra* note 2, at 1. Additionally, 90 percent of the 50 to 80 percent of e-waste that ends up in Asia specifically makes it to China. *Id.* at 11–12.

considerably, further exacerbating the e-waste problem.²⁵ Moore's Law governs that at any given time, "all the machines considered state-of-the-art are simultaneously on the verge of obsolescence."²⁶ This means that an estimated thirty to forty million computers will reach the end of their life span in the next few years.²⁷ This exponentially increasing expiration of electronic products only exacerbates the supply of e-waste to China.

Although a majority of e-waste ends up in landfills across the United States, leaking toxins into our soil, or rotting in our basements and attics, economically, "recycling" e-waste is a more profitable option.²⁸ While, recycling used electronics is tremendously "labor intensive,"²⁹ e-waste is a figurative and literal goldmine of precious metals.³⁰ In theory, "recycling gold from old computer motherboards

25. JIM PUCKETT ET AL., *supra* note 2, at 5 ("The average lifespan of a computer has shrunk from four or five years to two years.") (citing NATIONAL SAFETY COUNCIL, ELECTRONIC PRODUCT RECOVERY AND RECYCLING BASELINE REPORT (1999)); *60 Minutes: The Wasteland*, *supra* note 7 (stating 130,000 computers are discarded every single day). According to three large U.S. cellular companies, a phone can be upgraded in as little as twelve to twenty months. Marguerite Reardon, *Competitive Wireless Carriers Take on AT&T and Verizon*, CNET (Sept. 10, 2012), http://news.cnet.com/8301-1035_3-57505803-94/competitive-wireless-carriers-take-on-at-t-and-verizon/. These policies create an obsolescence of cell phones, a ubiquitous American electronic device, every single year. See *Phone Upgrade Qualifications*, T-MOBILE, <http://support.t-mobile.com/docs/DOC-1681> (last visited Oct. 16, 2011); *AT&T Upgrade Advantage*, AT&T, <http://www.att.com/shop/wireless/upgrade-advantage.jsp> (last visited Oct. 16, 2011); *Sprint New for Your Upgrade Program*, SPRINT, <https://manage.sprintpcs.com/specialoffers/RebateWelcome.do> (last visited Oct. 16, 2011); *60 Minutes: The Wasteland*, *supra* note 7 (stating 100 million cell phones are discarded each year).

26. Chris Carroll, *High-Tech Trash: Will Your Discarded TV End Up in a Ditch in Ghana?*, NAT'L GEOGRAPHIC MAG., Jan. 2008, available at <http://ngm.nationalgeographic.com/print/2008/01/high-tech-trash/carroll-text>. Moore's Law is named after a co-founder of Intel, Gordon Moore, who observed that computer processing power "roughly doubles every two years," such that computers are constantly on the brink of obsolescence, creating an unending source of e-waste. See *id.*

27. See *id.*

28. See *id.* An estimated 70 percent of discarded monitors and computers, as well as over 80 percent of TVs end up in a landfill. *Id.* Not to mention, "a staggering volume of unused electronic gear sits in storage" in our very homes collecting dust. *Id.* Over 180 million dusty electronics sit in our attics and basements unused. *Id.*

29. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 18, at 9 ("[T]o obtain salable commodities [from e-waste], metal and plastic 'scrap' must be further processed to obtain shredded plastic, aluminum, copper, gold, and other recyclable materials."). To witness the actual process of extracting such raw materials from the discarded electronics please view the 60 Minutes special, "The Wasteland" available on the Internet. *60 Minutes: The Wasteland*, *supra* note 7.

30. Carroll, *supra* note 26. "In addition to toxics, e-waste contains goodly amounts of

is far more efficient and less environmentally destructive than ripping it from the earth.”³¹ However, the technology and labor costs to cleanly and safely recycle e-waste in the United States are high, thereby causing domestic recyclers to “incur additional expenses when handling and disposing of [such] toxic components.”³² Instead, by selling the e-waste to China, where laborers can do the same work for just \$1.50 a day,³³ recyclers can lower costs and bring in additional revenue.³⁴ Thus, supply and incentive exists to drive such e-waste abroad out of the United States, just as the demand for the raw materials to be harvested from the e-waste exists in China.³⁵

Most of these electronics are recycled in a crude manner in which “[w]hatever of value is sold; the rest is typically burned and dumped, fouling the air and polluting China’s lakes and rivers.”³⁶ This method of recycling is especially dangerous as e-waste is extremely hazardous.³⁷ E-waste contains a deadly concoction of various toxins including lead, cadmium, mercury, hexavalent chromium, plastics, brominated flame retardants, barium, and beryllium, just to name a

silver, gold, and other metals.” *Id.*

31. *Id.*

32. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 9.

