

TRADE AND ENVIRONMENT A TEACHING CASE:

THE BASEL BAN AND BATTERIES

We learned the hard way that lead, when used improperly, is an unforgiving, toxic contaminant capable of creating health crises of the highest magnitude. But [...it] clearly seems to be a metal we can't do without.

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Abstract:

Serious global concern about shifting environmental risk from the rich to the poor produced a proposal to ban the North-to-South waste trade, even for recycling. Fears of sham or "dirty" recovery operations, or inadequate technical capacity for environmentally sound management, led the parties of the Basel Convention to amend their 1989 agreement to restrict such trade. But as the ban awaits ratification, opposition to it is growing. Some countries are claiming it will violate their sovereignty and their trading rights under the World Trade Organization (WTO/GATT) agreement. This case uses the example of a thriving "used lead acid battery" (ULAB) recycling business in the Philippines to draw out these trade & environment issues. The important lesson is that society has yet to resolve fundamental questions about the relationships between multilateral environmental agreements (MEAs) and the international trade rules.

Introduction to the Case

Management personnel at Philippines Recyclers, Inc. (PRI) in Manila are worried that the Basel Ban on waste trading from OECD-to-non-OECD countries is going to kill their profit margin. PRI has manufactured lead acid batteries since 1919, and is the largest battery producer and lead refiner in all of Southeast Asia. PRI, a subsidiary of RAMCAR, is officially licensed by the Philippine government. The company also recycles used lead acid batteries (ULABs), a good percentage of which it imports from industrialized countries, in order to recover the lead.

The Philippines neither mines sufficient primary lead, nor yet collects adequate quantities of used batteries domestically, to meet its growing national demands for the heavy metal. The main source of the rising lead demand in the Philippines is due to a very rapidly increasing demand for automobiles, all of which have lead acid batteries. Between the years 1990-1996, registration of new vehicles increased almost 80% in the Philippines, when, by contrast, this number remained steady in both the USA and Japan, and even declined in Western Europe during the same time period (Hoffman and Wilson 2000). Thus this developing nation depends upon the secondary materials market and hazardous waste imports as feedstock for its manufacturing needs, particularly lead.

Government officials, businessmen, and environmentalists are all paying close attention to recent developments in the Basel Convention (The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989). A majority of the parties to this multilateral environmental agreement (MEA), now with 151 members, agreed at the Conference of the Parties (COP-3) in Geneva in 1995 on the text of an amendment to the Convention that would ban the trading of hazardous wastes from developed countries to developing countries. This text is now in the process of ratification (30 of the required 62 ratifications are completed). When, and if, the amendment enters into force, the Basel Ban will most likely curtail OECD country exports of used lead acid batteries (ULABs) to non-OECD countries like the Philippines. It is conceivable that the Philippines government could bring a trade discrimination complaint to the World Trade Organization, against those OECD countries that ban the export of used batteries to the Philippines in compliance with the amendment.. Such a case would produce a unique and difficult confrontation between the global trade rules and global environmental rules, yielding unpredictable results.

Battery Recycling for Lead Recovery: The Business

Known and used by man since the earliest times, lead is usually derived from the naturally-occurring mineral galena (lead sulfide PbS). The Romans built extensive plumbing and water supply systems with lead, and also made dinnerware from it. Fourteenth century firearms were made more effective by the use of lead bullets. Moveable lead-tin type made the print revolution possible, and leaded crystal is more brilliant and beautiful than regular glass. Modern use began in the mid-19th century with the invention of storage batteries, demand for which expanded dramatically with the growth of automobile sales. In recent times we have used lead in gasoline to improve performance, in paints to increase durability, in tins cans to seal them, for x-rays and in computers as dense protective shielding (Voynick 1999).

Demand for lead stagnated during the last 3 years in both the United States and Europe, but globally it rose 2.5%, primarily due to rapid development in Asia. The main use is for lead-acid storage batteries, destined for cars, ships, and planes, and other electrical systems, including large telecommunications services. Much of the existing demand is met through the recycling of secondary materials (Cahners 2001).

Over the last decade or so, a new market has arisen for used lead acid batteries (ULABs), a market which has extended internationally. Industrialized countries produce, use, regulate and then collect batteries from both commercial and individual consumers. Several developing countries have entered the business of buying these ULABs in bulk, shipping them across oceans or wide territories, and recycling them for lead recovery. The Philippines is one such developing country where the lead recycling business not only provides all the lead it needs, but also generates both jobs and significant export earnings (Hoffman and Wilson 2000).

