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## **WASTE MANAGEMENT**

### **PRODUCT STEWARDSHIP**

Many Latin American countries have begun to embrace product stewardship initiatives that largely shift responsibility for management of end-of-life consumer products from governments to manufacturers, importers, and retailers. With product stewardship initiatives in full force in Europe and other regions in the world, it seems inevitable that a number of countries in Latin America will follow suit. This article provides an overview of product stewardship initiatives in Latin America, beginning with final measures in Mexico, Colombia, and Mercosur—Argentina, Brazil, Paraguay, and Uruguay—and following with pending initiatives in Argentina, Brazil, and Costa Rica.

## **Growing Attention to Product Stewardship Initiatives Seen in Latin America**

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**A** wave of product stewardship initiatives is quietly inundating the Latin America. Mexico is on the eve of adopting regulations to implement its federal waste law, adopted in 2003, under which end-of-life products identified as special management or hazardous wastes will require management plans. In March, Mercosur, the South American Common Market, adopted a regional consumer products initiative requiring member countries to adopt harmonized measures to implement new end-of-life producer responsibility poli-

cies. A bill introduced in January in the Argentine Senate proposes a hybrid law combining the materials ban and producer responsibility requirements of the European Union's directives on the Restriction of Hazardous Substances ("RoHS") and Waste Electrical and Electronic Equipment ("WEEE").<sup>1</sup> Colombia adopted regu-

<sup>1</sup> Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS), Council Directive 2002/95, 2003 O.J. (L 37/19) (EC) (RoHS Directive); Directive on Waste Electrical and Electronic Equipment, Council Directive 2002/96, 2003 O.J. (L 37/24) (EC) (WEEE Directive). The RoHS directive restricts, beginning July 1, 2006, the placing of electrical and electronic equipment

lations in December 2005, imposing producer responsibility requirements for hazardous products and packaging.

After years of languishing, a federal Brazilian omnibus waste policy bill that would impose significant producer responsibilities for certain consumer products and packaging identified as hazardous waste is moving quickly through the Special Commission of the Chamber of Deputies. Costa Rica has broad product stewardship initiatives pending before its Legislature and its environmental agency. Numerous other omnibus waste policies and product-specific initiatives pepper legislatures and environmental agencies across the region.

Faced with tremendous urban population growth, massive increases in consumer product wastes, and severe shortfalls in funding and waste management infrastructure, it is hardly a surprise that so many Latin American countries have begun to embrace product stewardship initiatives that largely shift responsibility for management of end-of-life consumer products from governments to manufacturers, importers, and retailers.

For many Latin American countries, the product stewardship framework—viewed as a natural extension of existing “polluter-pays” principles and buttressed by strong international precedent in Europe and other countries—provides an attractive fiscal, political, and seemingly practicable option to domestic waste management problems.

At its core, the Latin American product stewardship “model” requires, in varying degrees, that producers, importers, distributors, retailers, and/or marketers develop waste management plans that address the take-back and management (i.e., collection, storage, transportation, treatment, recycling, and disposal) of their end-of-life products, product components, and packaging. These requirements typically are coupled with some kind of product information requirement, such as consumer awareness campaigns and product labeling. Some initiatives also have proposed design for the environment requirements, including materials restrictions or bans.

Complicating matters, many Latin American countries have federalist governments and decentralized environmental regimes that grant states and municipalities authority to vary from or to be more stringent than federal legislation, creating the real potential for patchwork waste management requirements within countries.

The Latin American “model” is sometimes imposed through laws directed towards specific waste streams, but is increasingly applied through “omnibus” waste initiatives that cover a broad range of consumer product wastes. The most commonly targeted products include pesticides, batteries, pharmaceuticals, electric and electronic equipment, automotive parts, lighting products, and component parts or accessories that have certain chemical constituents. Product packaging and containers that come in contact with hazardous prod-

ucts containing lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PDBE) on the European market. Among other things, the WEEE directive is intended to complement the RoHS directive and provides for electrical and electronic equipment producers to bear the costs of recovering and recycling end-of-life electrical and electronic equipment.

ucts or wastes have also been central to these new initiatives.