33. JIM PUCKETT ET AL., *supra* note 2, at 16.

34. Often, recyclers earn double for their efforts in exporting e-waste, once when the consumer pays a fee to have the electronic recycled domestically, and a second time when the recycler sells the e-waste for export overseas. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 9. In fact, the first criminal charges have been handed to two executives of Executive Recycling Inc. for doing just as stated above, collecting fees to recycle e-waste domestically and environmentally and then exporting the e-waste to China for a fee. “Executive Recycling was responsible for at least 300 exports, including shipments of more than 100,000 toxic cathode ray tubes that netted the company \$1.8 million.” *First Federal Criminal Charges Brought Against Recycler for Exporting Toxic e-Waste*, BASEL ACTION NETWORK (Sept. 16, 2011), <http://www.ban.org/2011/09/16/first-federal-criminal-charges-brought-against-recycler-for-exporting-toxic-e-waste/> (emphasis added) (“They are but one of hundreds of fake recyclers who sell greenness and responsibility but in fact practice global dumping.”) (internal quotation omitted). A lucrative business indeed for doing nothing more than collecting discarded electronics.

35. Carroll, *supra* note 26 (“it’s a handy out-of-sight, out-of-mind solution”). See also *supra* note 18 regarding the demand for raw materials that drives the export of e-waste for recycling by China.

36. ECONOMY, *supra* note 13, at 74.

37. JIM PUCKETT ET AL., *supra* note 2, at 5 (“E-waste contains over 1,000 different substances, many of which are toxic, and creates serious pollution upon disposal.”).

few.³⁸ Taking no heed of the witch's brew of toxins contained in e-waste, in China e-waste is "recycled in 'backyard' operations involving open-air burning of copper wire and acid baths to recover valuable metals."³⁹ Treated in this fashion, e-waste causes significant environmental damage and personal harm to those who handle it.⁴⁰ But money trumps all.⁴¹ Cities like Guiyu are dependent on the business of recycling electronics.⁴² Without this market of electronic recycling, the city's livelihood would be devastated. But the business of recycling e-waste has brought upon the city the consequence of severe environmental degradation. From the toxins dumped into the local rivers to the acrid air that is filled with particulate matter, Guiyu is stained with the poison of its chosen enterprise.

In Guiyu, the level of lead in the local water is 2,400 times higher than what the World Health Organization deems as acceptable for drinking.⁴³ Guiyu has the highest levels of cancer-causing dioxins in the world, and pregnancies are six times more likely to end in

38. *Id.* at 9. These toxins not only leach into the groundwater and emit toxic air pollutants, but they are also damaging to the workers that handle them. *See id.*; U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 18, at 12–13. Specifically, just a few of the toxic effects of such hazardous materials are as follows: lead "causes damage to the central and peripheral nervous systems, blood systems, kidney and reproductive system in humans;" cadmium is "toxic with a possible risk of irreversible effects on human health, and accumulate[s] in the human body, particularly the kidneys;" mercury "can cause damage to various organs including the brain and kidneys;" barium, "studies have shown that short-term exposure to barium has caused brain swelling, muscle weakness, damage to the heart, liver, and spleen;" beryllium "has recently been classified as a human carcinogen as exposure to it can cause lung cancer." JIM PUCKETT ET AL., *supra* note 2, at 9–10.

39. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 18, at 15. Most of the work is done with bare hands and without any protective clothing. *See id.*; JIM PUCKETT ET AL., *supra* note 2, at 17.

40. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 18, at 15.

41. *Following the Trail of Toxic E-Waste*, *supra* note 4. When asked why a worker in Guiyu does not give up the work of "recycling" e-waste, he answered, "because the money's good." *Id.*

42. Many travel from afar to earn as little as \$1.50 a day. JIM PUCKETT ET AL., *supra* note 2, at 16. "For money, people have made a mess of this good farming village." *Id.* at 15 (citing Mak Chi Shing, *Inside Story of Hong Kong Rubbish Contaminate Chaoyang*, EAST WEEK, Nov. 30, 2000).

