

Weather

Today: Partly sunny, windy.
High 44. Low 28.
Tuesday: Partly sunny.
High 38. Low 22.
Details, Page B8

126TH YEAR No. 61 5 DM VA

The Washington Post

MONDAY, FEBRUARY 24, 2003

China Serves As Dump Site For Computers *Unsafe Recycling Practice Grows Despite Import Ban*

By PETER S. GOODMAN
Washington Post Foreign Service

GUIYU, China—This is the end of the road for the toxic detritus of the computer age.

In towns such as this one on China's southeastern coast, vast quantities of obsolete electronics shipped in from the United States, Europe and Japan are piled in mountains of waste. Even as entire communities, including children, earn their livelihoods by scavenging metals, glass and plastic from the dumps, the technological garbage is poisoning the water and soil and raising serious health concerns.

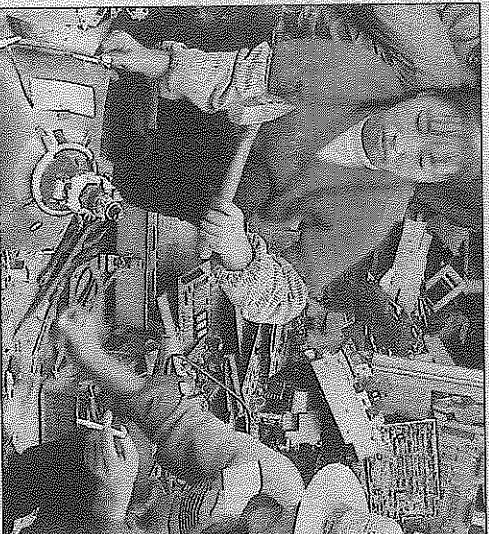
China's role as dumping ground for the world's unwanted gadgets is an outgrowth of efforts by wealthy countries to protect their own environments. Many governments are encouraging the recycling of computers to keep them out of landfills and prevent heavy metals from seeping into drinking water. But breaking computers down into reusable raw materials is labor intensive and expensive.

In the United States, where more than 40 million computers became obsolete in 2001 alone, according to a National Safety Council report, as much as 80 percent of the machines collected by recyclers are being disposed of for about one-tenth of the price through a far simpler means: They are being sold to Asian middlemen, put on ships and sent here.

Officially, China has its own ban on such imports, but the law is easily circumvented through payments to corrupt customs officials, according to industry sources.

The real costs are being borne by the people on the receiving end of the "e-waste." In towns along China's coast as well as in India and Pakistan, adults and children work for about \$1.20 a day in unregulated and un-

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THE PHOTO BY BASEL ACTION NETWORK VIA AGENCE FRANCE PRESSE
A woman in rural China prepares to break a computer monitor to extract copper from the cathode ray tube.



In Guiyu, workers sift through piles of electronic waste to recover copper and tiny amounts of gold. The job pays adults and children about \$1.20 a day in unregulated

PHOTO

High-Tech, High-Risk Recycling in China

COMPUTERS. From A1

safe conditions. As rivers and soils absorb a mounting influx of carcinogens and other toxins, people are suffering high incidences of birth defects, infant mortality, tuberculosis and blood diseases, as well as particularly severe respiratory problems, according to recent reports by the state-controlled Guangdong Radio and the Beijing Youth newspaper.

"At the same time that we're preventing pollution in the United States, we're shifting the problem to somebody else," said Ted Smith of the Silicon Valley Toxics Coalition, an environmental advocacy group. "It's being exported and doing harm."

High Toll on Humans, Environment

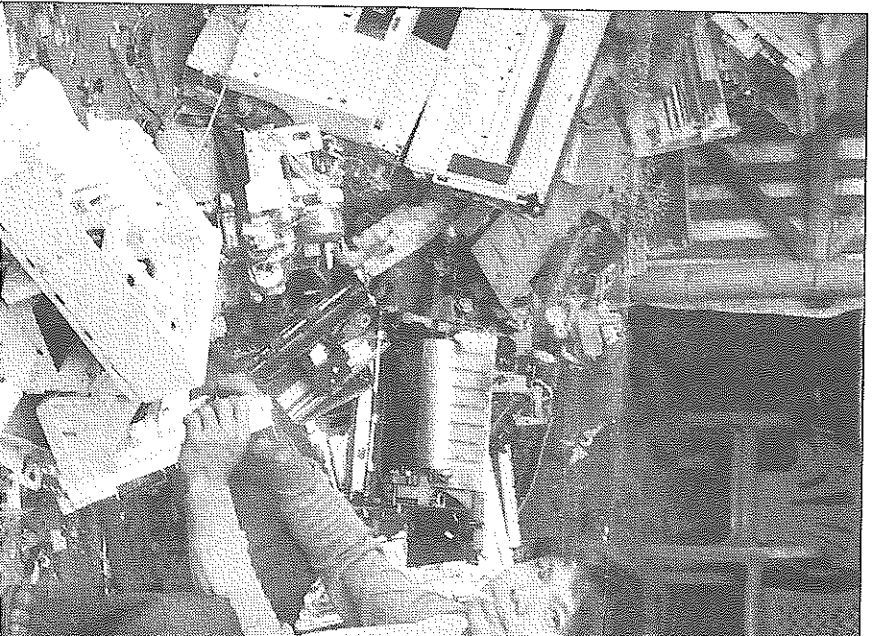
On a recent morning in Guiyu, in Guangdong province, hundreds of men squatted in concrete-block sheds, sifting through computers and printers and breaking them into