This article provides an overview of key product stewardship initiatives in Latin America, beginning with final measures in Mexico, Colombia, and Mercosur and following with pending initiatives in Argentina, Brazil, and Costa Rica. These initiatives reflect only a few of the scores of measures and new ones are being proposed all the time.

## FINAL MEASURES

### MEXICO

Mexico adopted in 2003 the first nationwide comprehensive product take-back law in Latin America, the “General Law for the Prevention and Integrated Management of Wastes” (“Mexican Waste Law” or “law”).<sup>2</sup> Like many Latin American product stewardship initiatives, the cornerstone of the Mexican Waste Law is the requirement that generators, manufacturers, importers, and distributors manage covered end-of-life products.

Reflecting deep legislative concern regarding consumer product wastes, the Mexican Waste Law amended a decades-old definition of “waste” to include discarded “products,” substantially expanding the scope of the waste law it replaced. The Law then classifies wastes into three categories—hazardous, urban solid, and a new category of “special management.”

Briefly, a hazardous waste is one that either meets the characteristics of corrosivity, reactivity, explosivity, toxicity, flammability, or infectious or is listed under the law or by SEMARNAT, Mexico’s federal environmental agency. Accordingly, any product that meets these hazardous characteristics is a product potentially subject to the take-back requirements. (As a loose rule of thumb, the Mexican hazardous characteristics follow those of the U.S. Environmental Protection Agency.)

Listed hazardous products designated under the Law include:

- used lubricating oil;
- used organic solvents;
- catalytic converters;
- accumulators that contain lead;
- nickel-cadmium or mercury batteries;
- fluorescent and mercury vapor lamps;
- product components containing mercury, cadmium, or lead;
- pharmaceuticals;
- pesticides and any packaging containing remnants;
- persistent organic compounds like polychlorinated biphenyls; and
- oil-based sludge originating from the extraction of fossil fuels and sludge originating from wastewater treatment plants when considered hazardous.

<sup>2</sup> *Ley General para la Prevención y Gestión Integral de los Residuos*, D.O. 8 de octubre de 2003, (México); General Law for the Prevention and Integrated Management of Wastes, D.O. October 8, 2003, (Mexico).

Finally, packages, containers, and packing materials contaminated with hazardous wastes are deemed to be hazardous wastes.

Urban solid wastes are household wastes (including consumer products and their packaging) and wastes of a domestic nature from other establishments and public transportation routes (e.g., trash). The Mexican Legislature recently amended the law to exclude batteries that are generated by households or that have "household" characteristics from the definition of hazardous waste; presumably, most such batteries would be household wastes.

Finally, special management wastes are those that are neither hazardous wastes nor urban solid wastes, except that urban solid wastes are classified as special management wastes if they are produced by large quantity generators (equal to or greater than 10 tonnes per year).

Special management wastes include non-hazardous wastes from nine listed categories. These include (1) wastes from rocks or products of their decomposition that can only be used for the fabrication of construction materials; (2) wastes from health services; (3) wastes generated by activities related to fishing, agriculture, forestry, poultry farms, and livestock; (4) transport wastes; (5) wastewater treatment wastes; (6) wastes from department stores or commercial centers generated in large volume; (7) wastes from construction, maintenance and demolition; (8) technological wastes, including electronic products and automotive parts; and (9) others that SEMARNAT, by common accord with the states and municipalities, identifies.

All three types of waste are potentially subject to management plans, although this will be determined by implementing technical standards. The law requires SEMARNAT to identify wastes subject to management plans based on (1) the high economic value of waste materials; (2) the high volume of generation produced by a low number of generators; (3) the bioaccumulative content of the wastes; and (4) the high risk to human health and the environment.