43. ECONOMY, *supra* note 13, at 74. Seven out of ten kids in Guiyu have too much lead in their blood. *60 Minutes: The Wasteland*, *supra* note 7. These lead levels are 50 percent higher than the limit for lead exposure as set by the Centers for Disease Control and Prevention. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 18, at 18.

miscarriage.⁴⁴ While the citizens of Guiyu are making much more money than they did when they were primarily a farming community, they have paid for this destructive business with their health and their quality of life. Guiyu's environment has not fared any better. Sediment samples revealed that barium was found at levels ten times higher than the United States Environmental Protection Agency's (EPA's) threshold for environmental risk, tin was found at 152 times the EPA threshold, and chromium was found at 1,338 times the EPA threshold.⁴⁵ For the last five years, the water has been undrinkable, requiring the town to have water trucked in from as far as thirty kilometers away.⁴⁶ Guiyu is but one of the cities in China found to be practicing this "egregious" form of electronic recycling and disposal practice.⁴⁷ "E-waste flows like water"⁴⁸—if it were not Guiyu, it would be another city, another country.⁴⁹

II. LEGISLATION GOVERNING E-WASTE

A variety of international, national, and local laws govern e-waste. With so many laws in place, the problem has not yet been solved and leaves open large loopholes for the exportation of e-waste.

A. *International Law*

The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal (the Basel Convention)⁵⁰ was adopted in 1989 and entered into force in 1992.⁵¹

44. *60 Minutes: The Wasteland*, *supra* note 7.

45. JIM PUCKETT ET AL., *supra* note 2, at 22.

46. *Id.* at 16. A parade of trucks carrying drinking water is trucked in from the neighboring town of Ninjing, thirty kilometers or just over eighteen miles away, every single day. *Id.*

47. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 18, at 17. Guiyu could be the tip of the iceberg, as it is not known how many other e-waste recycling centers exist in China, and whether they are comparable in size. JIM PUCKETT ET AL., *supra* note 2, at 15.

48. Carroll, *supra* note 26.

49. *Id.* Because we live in a globalized world, additional restrictions in China would not solve the problem of e-waste. "The flow simply shifts as it takes the path of least resistance to the bottom." *Id.*

50. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, U.N. Doc. UNEP/WG.190/4, 28 I.L.M. 649 available at <http://basel.int/text/documents.html>. The Basel Convention was an outgrowth of

Its goal was to prevent the export of hazardous material from developed nations to developing nations.⁵² The Basel Convention stipulates that a country may only ship hazardous waste if it receives prior written consent from the receiving country.⁵³ Although the Basel Convention protects developing nations from receiving hazardous materials such as electronic waste from developed nations, the United States is the single developed nation that has refused to ratify it.⁵⁴

Even then, many environmental groups and undeveloped nations believed that the terms of the Basel Convention were too weak, and in 1995, protests led to an amendment to the Basel Convention known as the Basel Ban Amendment (the Basel Ban).⁵⁵ The Basel

the United Nations Environment Programme that established an “international legal regime governing the export and import of hazardous wastes for disposal.” U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 3.

51. JIM PUCKETT ET AL., *supra* note 2, at 32. The Basel Convention was ratified by 170 parties and entered into force on May 5, 1992. *The Basel Convention*, GOOD PLANET, <http://www.goodplanet.info/eng/Outils-juridiques/Bale-Dechets/Convention-de-Bale> (last visited Dec. 21, 2011).

52. *The Basel Convention*, *supra* note 51. “The Basel Convention aims to protect human health and the environment against the deadly consequences of production, management, transboundary movement, and disposal of hazardous wastes. The driving philosophy of the text is that movement of hazardous waste is only justified in exceptional cases.” *Id.*

53. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 3.

54. *Id.* The only other two nations that have signed the Basel Convention but have not ratified it are Haiti and Afghanistan. Carroll, *supra* note 26. The United States was one of the first countries to sign the Basel Convention in 1992 but has since failed to ratify it. *Frequent Questions for Final OECD Rule Revisions*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, <http://www.epa.gov/osw/hazard/international/oecd-slab-faq.htm> (last visited Jan. 8, 2013). As of 2002, 149 countries have ratified the Basel Convention. JIM PUCKETT ET AL., *supra* note 2, at 32. Although the United States is not a ratifying member of the Basel Convention, the United States is a member of the Organization for Economic Cooperation and Development (the OECD) and as a member is bound by the decisions of the OECD Council. The OECD has its own recommendations for its member countries on the exportation of hazardous waste to non-OECD countries, and in 2001, “the OECD Council changed its waste classifications . . . to harmonize with those of the Basel Convention.” U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 3. But these recommendations are insufficient to bind the United States to take further action on its e-waste exportation policies. *Id.* at 4. Moreover, the United States has actively worked to push the OECD into rescinding earlier OECD Council decisions requiring prior informed consent controls. JIM PUCKETT ET AL., *supra* note 2, at 28.