The formal, officially recognized, sector of the battery manufacturing and recycling business in the Philippines is primarily represented by only one company, Philippines Recyclers, Inc. (PRI). PRI a subsidiary of RAMCAR, has about 150 employees working at its Bulacan site in Manila. This modern plant, purchased as a complete package from the United States in the early 1990s, provides about 75% of the licensed battery recycling capacity in the Philippines. Economies of scale currently demand imported batteries to meet economic viability. The balance of the formal sector is comprised of about a dozen known smaller lead smelters, who together employ an additional 150 people, and produce about 12,000 tons of lead currently costing about \$3 million/year. By contrast, the same amount of lead in the form of imported primary mined materials would cost more than twice that figure.

The formal sector of the Philippine economy, represented by PRI, however, did not produce these lead smelting results alone, but in full cooperation with a huge informal sector: unlicensed, unregulated, and unaccounted for mini-operations of battery reconditioners, cottage smelters, and backyard recyclers. The numbers of people deriving their incomes from this activity is extremely difficult to gauge, but educated estimates reach to 6000 Filipinos. In tropical climates, lead acid batteries tend to wear down fairly quickly, but can be "reconditioned" temporarily to provide extended service. When the cells are finally spent, the acid is then dumped, the plastic casings recycled, and the lead resmelted and sold to the formal sector, most often PRI.

Human exposures to lead can be especially high in the informal sector, where people lack understanding of its toxicity and control precautions. Lacking effective zoning, which separates the industrial from the domestic, many homes and eating establishments show high lead contamination. Yet even the official industrial manufacturers have an uneven record of environmental performance, as lead is not easy to manage safely.

The Environmental and Human Health Hazards

Early symptoms of lead poisoning mimic general malaise or common illnesses, and thus it is not usually diagnosed correctly. In adults, if not treated, lead poisoning can cause irritability, poor muscle coordination, nerve damage, higher blood pressure, and problems hearing and seeing well. Reproductive difficulties (low sperm counts) and disturbed pregnancies may also develop. Some historians and medical researchers attribute the demise of the Roman Empire to lead poisoning, as samples of ancient Roman bones contained lead levels high enough to cause male sterility and mental instability (Voynick 1999).

In children, lead poisoning can cause brain damage and retardation, anemia, liver and kidney damage, hearing loss, hyperactivity, and even death. In spite of tremendous progress towards limiting lead contamination and exposures in the United States over the last couple of decades, the Environmental Protection Agency (EPA) still names lead as the most serious environmental health threat to children, worse than the effects of radon,

pesticides, and asbestos combined. Young children are especially vulnerable, because they are growing rapidly, and quickly absorb the toxin. The currently mandated "safe" level of lead for children is only 10 micrograms per deciliter ($\mu\text{g}/\text{dl}$) of blood, with 20 $\mu\text{g}/\text{dl}$ the official toxicity level (U.S. EPA website).

Filipinos working in informal battery recycling and repair facilities show increased lead levels in their blood, significantly higher than the World Health Organization's permissible exposure limits. In addition, because families and living quarters are not separated from the workplace in most instances, children of battery workers in Manila have been tested at almost 50 $\mu\text{g}/\text{dl}$, a disastrous level (Suplido & Ong). Worker health and safety on the job in these small-scale operations is usually ignored, unprotected by special clothing or goggles, hard hats or ventilators.

Battery reconditioners and smelters in the Philippines are located on busy streets, next to food vendors, and populated areas. The general public health and the environment both suffer from sulfuric acid dumped in streams, into the sewer system, or out onto the soil. Owners of small smelting furnace stacks generally do not filter the exhaust gases, or contain nor treat their residue slag. Even PRI, the formal plant, has had to struggle to maintain a good performance record, particularly with regard to worker exposure, and contamination of the soil, water, and air surrounding the plant. However, recent progress at PRI earned it an ISO 14000 certification for its environmental management system (a program of the International Standards Organization).

The Philippines is not unique in its difficulties in managing lead properly, other developing countries like India, Brazil, and Mexico experience very similar situations (BNA 1997 & Shanoff 2002), where waste management has not kept pace with modern development. Many industrialized countries also have a history of unacceptable human exposures and toxic environments. In the United States, scientists estimate that most major cities have at least one abandoned lead battery recycling site, seriously contaminated with lead, waste acid, plastic battery casings, and other toxic metals and additives. While these recycling sites await clean-up with money provided by the Superfund legislation adopted in 1980 by the U.S. Congress, the U.S. Center for Disease Control still ranks lead as the number-one hazardous substance in America, where one in 11 children has lead blood levels that are unhealthy (Nedwed & Clifford 1997). France, among other nations, faces similar legacies (BNA 1999). The difference is that most industrialized countries currently have functional systems for collecting batteries in place, along with effective regulation of lead recovery operations. Successful battery manufacturing and recycling facilities are operating in some countries such as, for example, Belgium and the Netherlands (Quirijnen 1999).