Entities responsible for the management plan vary somewhat depending upon the waste stream. Waste management plans are required from:

- Producers, importers, exporters, and distributors of listed hazardous products;
- Generators of hazardous wastes and certain listed medical waste streams; and
- Large quantity generators (10 tonnes per year) and producers, importers, exporters, and distributors of products that when discarded become urban solid wastes or special management wastes.

The law is brief in its treatment of what management plans must entail. For post-consumer hazardous products, these include (1) procedures for collection, storage, transportation, recycling, treatment, and final disposal; (2) defined responsibilities for all of those involved in plan development and execution; and (3) strategies for communicating to consumers the precautions that should be undertaken in the handling of end-of-life products and procedures for product return to suppliers or designated collection centers.

The content of management plans for urban solid and special management wastes is not prescribed by the law. Based on numerous iterations of draft regulations, SEMARNAT appears to have extended the principles

laid out in the law for post-consumer hazardous products to all management plans, however.

As drafted, management plans would be required to include (1) the types and expected quantities of wastes subject to the plans; (2) the means by which waste minimization and valorization (i.e., recycling) will be achieved; (3) the mechanisms by which other responsible parties may be incorporated into the plans; and (4) the methods for evaluation and improvement of the plans.

The regulation also would allow for management plans to be individual or collective, developed with private and public entities, and structured so that they apply nationally, regionally, or locally.

The law has not been widely enforced to date due to the lack of implementing regulations and technical standards. This situation may change soon, as SEMARNAT is reported to be in the final stages of publishing its implementing regulation for adoption.

Although the regulation will provide much-needed clarity to a sometimes confusing and ambiguous law, it too will require significant implementation through technical standards. These include the all-important standards that identify which products and wastes are subject to management plans and the management plan application requirements. SEMARNAT recently has formed a work-group to begin creating these standards. Importantly, the law grants Mexican States and the Federal District jurisdiction over all special management wastes. Municipalities have jurisdiction over all urban wastes, as set forth under the Mexican Constitution. Accordingly, even when federal regulations and technical standards are established, the timing and specifics of implementation of the law likely will vary across jurisdictions.

The Mexican Legislature has continued to weigh new producer responsibility initiatives and could well amend the law going forward.

## COLOMBIA

The Colombian Ministry of Environment, Housing and Territorial Development ("MinAmbiente") issued Decree 4741 ("decree") in December 2005 to implement its federal hazardous waste law, Law 430/98.<sup>3</sup> Under a two-tiered classification system, the decree requires manufacturers and importers of hazardous products to prepare comprehensive management plans for the storage, handling, treatment and disposal of such products at their end-of-life over the next year.

Like its Mexican counterpart, the decree defines "waste" to include a product that a generator disposes of, discards, or transfers because its properties prevent it from being used in the activities that generated it. In turn, a hazardous waste is defined as a waste that, due to its corrosive, reactive, explosive, toxic, flammable, radioactive or infectious characteristics, can cause harm or risk to human health and the environment. The decree also includes as hazardous wastes all containers and packaging that have come in contact with hazardous waste and any mixtures of hazardous and non-hazardous wastes. Based on these definitions, an end-

<sup>3</sup> *Ley 430 de 1998, Por la cual se dictan normas prohibitivas en materia ambiental, referentes a los desechos peligrosos y se dictan otras disposiciones* [trns. Law 430 1998, establishing environmental standards regarding hazardous wastes and other matters], D.O. No. 43.219 (21 de enero de 1998).

of-life product and its packaging manifesting a hazardous characteristic would meet the definition of hazardous waste.

For classification purposes, the decree adopts a system modeled on the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (the Basel Convention).<sup>4</sup> Briefly, the Basel system presumes a waste is hazardous if it contains certain constituents and/or belongs to listed categories of waste streams, unless it is demonstrated not to have hazardous characteristics. MinAmbiente recently proposed testing protocols for the hazardous characteristics.