55. Carroll, *supra* note 26. Many felt that the Basel Convention only served to legitimize hazardous waste trade rather than prohibit it. The passing of the Basel Ban was a victory against very powerful opposition from such countries as the United States, Australia, Germany,

Ban outright bans the exportation of hazardous waste from OECD countries to any non-OECD countries.⁵⁶ In a recent breakthrough, the parties to the Basel Convention agreed to allow an early entry into force of law of the Basel Ban.⁵⁷

Even with such strong support for the Basel Ban and the Basel Convention in the European Union and other developed and developing countries, the United States does not support such policies.⁵⁸ Some in the United States justify the “recycling” of e-waste within China on the grounds that most of the electronics were originally produced in China.⁵⁹ This is echoed by the former head of the Office of Solid Waste and Emergency Response for the EPA,

Canada, Japan, and the United Kingdom. *What is the Basel Ban?*, BASEL ACTION NETWORK, http://ban.org/about_basel_ban/what_is_basel_ban.html (last visited on Dec. 21, 2011).

56. *What is the Basel Ban*, *supra* note 55. Shipment of hazardous waste to OECD countries still requires prior written consent. JIM PUCKETT ET AL., *supra* note 2, at 27. And though the Basel Ban has not yet been ratified, “the European Union has written the requirements into its laws.” Carroll, *supra* note 26. In addition to implementing the ban against exportation of hazardous waste to non-OECD countries, the European Union also requires that exportation of waste only occur under the following narrow circumstances: “(1) if the exporting country does not have sufficient disposal capacity, (2) if the exporting country does not have disposal sites that can dispose of the waste in an environmentally sound manner, and (3) if the wastes are required as raw material for recycling or recovery industries in the importing country.” U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 14.

57. Press Release, Basel Action Network, 178 Countries Agree to Allow the Ban on Exports of Toxic Wastes to Developing Countries to Become Law (Oct. 21, 2011), <https://app.e2ma.net/app/view/CampaignPublic/id:1400891.7310563069/rid:0f191f92ae3e1290a8e318cc85a7141d>. This agreement allows for early entry into force of the Basel Ban once sixty-eight of the ninety signatory countries of the Basel Convention ratify the agreement. *Id.* Fifty-one of these countries have ratified the amendment. *Id.* It is expected that this agreement will allow the Basel Ban to enter into force in just two to three years. *Id.*

58. *Supra* note 54 and accompanying text.

59. Robert19601, Comment to *Following the Trail of Toxic E-Waste*, CBSNEWS (Sept. 25, 2010, 7:31 PM), <http://www.cbsnews.com/stories/2008/11/06/60minutes/main4579229.shtml>. Robert19601 embodies this sentiment perfectly when he asks:

I have a big question. Where did the products originate from? You know, what country manufactured [sic] the electronic gadgets to start. That is where the e-waste should end up. Now everyone look at the hidden tag on your computer, gameboy, cell phone, etc and tell me what does it say after “Made in . . .” or “Product of” My computer says China, My house phone says china, all of the batteries I find say china, My cell phone says Korea. So answer me this . . . Why shouldn't the waste go back where it came from?

Id.

Matt Hale, who said “since most electronics are manufactured abroad, it makes sense to recycle them abroad.”⁶⁰

B. United States Federal Law

Current EPA regulations control only the export of used cathode ray tubes (CRTs) under the CRT rule.⁶¹ The CRT rule was created as an amendment to the Resource Conservation and Recovery Act (the RCRA)⁶² and serves to “encourage recycling and reuse of used CRTs and CRT glass.”⁶³ The CRT was specifically targeted because the CRT consistently failed the EPA’s test for toxicity.⁶⁴

60. Nate DeMontigny, *Destination of ‘Recycled’ Electronics May Surprise You*, PRECIOUS METAL (Nov. 18, 2007), <http://preciousmetal.wordpress.com/2007/11/18/destination-of-recycled-electronics-may-surprise-you/>. The EPA does not believe that stopping exportation is a necessary solution to the problem of e-waste recycling. *Id.*

61. Cathode Ray Tubes Final Rule, 67 Fed. Reg. 40508 (June 12, 2002); U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 22. The cathode ray tube is a glass video display; previously a common component found in television and computer monitors. *Id.*