In recent years, however, much of the recycling of batteries activity has moved overseas, to developing countries without equivalent governmental control. Concern for this financial, technical, and regulatory disparity among countries led parties to the Basel Convention to agree to ban international toxic waste shipments from rich countries to poorer ones. Ban supporters claim countries must not be forced to make a choice between

poverty and poison, and that industrialized countries have an ethical responsibility to manage their own toxic wastes (Lipman 2002).

The Basel Convention and the Ban

Global trade in toxic wastes accelerated during the 1980s, driven by high potential profits made possible through the combination of: 1) dramatic increases in waste generation; 2) the public NIMBY (not-in-my-backyard) syndrome that blocks new disposal facilities in Western nations, and 3) very different regulatory climates for waste management among countries. Although the majority of cases of transboundary waste movements are between industrialized countries, significant percentages are North-to-South trade. A few infamous waste dumping incidents, such as the New York garbage barge, the *Khian Sea*, and Koko, Nigeria, demonstrated a serious potential for wholesale unethical transfer of environmental risk to vulnerable groups (Strohm 1993).

In response to these new developments, the international community negotiated an agreement, signed in Basel, Switzerland in 1989, which limits waste trading. The fundamental provisions of the Basel Convention seek to impose a "prior informed consent" (PIC) regime on waste trading, using designated "authorizing agencies", labeling forms, and packaging and transportation safety standards. The Convention contains the following specific trade provisions: (Krueger 1999).

1. Any shipment of wastes, as defined by the Technical Annexes to the Convention, shall be in accordance with Prior Informed Consent (PIC) procedures.
2. Any sovereign nation may ban waste imports, (now over 100 nations do so) and all members are required to respect such bans by prohibiting waste exports to those countries.
3. Parties must prevent the export of hazardous waste if there is "reason to believe" the waste will not be managed in an environmentally sound manner.
4. Waste exporting is prohibited to Antarctica and the surrounding waters.
5. Parties cannot engage in waste trade (i.e., import or export) with states that are not parties to the Convention. However, Article 11 permits parties to trade with non-parties if they have entered into bilateral or regional agreements outside the Basel Convention which satisfy certain conditions. In particular, such agreements must not derogate from the environmentally sound management of hazardous wastes and other wastes as required by the Convention.

Leading up the conclusion of the Convention in 1989, the politics underlying the negotiations split between two distinct groups. The first group consisted of those who would completely ban the waste trade (most Third World nations, environmentalists, and other members of the international community). The second group consisted of those who saw waste trading as a normal and appropriate extension of market forces between consenting nations (generally the developed nations, some economists, and the waste disposal industry). The goal of this second group was to monitor the waste trade so that it was done properly; and this view prevailed at the signing of the original agreement in 1989. Many African nations, upset with the outcome of the Basel negotiations, withdrew

and wrote and signed their own Bamako Convention the following year. This convention bans any waste imports into Africa.

Ban supporters did not give up, however, and continued to press in the early 1990's for various iterations of a ban on waste trading, including wastes destined for recycling. The ban supporters claimed there had been too many incidents of sham recycling where, for example, toxic substances ended up on roads as baserock, or simply dumped in piles. The sophisticated technology required to safely recycle hazardous wastes and toxic materials was too often missing, or inadequately maintained, resulting in high threats to worker and public health. Monitoring and inspections at the international level, and within other sovereign countries, was not realistic either financially or politically. Finally the Conference of the Parties (COP-3) in Geneva in 1995 adopted Decision III/1, which proposed a ban on the trading of hazardous wastes (listed by the technical working group) from Annex VII countries (primarily OECD countries) to non-Annex VII countries (all other parties to the Convention) for either disposal or recovery, recycling, or reuse. As an amendment to the Basel Convention, it will require ratification of 62 parties in order to enter into force. As of summer of 2002, only 30 Parties have ratified the Decision. The operative provisions of Decisions III/1 read as follows:

"Insert new preambular paragraph 7 bis:

Recognizing that transboundary movements of hazardous wastes, especially to developing countries, have a high risk of not constituting an environmentally sound management of hazardous wastes as required by this Convention;

Insert new Article 4A:

1. Each Party listed in Annex VII shall prohibit all transboundary movements of hazardous wastes which are destined for operations according to Annex IV A, to States not listed in Annex VII.