weak Magazine, which found even higher lead levels.

The report by the two environmental groups, "Exporting Harm: The High-Tech Trashing of Asia" accused computer manufacturers of failing to assume responsibility for the pollution they cause by instituting their own recycling programs. It also criticized the United States for declining to ratify the Basel Convention, an international agreement signed by every other developed country that aims to limit the export of hazardous waste. As a result, recyclers in the United States are not in violation of domestic laws when they ship computer waste to poor countries in Asia.

New Entry Ports to Bypass Ban

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Recycling in China

COMPUTERS, From A1

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On a recent morning in Guiyu, in Guangdong province, hundreds of men squatted in concrete-block sheds, sifting through computers and printers and breaking them into scrap with their bare hands. Some inhaled black clouds of toner. A tractor carted a mass of wires to an alley, where women melted them in barrels to scavenge their copper before spilling the leftovers into the dead-back Liangjiang River.

In a low building tucked at the bottom of a hill, a middle-aged woman leaned over a sheet of steel placed atop a charcoal fire, melting down capacitors pried from computers to harvest tiny amounts of gold. Ten feet away, a girl no older than 11 bent over a table, sorting through more circuitry.

"Today there's no school," said the boss, Zheng Conggong, 27, when asked why the girl was there. "Vacation." It was 10 o'clock on a Monday morning, a regular school day everywhere else in China. When the boss stepped away, the girl timidly confirmed that she works here every day, all day. Her fingers were quick and nimble, clearly well-practiced.

Nearly every crevice of the town showed evidence of the trade, from the strips of plastic and shards of glass choking the river to the piles of motherboards, hard drives and keyboards in front of nearly every home. The landscape was poisonous. Glass from monitors contains lead, which afflicts the nervous system and harms children's brains. Batteries and switches contain mercury, which damages organs and fetuses. Motherboards contain beryllium, the inhalation of which can cause cancer.

Trucks bring in drinking water from more than 10 miles away because the local supply is not potable. Near a riverbank that has been used to break down and burn circuit boards, a water sample revealed levels of lead 190 times as high as the drinking water standard set by the World Health Organization, according to a report released last year by the Silicon Valley Toxics Coalition and another U.S.-based environmental group, the Basel Action Network.

The environmental groups had their samples analyzed by the Hong Kong Standards and Testing Centre Ltd., according to their report. A sediment sample found levels of lead and other heavy metals such as chromium and barium hundreds of times as high as U.S. and European environmental standards for risk. The water test confirmed an earlier sample taken by a reporter for a Chinese-language publication in Hong Kong. East-

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New Entry Ports to Bypass Ban

China's ban on imports of many types of discarded computers and electronics, which began last year, led the government to seize 22 shipping containers in the port of Wenzhou in September. But recent visits to areas that have been at the center of the e-waste trade revealed that it continues despite the ban, though more covertly. In Guiyu, one truck after another wound down the muddy track through town on a recent morning, bearing fresh loads of junked electronics. One bore stickers showing it had come from Italy, another from Korea and a third from Japan. In a concrete-block building loaded with circuit boards, one load contained a sticker from New Jersey.

Many old computers were formerly shipped to Nantai, a port outside the city of Guangzhou. But shipping agents there said customs officials have gotten strict since the ban. Much e-waste is now routed through Hong Kong, Taiwan and the Philippines on container ships, according to those involved in the trade, then trans-shipped to smaller ports in mainland China such as Shantou and Jiangkou, where customs officials are willing to look the other way in exchange for a share of the spoils.