62. Resource Conservation and Recovery Act, 42 U.S.C. § 6901 (1976). The RCRA “governs the management of hazardous wastes.” *What is a RCRA hazardous waste?*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, <http://waste.supportportal.com/link/portal/23002/23023/Article/22091/What-is-a-RCRA-hazardous-waste> (last visited on Dec. 22, 2011). The exporter must provide the EPA with information “describing the type and amount of waste, its itinerary, the number of shipments expected, and the period during which the shipments will occur.” U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 22 n.18. The importing country must also consent to the shipment before shipment can occur. *Id.* Once shipped, the hazardous waste should have attached a manifest along with the acknowledgement of consent from the importing country. *Id.* Finally, the exporter must also file an annual report with the EPA summarizing the year’s shipments. *Id.* According to the EPA, the CRT rule was meant to streamline RCRA management requirements for CRTs. *How does the cathode ray tube (CRT) rule encourage electronics recycling?*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, <http://waste.supportportal.com/link/portal/23002/23023/Article/17276/How-does-the-cathode-ray-tube-CRT-rule-encourage-electronics-recycling> (last visited Dec. 22, 2011). Under the CRT rule, exporters of CRTs for recycling must notify the EPA of the export, the EPA then obtains consent from the importing country and forwards it to the exporter. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 22. The exporter then must attach the consent to its shipment. *Id.* If these conditions are not met, the CRTs become subject to RCRA regulation as a hazardous waste. *Id.*

63. Cathode Ray Tubes Final Rule, 67 Fed. Reg. 40508 (June 12, 2002). Upon issuing the final CRT rule in July 2006, the EPA asserted that “[CRTs] are sometimes managed so carelessly [overseas] that they pose possible human health and environmental risks from such practices as open burning, land disposal, and dumping into rivers.” U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 22 (quoting the EPA’s 2006 final CRT rule; brackets in original).

64. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 22. A waste product is considered hazardous “if it exhibits one or more characteristics of ignitability, corrosivity,

Under the RCRA, if a waste is classified as hazardous, it becomes subject to the regulation of the federal government under the RCRA, requiring notice to be given to the EPA when such hazardous items are destined for export.⁶⁵ Prior to the addition of the final CRT rule, e-waste was wholly exempt from RCRA regulation.⁶⁶ The concept behind this exemption was that if the toxic waste was destined to be recycled, then it did not need to be governed by the RCRA.⁶⁷ This exemption does not consider the varying standards of e-waste recycling. Thus, the CRT is the only electronic waste that the United States currently regulates for export, and even so, it is poorly enforced.⁶⁸

C. State Law

States, beginning to recognize the danger and toxicity of e-waste, have begun to ban e-waste from landfills.⁶⁹ This further exacerbates

reactivity or toxicity or if it is specifically listed as a hazardous waste” under the RCRA. *Id.* at 23 n.19. *What is a RCRA hazardous waste?*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, <http://waste.supportportal.com/link/portal/23002/23023/Article/22091/What-is-a-RCRA-hazardous-waste> (last visited on Dec. 22, 2011); U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 23. In regards to electronics, the most relevant characteristic is toxicity. *Id.* A product is toxic if it would leach toxic chemicals “if disposed of in unlined landfills.” *Id.* at 23. Of most e-waste, only the CRT consistently qualifies as a hazardous waste. *Id.* at 22. This is because the test is performed on the entire electronic product and most electronics are housed in protective plastic housing not prone to leaching toxins. *Id.* at 23 n.19. This overlooks the toxicity of most electronics that are potentially highly toxic when disassembled, much like they are when recycled in China. *Id.* at 23 n.20.

65. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 22.

66. JIM PUCKETT ET AL., *supra* note 2, at 28.

67. *Id.* at 29–30.

68. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 22. According to studies by the United States Government Accountability Office, most, if not all, CRT exporters openly ignore and violate the rule. *Id.* at 23–24. Recognizing such noncompliance the EPA has explained that due to the rule’s relative newness, “the regulated community must first be made aware of the rule’s requirements.” *Id.* at 30 (at the time of the GAO’s study, the CRT rule had already been in effect for over six years, and the “EPA advised the public as early as 2001 that CRTs were generally regulated as hazardous waste”). Even then, households and “small quantity generators” are exempt from the CRT rule. Electronics Take Back Coalition, *States Where You Can’t Throw E-Waste Into the Trash* 10 (Sept. 27, 2011), http://www.electronicstakeback.com/wp-content/uploads/Disposal_Ban_Bills.pdf. A “small quantity generator,” is a business that generates about 220 pounds of hazardous waste per month. *Id.* This is still a very high threshold, meaning a lot of e-waste is still unaccounted for and untouched by the federal law. *See id.*

69. *See* Electronics Take Back Coalition, *supra* note 68. As of September 27, 2011,

the problem by increasing the supply of e-waste that may end up exported for “recycling.”⁷⁰ Additionally, twenty-two states have passed “Producer Responsibility Laws.”⁷¹ Producer responsibility laws are a step in the right direction because they aim at the source of the problem, by attempting to limit the supply of toxic electronics at its source. These state laws vary in their ambition and application. Most constitute as a “take back” law, where producers and manufacturers of electronics must literally take back a product they sell at its end of life for disposal.⁷² Most require manufacturers to foot the bill for the collection, transportation, and processing of e-waste, but many set no environmental standard with which the manufacturers must comply in taking back electronics for disposal.⁷³ This leaves open the possibility that manufacturers may still choose to export e-waste for recycling, which presents and aggravates the same issue of e-waste exportation that existed before the implementation of such state take back laws.