Under the decree, examples of presumptively hazardous wastes include the following:

- Waste pharmaceuticals, drugs and medicines;
- Wastes from the production and preparation of pharmaceutical products;
- Wastes from production, formulation and use of photographic chemicals and processing materials;
- Wastes having as constituents that include beryllium, arsenic, selenium, cadmium, antimony, tellurium, mercury, lead, organic cyanides, phenols, and ethers;
- Waste lead-acid batteries, whole or crushed, and certain waste electrical and electronic assemblies or scrap;
- Glass waste from cathode ray tubes; and
- Wastes from the production, formulation and use of biocides and phytopharmaceuticals, including certain waste pesticides and herbicides

Significantly, manufacturers and importers of hazardous end-of-life products are deemed “generators” of hazardous waste and must therefore comply with all of the generator responsibilities set forth in the decree. These include a host of responsibilities, including the obligation to develop and implement a comprehensive waste management plan for hazardous wastes by December 30, 2006. The plans must include the origin, quantity, hazardous characteristics, and handling for each type of waste. The decree also requires manufacturers and importers of hazardous products to ensure the proper packaging and handling of all containers and wastes from their hazardous products and to inform the users or consumers of the risks of the hazardous substances or products. Generators, and by extension, manufacturers and importers, must also comply with numerous cradle-to-grave requirements, including registration<sup>5</sup>, manifesting, and personnel training requirements.

<sup>4</sup> Colombia ratified the Basel Convention in 1996. See *Ley 253 de 1996, Por medio de la cual se aprueba el Convenio de Basilea sobre el control de los movimientos transfronterizos de los desechos peligrosos y su eliminación, hecho en Basilea el 22 de marzo de 1989*, D.O. No. 42,688 (17 de enero de 1996); Law 253 of 1996, by which [Colombia] approves The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, completed in Basel on March 22, 1989, D.O. 42,688 (January 17, 1996) (“Law 253”).

<sup>5</sup> MinAmbiente has proposed a new resolution creating the Registry of Hazardous Waste Generators that may include product manufacturers and importers. A final version has not yet been published.

Under a separate classification system, the decree sets forth special requirements for manufacturers and importers of certain listed consumer products. For now, listed products include hospital wastes, pharmaceuticals, and used lead acid batteries. Under this separate take-back program, manufacturers and importers must prepare and submit to MinAmbiente “Management Plans for the Return of Post-Consumer Products” for approval and implementation. These plans must include standards, actions, procedures, and measures intended to facilitate the return and collection of post-consumer products that become hazardous wastes at their end-of-life, with the goal of returning the products to recycling, valorization, treatment, or final disposal. *Id.* Art. 3. These plans may be developed and implemented by importer and manufacturer collectives established to address similar waste streams. Also, the plans must provide for active participation by distributors, retailers, and consumers.

At this juncture, the interplay between the consumer product take-back program and the more general management framework for hazardous waste is not clear. MinAmbiente has not issued any official interpretive guidance reconciling these two programs, but such guidance could greatly impact the scope of the decree and the number of products for which manufacturers and importers may have product stewardship requirements.

## MERCOSUR

No country in Mercosur currently has a comprehensive product stewardship program in place. However, at an extraordinary meeting of the Ministers of the Environment, on March 29, the member states of Mercosur—Argentina, Brazil, Paraguay, and Uruguay—enacted the “Mercosur Policy of Environmental Management of Special Universal Wastes and Post-Consumer Responsibility” (“policy”).<sup>6</sup> Proposed last fall, the policy will go into effect 30 days after deposit of the fourth instrument of ratification. Although the policy itself has no privately enforceable requirements, it is intended to serve as the basis for a regional platform for harmonized environmental management of post-consumer products, including take-back programs and consumer awareness campaigns. This initiative may be a harbinger of product stewardship policy in the southern cone of Latin America.

The policy covers “special universal wastes,” defined as those wastes listed in Annex I of the policy when they (a) are generated in a mass or universal fashion and (b) require separate environmental management because of their environmental consequences, hazardous characteristics, risks, or potential harmful environmental effects. Annex I covers batteries and piles, electro-electronics, lamps containing mercury or fluorescent tubes, other mercury-containing equipment, and cellular telephones.