2. Each Party listed in Annex VII shall phase out by 31 December 1997, and prohibit as of that date, all transboundary movements of hazardous wastes under Article 1(i)(a) of the Convention which are destined for operations according to Annex IV B to States not listed in Annex VII. Such transboundary movement shall not be prohibited unless the wastes in question are characterized as hazardous under the Convention. "

Annex VII includes Parties and other States which are members of OECD, EC, Liechtenstein."

There is an unresolved question regarding the relationship between the 1995 Ban Amendment and Article 11 of the original Convention. The amendment could be read to prohibit developed countries in Annex VII from invoking the provisions of Article 11 and exporting hazardous waste if they have concluded a bilateral or multilateral agreement with a developing country. Such an interpretation is possible given that the language in the amendment is encompassing and the preamble language, which says that waste trade to developing countries has a high risk of not constituting environmentally sound management of hazardous waste. While one party has disagreed with this interpretation,

others have taken a different view. In fact, the EU has already passed legislation implementing the Basel Ban and has specifically provided that its Members States are not allowed to use Article 11 to get around the ban.

The Philippines is a full party to the Basel Convention, but has not yet approved the Ban amendment. Waste (or Used) lead acid batteries (ULABs) are specifically classified as hazardous under the Basel Convention's Annex VIII (BNA 2001, 2002). If and when the Ban enters into force and in light of the EU's implementing legislation, industrialized nations who are parties to the Basel Convention would presumably stop exporting hazardous materials to developing countries either for final disposal or recycling. ULABs would no longer legally be shipped to the Philippines from the EU or other Basel Annex VII countries. The United States has signed the Basel Convention, but not yet fully ratified it, nor passed domestic implementing legislation. Thus the United States is not a party to the Convention, and has no official involvement with the ban amendment.

Although the developing countries traditionally called environmental concerns "a rich man's concern," demanding development aid, technology transfer, and debt relief as higher priorities, the waste trade struck a different nerve. Fear of large-scale dumping by the North, combined with other political forces and timing, lead the South to sharply reject the waste trade, calling it "toxic terrorism" and "an affront to African dignity" (Strohm 1993). This position twist is now turning back again, as some developing nations want to import hazardous feedstock for recycling. Thus developing countries remain split on the Basel Ban, with some developing country WTO members supporting it strongly, and others opposing it strongly.

The Trade and Environment Conflict?

Assume the Ban amendment is in effect and the Philippine Government, in consultation with its industry, decides to assert its rights under the international trading rules and brings a complaint against the EU under the World Trade Organization's (WTO) dispute settlement mechanism. Under WTO rules, before a Member can ask a dispute settlement panel to examine whether a trade measure of another Member violates a WTO agreement, the Member must request consultations with the second party. In the consultations, what measure or measures should the Philippines complain about, what questions should it ask and what issues should it explore? What questions might the EU ask and what issues should it raise? What options for a negotiated settlement might the two parties consider?

If the consultations fail and the Philippines requests to have a panel examine the matter, what violations of the WTO agreements would the Philippines allege or what would be the basis of its complaint? What would be the EU's defense? How should that panel decide? Consult your special confidential instructions, outside resources, and each other to prepare for the consultations and, if necessary, for the presentation of the case to a WTO panel for a decision.

RELEVANT WEBSITES

Business

International Lead and Zinc Study Group: www.ilzsg.org

International Council on Mining and Metals: www.icme.com

International Chamber of Commerce: www.iccwbo.org

Bureau of International Recycling: www.bir.org

International Organizations

The European Commission: <http://europa.eu.int>

Organization for Economic Cooperation and Development (OECD): www.oecd.org

Group of 77: www.g77.org

United Nations Commission on Trade and Development: www.unctad.org

World Trade Organization: www.wto.org

Basel Convention Secretariat: www.basel.int

Non-governmental Organizations

Basel Action Network: www.ban.org

Greenpeace, Toxic Campaign: www.greenpeace.org/~toxics

World Wildlife Federation, Global Toxic Initiative:
www.worldwildlife.org/toxics/globaltoxics

International Institute for Sustainable Development: www.iisd.org

Government

U.S. EPA website: www.epa.gov/superfund/programs/lead

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