D. Chinese Law

Regulation similarly exists in China to ban the import of electronic waste, however, it is obvious from the existence of Guiyu that China’s own laws have also been poorly enforced.⁷⁴ In fact, China was one of the “first global proponents for an international ban on the export of toxic waste from developed to developing countries.”⁷⁵ China explicitly bans the import of many common

seventeen states have adopted bans on the disposal of e-waste into state landfills. *Id.* These bans cover a range of electronic products including desktops, laptops, CRTs, monitors, and printers. *Id.*

70. JIM PUCKETT ET AL., *supra* note 2, at 35. Moreover, even if states wanted to individually ban exportation of e-waste, they have no such authority due to dormant Commerce Clause issues. See U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 18, at 27 n.24; *Commerce Clause*, LEGAL INFORMATION INSTITUTE, http://www.law.cornell.edu/wex/commerce_clause (last visited on Nov. 16, 2012).

71. Electronics Take Back Coalition, *Brief Comparison of State Laws on Electronic Recycling* 1–5 (Oct. 20, 2011), http://www.electronicstakeback.com/wp-content/uploads/Compare_state_laws_chart.pdf.

72. *See id.*

73. *Id.*

74. Basel Action Network and Silicon Valley Toxics Coalition, *Exporting Harm: The High-Tech Trashing of Asia* 31–32 (2002).

75. *Id.* at 31.

household electronic appliances, including computers, monitors, and CRTs.⁷⁶ China has also ratified the Basel Convention and the Basel Ban.⁷⁷ Likely “a lack of will on the part of local officials and a lack of infrastructure on the part of the central government” cause a deficiency between China’s laws and stance against e-waste and its enforcement.⁷⁸ Furthermore, although China may promulgate strict environmental directives from top-down, local-level governments tasked with enforcement of such laws often “engag[e] in a race to the bottom” to attract business to local municipalities in competition with one another.⁷⁹

III. ANALYSIS AND PROPOSAL

A. *Analysis*

E-waste has been able to escape with little oversight and attention from the American public due to holes in the legislation governing its disposal, the natural governance of economic theory, and the public expectation that once an object is out of sight it is out of mind.

1. Current Legislation Leaves Large Loopholes

As of early 2013, the United States has not yet ratified the Basel Convention.⁸⁰ This presents the initial problem of governance by international law, as a nation cannot be governed by international law unless it has subjected itself to such governance. Moreover, U.S. federal law leaves much to be desired in its coverage of safe disposal for electronics.⁸¹ Only CRTs are regulated for exportation and even then, it is insufficiently enforced.⁸² In fact, the EPA was directly criticized by the United States Government Accountability Office

76. *Id.* at 32.

77. *Id.*

78. *Id.*

79. Hart & Cavanagh, *supra* note 16.

80. *See supra* notes 51–55 and accompanying text.

81. *See supra* notes 61–68 and accompanying text.

82. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-08-1044, ELECTRONIC WASTE: EPA NEEDS TO BETTER CONTROL HARMFUL U.S. EXPORTS THROUGH STRONGER ENFORCEMENT AND MORE COMPREHENSIVE REGULATION (2008).

(GAO) in a report labeled: “Electronic Waste: EPA Needs to Better Control Harmful U.S. Exports through Stronger Enforcement and More Comprehensive Regulation.”⁸³ The RCRA, the other federal law pertaining to e-waste, widely exempts all electronics from regulation as long as they are to be recycled.⁸⁴ However, it is obvious that when electronics are to be recycled, this does not always signify an environmentally sound practice of recycling. This is a hole in the system, as the RCRA allows the recycling exemption under the assumption that recycled e-waste will be handled in an environmentally sound manner.

Additionally, state laws banning e-waste from landfills only add to the amount of e-waste available for exportation.⁸⁵ States, many of which are aware of the exportation problem, are unable to legislate on exportation as the Commerce Clause pre-empts states from legislating in that area of the law.⁸⁶ States’ take back laws move in the right direction by seeking to address the issue of e-waste at its source; however, seeking to require manufacturers to internalize the costs of recycling electronics poses its own set of problems.