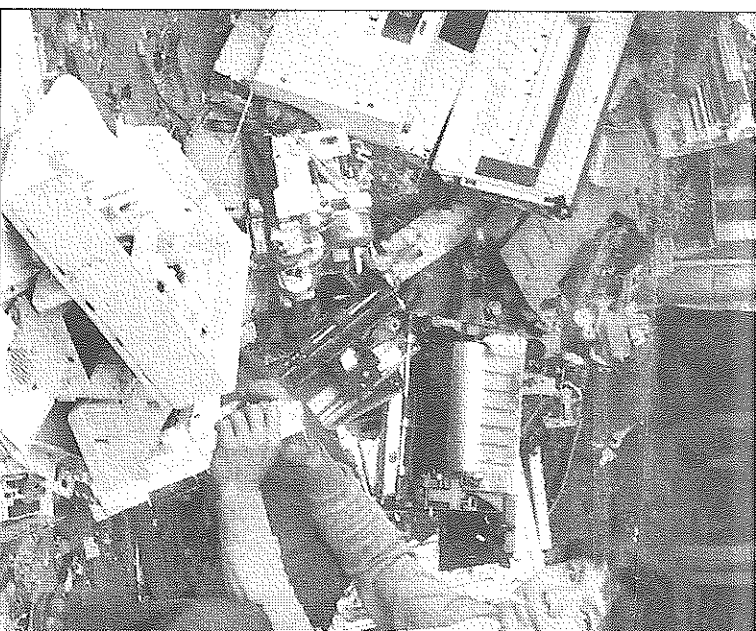
Mark Dallura, head of Chase Electronics Inc. of Philadelphia, which buys discarded computers in the United States and then ships them to China via Taiwanese middlemen based in Los Angeles, said he has been in the trade for 15 years and has not been slowed by the ban.

"I sell it to [the Taiwanese] in Los Angeles and how they get it there is not my concern," Dallura said. "They pay the customs officials off. Everybody knows it. They show up with Mercedeses, rolls of hundred-dollar bills. This is not small time. This is big-time stuff. There's a lot of money going on in this."

Dallura said his company gets many of its old computers from recyclers scattered across the United States. They pick them up from well-intentioned citizens and businesses that hand them off at events organized by cities and counties aimed at keeping e-waste out of landfills. He acts as a broker, consolidating container shipments that he then hands off to the middlemen. Most weeks, he ships at least one container bearing 45,000 pounds of such waste.

A container full of computer monitors brings him a fee of \$2,600, he said. During a recent week, he planned to ship four containers. Two were bound for Hong Kong, the other two for Nantai, bearing mainframe computers not covered by China's ban.

"I could care less where they go," Dallura



Zhou 24, came to Guiyu from Guizhou for a job breaking apart old computers. While China bans such imports, the law is not strictly enforced in Guiyu.

said. "My job is to make money."

Taizang City, a collection of industrial warehouses an hour's drive north of Shanghai in Jiangsu province, has long served as a distribution center for e-waste, according to those engaged in the trade. During a recent visit, stacks of keyboards and monitors could be seen along the walls of warehouses that have historically received them. Local motorcycle drivers said they continue to take buyers from all over eastern China to 15 such warehouses, and trucks arrive regularly with shipments from the port of Shanghai.

"The local government tolerates this stuff," said Ren Maohui, one such driver. "The government would rather tax the trade than put it out of business."

Ren said he recently took a buyer from Zhejiang province interested in procuring circuit boards to a warehouse controlled by a Taiwan-based firm, Suzhou Yueta Non-ferrous Metal Product Co. In a brief interview, the company's general manager said he could not remember when his last shipment of old computers was delivered. But Ren recalled a different account supplied to the buyer: "They didn't have enough, but they told him, 'Don't worry. We'll get foreign shipments every month. We'll get more.'"

E-Waste Recyclers' Role to Grow

As the cycle of electronics obsolescence accelerates, the flow of e-waste to China seems likely to increase. More computers, for example, are being retired—most of them in good working order, but unable to handle the latest software advance from digital video-editing to graphics-intensive games.

The Silicon Valley Toxics Coalition estimates that from 1997 to 2007, as many as 500 million computers will have been discarded in the United States. In addition, a shift to high-definition televisions will probably lead to the disposal of more of the old cathode-ray-tube variety, which contain lots of lead. And as newer flat-panel monitors begin to be retired, the mercury they contain will find its way into the waste stream as

well.

The Environment estimates that dis- for 70 percent of bage dumps. Mar- have banned the monitors in land- considering smit- are already barre- computers to lan- ing role for elect- But as the DPPA California, the ce- and reusing the monitor in the l- times as high as China. That near- of Guiyu remain b- computers.

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"We need this farmer from Guiz- ernment shuts it c- somewhere else a-

The workers' their fingers—in- Stubborn, hacker- poorly ventilate- breathe the noxious f- Mostly, they for earning.

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Special correspond- contributed to this