Under the policy, manufacturers and importers should be responsible for managing their end-of-life consumer products. This responsibility involves ensuring that listed products are collected, reused, recycled, recovered, or eliminated in an environmentally adequate manner and that consumers are aware of the

<sup>6</sup> *Acuerdo sobre Política Mercosur de Gestión Ambiental de Residuos Especiales de Generación Universal y Responsabilidad Post Consumo.*

specific take-back systems and their role in segregation of the used products.

To ensure the policy's objectives for post-consumer responsibility are met, member countries would be required to adopt local implementing measures. These national measures must include development of regulations and technical guidance implementing minimum environmental requirements for product composition. The policy also calls for the use of different instruments to achieve its goals, including waste management plans, waste inventories, a regional environmental information system for Mercosur (SIAM), and clean production, among others.

By the adoption of the policy, the region's ministers of the environment made clear their preference for extended producer responsibility and take-back programs. Because this enactment requires regional harmonization of the environmental management of special universal wastes, the first implementing national measures to be adopted by a member country may establish the model, and most likely a floor, for any other national measures that follow. It is possible that Brazil, whose environmental minister proposed the policy, will take a leadership role in enacting implementing measures.

## PROPOSED INITIATIVES

### ARGENTINA

If it is approved, a bill introduced in the Argentine Senate in March would become the first Latin American national law to adopt measures based on the European Union RoHS and Waste Electrical and Electronic Equipment (WEEE) directives. The bill, *Proyecto de Ley Sobre Disposición de Aparatos Electricos y Electrónicos en Desuso y Gestión de sus Residuos* (Draft Law on the Disposal of Electric and Electronic Devices Not in Use and the Management of Wastes), would impose new design mandates and end-of-life management obligations on manufacturers, importers, and others for a broad range of end-of-life electric and electronic products.

The categories and list of products covered under the bill are nearly verbatim (with slight modifications) to those identified under Annex I of the European WEEE Directive and include:

- large domestic appliances (e.g., refrigerators, freezers, microwave ovens);
- small domestic appliances (e.g., vacuum cleaners and toasters);
- computer and telecommunications equipment (e.g., computers, printers, cellular telephones);
- consumer electronic devices (e.g., radios, televisions, video cameras);
- lighting devices (e.g., straight and compact fluorescent lamps);
- electric or electronic tools (except for industrial tools permanently set for high energy, of high energy and installed by professionals) (e.g., drills, saws);
- toys or sports and leisure equipment (e.g., video games, portable consoles);
- medical devices (except all implanted and infected products) (e.g., dialysis, cardiology);

- instruments for monitoring or control (e.g., thermostats, smoke detectors);
- and vending machines (e.g., for hot drinks and for bottles and cans).

The bill also includes a RoHS-styled materials ban on the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated biphenyl ether (PBDE) in new products and any components used for repair or reuse. As proposed, the ban would apply only to electrical and electronic equipment placed on the market after adoption and official publication of the bill. The bill would preserve the exemptions to the RoHS materials ban, for example, lead in cathode ray tubes glass, mercury in certain fluorescent lamps, and hexavalent chromium used as anti-corrosive protection for carbon steel cooling systems in absorption refrigerators.

Producers and importers of listed products or components would be charged with obligations similar to those in the WEEE Directive. These include product design to facilitate end-of-life treatment, design and implementation of product take-back programs that are free of charge to consumers, product labeling, annual reporting, and provision of information for consumers on environmental and health risks and take-back options.

As drafted, producers and importers could participate in individual or collective waste management programs. Although the requirements for these plans vary somewhat, both likely would require information identifying: the producer or importer; the types of electric and electronic devices produced; the collection points and persons responsible for the collection; the transportation and treatment methods to be used; detailed percentages of collection, reuse, and recycling (with certain defined percentages for certain types of products); and the form of financing that will be used to guarantee the management of product wastes.