2. Economic Factors Support and Encourage the Existing System

The economic theory of supply and demand governs throughout the issue of e-waste exportation.⁸⁷ Demand by consumers requires manufacturers to continue to produce electronic products that are better and faster every year. Consumers also demand these electronic products at the lowest price, thus causing manufacturers to externalize as much cost as possible in order to maximize profit. In order to maintain high profits, it is unlikely that manufacturers would choose to internalize the cost of recycling their own products at the

83. *Id.* The GAO posed as fictitious foreign brokers looking to buy e-waste, and several American recycling companies offered to sell. When asked whether the CRT rule would be a deterrent, one e-waste seller responded, “we ship these overseas all the time.” *Id.* at 25.

84. *See supra* notes 66–67 and accompanying text.

85. *See supra* notes 69–70 and accompanying text.

86. U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-08-1044, ELECTRONIC WASTE: EPA NEEDS TO BETTER CONTROL HARMFUL U.S. EXPORTS THROUGH STRONGER ENFORCEMENT AND MORE COMPREHENSIVE REGULATION 27 (2008).

87. *Economics Basics: Supply and Demand*, INVESTOPEDIA, <http://www.investopedia.com/university/economics/economics3.asp#axzz2HQELqyQu> (last visited Jan. 8, 2013).

end of its life. Moreover, it is to the benefit of manufacturers to produce electronics that need to be upgraded frequently, thus producing more profit but even more e-waste.⁸⁸ Thus, exportation of e-waste is encouraged by market factors and its ease of implementation.⁸⁹

3. Expecting China to Stop the Flow of Electronic Exportation is Unrealistic and Unfair

Shifting the burden of stopping the importation of e-waste onto China is unrealistic and unfair. Even if China were able to successfully stop the importation of e-waste, the e-waste would still find its way to another developing country in need of revenue and raw materials.⁹⁰

Moreover, the justification of allowing the country that manufactured most electronics to take such e-waste back is a form of justification demonstrating the further oppression that developing nations have to suffer as the direct result of globalization.⁹¹ Even though many of the electronic products that the United States recycles in China were originally made in China, China only made these products in accordance with the desires of the former nation as well as the pressures of industrialization within a globalized world. Additionally, allowing China to take back the electronic products that it originally manufactured neither solves nor reduces the effects of the mounting number of discarded electronics, each containing a witch's brew of toxins.⁹²

B. Proposal

Loopholes and areas of the e-waste exportation trade untouched by patchy regulation only help to facilitate discarded electronics to

88. See *supra* notes 24–25 and accompanying text.

89. Basel Action Network and Silicon Valley Toxics Coalition, *Exporting Harm: The High-Tech Trashing of Asia* 3 (2002) (moreover, “export stifles the innovation needed to actually solve the problem at its source—upstream at the point of design and manufacture”).

90. See *supra* notes 18, 35 and accompanying text.

91. See *supra* notes 17–19 and accompanying text.

92. See *supra* notes 37–38 and accompanying text.

China. The United States requires a comprehensive regulation system to ensure that e-waste is not just shifted from landfill to shipping container to China. Requiring manufacturers to internalize the costs and assume responsibility in recycling e-waste may be difficult without financial incentive to make the cost-benefit analysis weigh in favor of taking back discarded electronics. Thus, the federal government should implement a comprehensive system in order to ensure participation by producers and consumers alike. Such a comprehensive system should be modeled or piggybacked off an existing system in order to quickly implement a plan of action that will slow the rapid disposal of electronics.

Inspiration can be found in the medical waste disposal system.⁹³ Medical waste is highly toxic and contaminated, containing similar characteristics to e-waste.⁹⁴ Implementing a system that can be modeled after the medical waste disposal system can be beneficial in that the system can easily be copied.⁹⁵ However, it is important to

93. In 1998, Congress enacted the Medical Waste Tracking Act (MWTA) to “define[] medical waste and those wastes to be regulated; establish[] a cradle to grave tracking system utilizing a generator initiated tracking form; require[] management standards for segregation, packaging, labeling and marking, and storage of the waste; and establish[] record keeping requirements and penalties that could be imposed for mismanagement.” *Medical Waste Frequent Questions*, U.S. ENVIRONMENTAL PROTECTION AGENCY, <http://www.epa.gov/osw/nonhaz/industrial/medical/mwfaq.htm> (last visited Jan. 15, 2013). Although the MWTA expired in 1999, it has been used as a basis for federal and state agencies “in developing their own medical waste programs.” *Id.* Currently, various state and local authorities as well as multiple federal agencies including the Occupational Safety and Health Administration, the Department of Transportation, the EPA, and the Food and Drug Administration govern medical waste disposal. *Biohazard Waste Disposal Services*, STERICYCLE, <http://www.stericycle.com/bio-hazard-waste-disposal> (last visited on Jan. 17, 2013). Although the governance of medical waste disposal by several federal agencies may seem an inefficient system, this is infinitely superior to the governance of electronic waste disposal to which little to almost no attention has been paid by the government. *See supra* notes 65–68 and accompanying text.

