

**Municipal Management of E-Waste:
A Comparative Analysis of Latin America and the United States
(Summary)**

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In most countries, municipalities are responsible for waste removal and urban sanitation, as well as spillways, landfills and incarceration sites.

The division of responsibilities among local governments and national agencies leaves municipalities a certain amount of leeway when it comes to deciding how to provide certain services and administer resources such as municipal fees. Now, if it were possible to establish direct treatment of any of the fundamental rights through a municipal order so as to establish limitations or restrictions, it would mean that a single State would have both regulative treatment of rights and decentralized local government corporations, with manifest and evident prejudice –if not grotesque denaturalization- of the principle of equality.

On the other hand, many problems are first perceived by municipalities because they have a swift impact on daily life or develop as a result of differences in the size or activities of each city. Furthermore, municipalities' technical capacity varies by size and level of resources.

All of this led municipalities in the United States to generate a series of specific responses to recycling and the prevention of pollution in ground water as a result of the disposal of dangerous waste in land fills. Recycling programs came first, and differentiated collection of e-waste came later. State or federal laws tend to lag behind because of a lack of experience and the efforts of the companies that produce the equipment to avoid being held responsible for the costs of recycling and final disposal operations.

While a variety of proposals for protecting spillways from e-waste have been developed, the issue at hand is whether or not the entire operation should be handled with municipal resources collected as urban sanitation fees or through an extended producer responsibility system.

The experience in the U.S. has shown that residually –or in the absence of another national decision- municipalities are left to handle the problem and protect the environment. Municipalities tend to lose competence and the need to use their resources only when state or federal strategies are developed.

1. E-waste Disposal in the U.S.

Municipal and state programs for collecting and disposing of e-waste differ significantly. An analysis of the laws and models adopted suggests that the U.S. is still looking for an effective mechanism.

State programs such as those in California, Maine, Maryland and Washington differ mainly in regard to the type of financing used and the participation of municipalities. The experience of California and the lobbying that producers did to change the text of the law suggest that citizens are willing to accept extended responsibility but that prefer that it be limited. The current solution in that state is preventative, and involves user fees that are charged up front in order to cover the costs of recycling and final disposal. Here producers are only responsible for system errors. The key to this system is that a set fee (established by the governor) is associated with every machine purchased.

In Maine, extended responsibility is shared by the municipalities (for collection) and producers, but the fee is expected to be regulated by the rules of the market rather than set by a state entity. The law sets requirements for municipalities, which may explain why home waste removal fees increased from about \$80.60 per year to \$150 in 2006.

The solution chosen in Maryland visibly favors producers, each of which must pay a set fee of \$5,000. Maryland law leaves room for doubt regarding whether or not this will be sufficient (in that it is independent of volume), but in practice it tends to serve as an incentive for take-back programs. Excluding producers that sell less than 1,000 machines a year, not linking the fee to production size and giving municipalities an excessive sphere of action could put this experience at risk, at least for its extrapolation in Latin America.

The Washington State solution gives too much control to state authorities, leaves producers captive, excludes municipalities and creates a governmental structure. It seems somewhat statist and it is hard to estimate the repercussions that it will have for the market.

The solutions developed by municipalities in which the State has not yet regulated the disposal of all e-waste gives one the feeling that they are strongly based on citizens' social and environmental responsibilities and that –as they put it- the cost of final disposal is falling "dramatically." This situation is difficult to replicate, but some experiences can be used. These include expanding the differentiated system for home and non-home users (or large generators, small generators and conditionally small generators), increasing control over industrial and commercial users and making it easier to hold them accountable for their actions.

Federal policy prohibits incineration or disposal of CRTs (excluding those designed for home use) from spillways. This has led to the development of specific recycling fee programs (that include residential users).

2. Conclusions of the Department of Commerce Study on E-waste Policies

In December 2004 the Department of Commerce undertook a study in collaboration with the EPA's Office of Solid Waste in order to analyze policies on e-waste and formulate recommendations. A series of consultations of government entities, industry, non-profit organizations and key individuals was implemented. The final report [Laureen Daly & al. [Recycling Technology Products: An Overview of E-Waste Policy Issues](#), U.S. Department of Commerce, Technology Administration, Office of Technology Policy] was published in July 2006.

The main recommendations of the study (though there is a great deal of divergence and discussion of the positive aspects of federal regulation) address a need for:

- a. **Reach:** to clearly define the products covered;
- b. **Collection:** (1) to establish quantitative goals for collection and recycling (in percentage of production or *per capita*); (2) to give local governments flexibility regarding collection forms;
- c. **Recycling:** (1) to process commercial and residential waste together and to prohibit incineration or disposal in spillways; (2) to remove e-waste from procedures and regulations for hazardous solid waste and to regulate them through a specific law; (3) to establish a strict rule for disposal of cathode ray tubes; (4) to outline environmental standards for recycling and create an auditing system to oversee recyclers and disassemblers; (5) to ensure that exportations of waste comply with all applicable legislation;
- d. **Funding:** (1) to establish an agreement for a national funding mechanism (if it is an advance recycling fee, it should be uniform; if it is producer responsibility, a system for quantifying collection and recycling rates should be developed); (2) to establish mechanisms for supervising and ensuring uniform participation (if the State raises funds to pay for recycling they will likely be used for other purposes); (3) to promote competition so that costs remain low;
- e. **Reduce Costs and Maximize Participation:** (1) to standardize product labels, instructions and packaging requirements; (2) to give the industry participation in the design of standards and restrictions if they form part of the legislation; (3) to ensure that all producers in each product category are there (to ensure that standards are identical); (4) to require producers that sell over the internet or foreign businesses to participate fully in recycling programs (including charging fees and responsibilities);
- f. **To promote market-based solutions:** (1) to utilize the buying power of the federal government to demand better designs and the participation of producers in recycling solutions and final destination services; (2) to develop incentives in the private sector for buying "recyclable designs" and "environmentally friendly designs"; (3) to stimulate the recycling industry and a market for recycled products; (4) to educate consumers.

The report includes comments from Snohomish County, WA, one of the first to create a program: "Many of the efforts made by Snohomish County have required a great deal of time and resources that would have been unnecessary if there had been an adequate national program that was funded from the initial phases. Very few municipalities are in a position to dedicate the amount of effort that we have. Having each local and state government overcome challenges is a great loss of public resources and funds that could be focused more efficiently and effectively at the national level"

3. Municipalities in Latin America

Latin America has an informal circuit for waste that could have some value (appliances, etc.). Entire communities have developed that move from one neighborhood to the next looking through the trash on the sidewalk in order to sift out relatively useful objects. Almost all of them work with basic materials (paper, glass, metals). They are called *cartoneros* in Buenos Aires, *gancheros* in Asunción, *carritos* in Montevideo and *catadores* in Porto Alegre. But regardless of the term used, all of them share their involvement in the municipal mechanism of collecting waste.

In regard to the participation of civil society, as is the case in the U.S. (where various municipalities promote non-profit institutions that collect waste, such as [Goodwill](#) and [Goodwill Industries International, Inc.](#)), some Latin American institutions accept donations. These include [Don Orione](#) and [Emaus](#) (Argentina), [Emaus](#) (Uruguay), [Hogar de Cristo](#), [Traperos de Emaus](#) (Chile- see [Traperos de Emaus](#): "Don't throw your heart in the trash- it could still work!") and [Rastro Betel](#), Spain.

In general, however, e-waste is not a priority in municipal policy in Latin America. The specific experiences that have been developed are mostly voluntary and involve large cities.

There is a need to develop a municipal policy on e-waste for Latin America given the large amount of clones (computers for which there are no responsible producers) in the region. Also, it is inevitable that a state agency for collecting e-waste in Latin America (such as the one designed in Washington State) will be developed at the national and regional levels. This could also be implemented in large cities, though the agencies would eventually be municipal.

In Latin America, extended producer responsibility would have a very weak impact in that only some of the computers in use have an identifiable producer. This would force agencies to include importers or other producers (companies that make televisions or appliances) in extended producer systems. Excluding producers who make less than 1,000 machines in Latin America would leave clone assemblers out of the system.

The collection procedures implemented in the U.S. could be used in Latin America, but the need to travel by car seems to be a limitation that could be compensated with adequate coverage of clean points (as is seen in Paraná, Argentina).

Municipalities play an important role in collection and supervision in small cities in which there seems to be no other alternative in all of the possible scenarios for Latin America.

4. What Can We Take from the U.S. Experience?

As we have seen, financing recycling and final disposal operations is a key factor for guaranteeing environmental principles. Of the existing state laws in the U.S., it is important to consider that recycling and final disposal operations are not self-sufficient, which is why responsibility is transferred to or extended for producers. There is also a visible difference between processing costs and benefits or the return that is obtained through the sale of reusable parts or basic sorted components (metals or plastics). These are relatively small and negative (one could estimate a per machine fee of \$10 to be charged at the time of purchase or collection).

In states in which no extended responsibility law has been passed, municipalities tend to finance recycling and final disposal costs through municipal fees (specific to urban sanitation), which would break the principle of "the polluter pays."

The major difference in Latin America is that that equation or the difference between the costs of recycling is lower and in some cases positive (or it would be a self-sufficient operation). This is due to the fact that the parties have greater opportunities for resale, there is a larger market for reconditioned computers, and the cost of labor is lower but international prices hold. According to the indices obtained (there is a preponderance of state and municipal programs in the U.S. and commentaries received in municipalities in Latin America), the only part of a computer that would have to be negative in this equation in LAC is the monitor (or the cathode ray tube).

This creates a significant responsibility for municipalities in that as this equation is very close to the point of equilibrium or self-financing (because variables such as volume of waste or transportation cost from municipalities that are far from recycling plants plus the costs of removal and sorting come into play). Each municipality must develop policies and orders so that the recycling of cathode ray tubes has a distribution of use (to include televisions) that is extensive enough to compensate for the costs of recycling and final disposal (with municipal taxes or fiscal relinquishment). This must be done so as not to violate the principle of "the polluter pays." Furthermore, given the local industry of television tubes (which is much more extensive in Latin America than computers), a certain amount of extended responsibility could be assigned.