Although some local observers believe that the bill in its current form is unlikely to pass, the Argentine legislature can be surprisingly aggressive in the environmental arena. In the last few years, progressive new federal environmental legislation on environmental impact statements and industrial wastes passed quickly while Argentina was in the throes of a fiscal crisis. A number of other e-waste bills are pending in the Argentine Senate, which may influence action on this bill. It is conceivable that this bill will move through the legislative process in some form, and perhaps even quickly.

### BRAZIL

The Brazilian Congress has been considering a federal waste management bill ("Omnibus Waste Bill" or "bill")<sup>7</sup> for all solid and hazardous wastes since 1991, but previous attempts to pass it have failed. However, last fall, under pressure from the Executive Branch, a Special Commission of the Chamber of Deputies was recalled and tasked with the development of a new version. The bill has moved quickly through the commission and a second revised draft was released in June 2006. If passed by Congress, the bill would create the first federal waste regime in Brazil and would impose

<sup>7</sup> *Substituto ao Projeto de Lei No 203, de 1991, e Apensos; Substitute to Draft Law No.. 203 of 1991, and Annexed [Bills]*

significant new producer responsibility requirements for a range of end-of-life products.

The bill would create a new and complex waste classification system. Solid waste would be classified into one of six categories—urban, industrial, medical, rural, transport, and construction wastes. More than twelve specific waste streams are addressed in special chapters, including technological wastes, commerce and services wastes, used tires, medical wastes, hazardous wastes, among others.

The categories of solid wastes appear to include a range of consumer products. For example, medical wastes encompass seventeen different waste streams, including end-of-life pharmaceutical products. Technological wastes would include wastes from the computer and automotive industries, electrical and electronic communications, batteries, lamps and others that, at the end of their useful life, require special disposal. Presumably, this would include cellular telephones and computer components, among others. Rural wastes would include pesticides that were expired, prohibited, seized or classified as hazardous.

Generally speaking, manufacturers and importers of covered products, and in some cases distributors and users, who generate solid wastes would be responsible for final management of these wastes through the development of waste management plans. The bill only specifies that the plan should contemplate the generation, segregation, treatment, storage, collection, transport, and final disposal of the wastes, as well as how to eliminate risks and to protect health and the environment. These plans must take into account the guidelines in the Municipal Urban Waste Management Plan, if available, the National Water Plan, and the National Sanitation Plan. Further details are left to future regulations and to the environmental and health authorities.

The latest version of the bill appears to create a new *de facto* category for “hazardous products.” Manufacturers, importers, and suppliers of products and services that generate wastes hazardous to health or the environment would be required to inform the community about the risks posed by their handling. Also, manufacturers and importers of those same products would be required to inform consumers about both the environmental impacts of the product and its production process through labeling and declarations. This self-declaration of environmental impact is one of the key instruments of the National Solid Waste Policy.

Manufacturers, importers, and distributors of hazardous products that require or could require special systems for storage, collection, transport, treatment, or disposal to avoid harm to public health or the environment are responsible for meeting the obligations defined by the environmental authorities, presumably the state agencies.

Despite its recent movement, the future of the Omnibus Waste Bill is unclear. In June 2006, the bill was voted out of Committee only to have the vote annulled on a technicality and sent back for more consideration. Weeks later, the Committee met again and approved the same version again thus thwarting attempts to derail the bill and perhaps signaling a greater likelihood of passage in the plenary session.

Even if the bill fails to pass, the recent signing of the Mercosur policy on consumer products could spur change.

For almost the last decade, CONAMA, Brazil’s policy-setting entity, has proposed omnibus waste measures similar in scope to the Legislative version of the bill. Some local observers suggest CONAMA has held off adopting such measures because its legal authority to adopt an omnibus measure is unclear and it has awaited a more firm mandate from the Legislature. In the absence of legislative activity, however, the adoption of the Mercosur policy directing its member countries to implement harmonized consumer product take-back measures could provide a colorable legal basis for CONAMA to move forward with its own policy.