94. Medical waste is defined as “any solid waste that is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals.” Medical Waste Tracking Act of 1988, H.R. 3515, 100th Cong. (1988) (enacted). Hazardous and toxic medical waste includes infectious blood contaminated waste, chemicals containing mercury, contaminated pharmaceuticals, “highly hazardous, mutagenic, teratogenic or carcinogenic, genotoxic waste” and radioactive wastes. *Waste from health-care activities*, WORLD HEALTH ORGANIZATION, <http://www.who.int/media/centre/factsheets/fs253/en/> (last visited on Jan. 15, 2013).

95. Action by Congress to first pass a statute similar to the MWTA to evaluate and track e-waste would be the ideal first step in implementing a disposal system similar to the medical waste disposal system.

acknowledge a key difference in the journey of e-waste as compared to medical waste—predominantly, medical waste is generated and reaches its end of life at the site of hospitals, medical offices, and research labs where medical waste can be more easily monitored,⁹⁶ whereas while e-waste is generated at large manufacturers, e-waste reaches its end of life in millions of homes of Americans. This makes the collection of e-waste for disposal more onerous than the collection and disposal of medical waste and requires more voluntary action by each individual household.

Because more voluntary action is needed from individuals in order to create an e-waste disposal system, incentives should be created to make e-waste as convenient and user-friendly as possible. Such a system can be implemented using the existing postal office network. Because the postal office network is large and reaches every corner of the United States, postal offices could be utilized as reception sites for e-waste. Once e-waste has been deposited at a local postal office, each postal office, using its existing transportation resources ships the e-waste to centrally located e-waste processing plants that are regulated and managed by the federal and state and local governments.⁹⁷ With the implementation of a tax on either the individual electronic product or the electronic manufacturer, funds can be raised to build the e-waste processing plants, and consumers can bring in e-waste for recycling without any additional on-site costs.⁹⁸ Piggybacking off the extensive network of the federal postal office system ensures that an e-waste transit system can be implemented without incurring the high transaction costs of building a brand new system.

While such a system would be ideal, it will be a long time until Congress can find support from the public for such a radical

96. Furthermore, such end of life locations of medical waste are already subject to various regulations, thus making implementation and application of further regulation for the disposal of medical waste easier than for its counterparts in e-waste.

97. Such e-waste processing plants may be ultimately privatized as the market and technology evolve to make such undertakings profitable.

98. Requiring no on-site recycling fee or costs will help to encourage voluntary relinquishment of household e-waste. It should be noted that while a tax may or may not be completely sufficient to cover the costs attendant to responsibly recycling e-waste, a tax is generally considered politically unpopular, and thus may take significant popular support in order to raise it.

undertaking in managing e-waste. Until then, the government, academic institutions, and manufacturers and retailers of electronics should sponsor educational programs to educate the public about such e-waste recycling problems. The recycling of e-waste is a problem that exists under the noses of all Americans but yet is very rarely considered.⁹⁹ No one considers what happens to the brand new flat screen television that will soon be outdated in a few short years, or what will happen to the latest smart phone when its newer version comes out just one year later. By educating the public, social norms can be created in the population to discourage the dumping of e-waste in susceptible countries such as China. If a sizeable segment of the population were to adopt the social norm of objecting to e-waste dumping in China, then perhaps at that point, legislation could be introduced to manage e-waste recycling.

CONCLUSION

Currently, legislation governing e-waste is insufficient to stymie the continued exportation of e-waste to China and other developing nations. The United States should take a more active role in developing a comprehensive system to deal with the increasingly significant problem of e-waste as consumers demand and discard electronics at a shocking rate. Absent additional legislation dealing with e-waste, the flow of discarded electronics will continue to find its way to China as a result of the globalized economy. As long as consumers continue to demand electronic products at an escalating pace, the supply of e-waste will only grow. No longer can it be ignored or can Americans cast aside the idea that the actions of those thousands of miles away do not have an impact on the other side of the world. Blindly ignoring the situation does not make it disappear. It must be directly confronted, or e-waste and its toxins are likely to consume its consumers.

99. *See supra* note 4 and accompanying text.