It bears noting that CONAMA has established several waste-specific take-back requirements for certain end-of-life products (i.e., batteries, tires, empty pesticide containers); even in the absence of an omnibus policy, the agency could continue to adopt stewardship measures on a product-by-product basis.

Finally, even without a federal policy, other Brazilian states may follow São Paulo’s lead and move forward with producer responsibility initiatives of their own. Whatever the case, product stewardship appears to have firm footing in the future of Brazilian solid waste policy.

## COSTA RICA

In Costa Rica, a proposed “General Waste Law” (*Ley General De Residuos*, Bill 15.897) would put in place a federal waste management regime. The new system is designed to shift the responsibility for the management of wastes from the government to generators, producers, and consumers. The bill would apply to solid and hazardous wastes and would require producers to develop and implement management plans for goods that generate wastes at their end-of-life.

Bill 15.897 defines “waste” to include end-of-life products, and classifies waste streams into three categories—hazardous, special management, and ordinary solid wastes. Much of the waste classification under the bill is left to future regulations. The Ministry of Environment and Energy (MINAE) would regulate hazardous and special management wastes and the Ministry of Health would regulate ordinary solid wastes. The classification system for hazardous waste would be established through implementing regulations listing hazardous wastes and concentration limits.

The bill provides a list of special management wastes:

- automobile sector wastes;
- beverage sector wastes;
- agricultural and livestock sector wastes;
- electric and electronic wastes;
- construction and demolition wastes;
- cleaning, pharmaceutical, and cosmetic products;
- household goods and furnishings; and
- those established by regulation by the Ministry of the Environment and Energy.

Special management wastes would be classified as both hazardous special wastes and nonhazardous special wastes.

As in many other Latin American bills, the obligation to develop a management plan is central to the proposed waste management regime. The bill requires product manufacturers to prepare and implement man-

agement plans for products that result in waste after consumption. Because the term "producer" is broadly defined, a manufacturer, distributor, importer, packager and exporter of a good that generates a post-consumption waste would potentially be subject to the management plan requirement. Future regulations would define both the kinds of waste subject to a management plan and those entities required to develop those plans. Among the factors to be considered are the high volume of wastes generated, the persistent and bioaccumulative nature of the wastes, and the risks presented to human health and the environment.

Management plans would be required to include procedures for collection, storage, transportation, treatment, and disposal of covered wastes. In addition, management plans would need to provide strategies and methodologies for communicating to consumers the proper handling instructions for returning end-of-life products to providers or collection centers.

It is difficult to predict the likelihood that the bill will pass, in part due to the broad scope of the bill. However, even in the absence of legislative action, comprehensive product stewardship policies in Costa Rica may be established in the near term. MINAE recently unveiled a draft regulation implementing existing environmental and health laws that would create a national system for the management of "special wastes." The draft regulation proposes to require manufacturers and importers to develop management plans that include mandatory collection quotas for covered end-of-life products. Although still under development, the draft lists several

categories of goods from the automotive, beverage, agriculture, and electric and electronic sectors. The proposal reflects MINAE's broad interpretation of "polluter-pays" principles that, if adopted, would have a significant impact on manufacturers and importers with market share in Costa Rica.

When and if these progressive measure will be adopted is uncertain. Costa Rica recently elected a new president who has pledged to make the country a leader in environmental protection. The new administration could invigorate the progress of environmental initiatives such as Bill 15.987 and this draft regulation.

## CONCLUSION

It is plainly a dynamic time in Latin America for the development of waste policy. It is also an opportune time for manufacturers, importers, and retailers to help shape proposed initiatives and standards implementing existing laws. Latin American legislatures and environmental agencies are typically receptive to industry observations and comments, especially when supported by data, experience in other countries, and reasoned solutions. Some Latin American countries have public notice and comment procedures for rulemaking, providing a formal mechanism for industry input. With product stewardship initiatives in full force in Europe and other regions in the world, however, it seems inevitable that a number of countries in Latin American soon will follow suit.