

TRADE LIBERALIZATION AND SOLID WASTE MANAGEMENT IN MEXICO

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¹ For more information about the subject and the author consult: www.cristinacortinas.net

Summary

Trade liberalization as a result of the multiple international trade agreements subscribed by Mexico at the end of last Century, with Canada and United States, the European Union, Japan, and many other countries, has had an important role in the development and approval of the new legislation on waste prevention and integral management promulgated in 2003².

Trade liberalization not only is having a big influence in the change of the composition of urban solid wastes and hazardous wastes, but also has been the trigger of an increased interest of the national industry to export their products some of which are subject to the extended producer responsibility in several of the most important markets in importer countries.

The fact that Mexico became a member of the Organization for Economic Cooperation and Development (OECD) in 1994, and its participation on the multiple activities taking place in the Organization regarding pollution prevention, waste minimization³, trade and environment and other related issues, was also crucial for the changes introduced on waste management policies and regulations in the country.

Three different Commissions at the Congress (Environment, Science and Technology, and Legislative Issues) were involved on the review, modification and approval of the project of Law, to assure that the legislation of waste management respond to Mexico's needs and respect Constitutional provisions on the matter.

Representatives of the industrial sector in Mexico involved on the preparation of the different international trade agreements, that participated in OECD and other international agencies meetings on environmental matters, aware as well of the policies and regulations of importer countries regarding end of life products, were key actors in the publication of the new General Law on Waste Prevention and Integral Management.

² Ley General para la Prevención y Gestión Integral de los Residuos, published on October 8, 2003, at the Diario Oficial de la Federación (D.O.F.) (available at the Web page: www.cristinacortinas.net)

³ See as an example: OCDE, Washington Waste Minimization Workshop. Vol. I. Five Waste Streams to Reduce. Vol. II. Which Policies, Which Tools? 1996. and OCDE. Strategic Waste Prevention: OECD Reference Manual. 2000.

General background information

Mexico's territory has approximately two million square kilometers and more than a hundred million inhabitants. Its population has grown four times in the last 50 years and by the year 2040 the number of inhabitants is estimated to be about 130 million. About 76 percent of the population lives in urban areas (with more than 2 500 inhabitants). One of the more challenging problems is that more than 48 million of people (47% of the population) face poverty conditions.

The country shares borders at the north with the United States of America (USA) and at the south with Guatemala and Belize. As for its political division Mexico is a Republic formed by 31 federal entities, a Federal District (Mexico City) and about 2 439 municipalities.

According to Article 155, Fraction III, of the National Constitution⁴, the municipal authorities are on charge of the public services regarding the collection, transport, treatment and final disposal of wastes.

Since 1988 the Legislators promulgated the General Law on Ecological Equilibrium and Environmental Protection, which introduced the first regulation of hazardous wastes under the supervision of the federal environmental authorities and managed through private authorized companies.

Sharing of powers between municipal and federal authorities regarding a particularly risky type of solid wastes, was legally based on Article 73 XXIX G of the Constitution, that empower the Congress to promulgate laws that establish the concurrence between the Federal Government, the governments of federal entities and municipalities, in their respective field of competences, regarding the protection of the environment and the preservation and restoration of the ecological equilibrium.

On the basis of such Constitutional provision, the Congress promulgated in 2003 the General Law on Waste Prevention and Integral Management that regulate from an environmental perspective three types of wastes: urban solid wastes, special management wastes and hazardous wastes.

As urban solid wastes and special management wastes are considered a local matter, the General Law only provide general principles, criteria, management instruments and orientations for local regulators to develop their own legal ordinances according to the needs, circumstances and priorities of each federal entity and municipality.

⁴ Constitución Política de los Estados Unidos Mexicanos.

Urban development, solid waste management and social implications

Urban development

Urban development in Mexico -in particular in great cities- has happened without a planning that correspond to a sustainable development, as a result of a rapid population growth, the economic interest of developers and migration of rural populations.

The extension of the cities, the increase of housing for single families, the creation of population settlements in locations of difficult access and the formation of urban belts of poverty and lack of public services, have contributed to severe environmental pollution problems related to an improper management of residual waters and solid wastes

Water sources severely threatened by such pollution problems, flooding of urban areas associated to the solid wastes dumped in the drainage systems, liberation of toxic substances (by example, persistent organic pollutants) during open air burning of wastes, as well as increase on transmissible diseases -like dengue- by insects that multiply in reservoirs such as used tires or empty containers full of water and abandoned at open air, are some of the consequences of the increase in waste generation, improper handling by generators and lack of municipal waste management capacity.

Waste management⁵

More than one hundred thousand tones of urban solid waste are generated every day in Mexico and the Central Region -where Mexico City is located- contributes with 50% of such wastes. Generation has increased 57% between 1992 and 2004 imposing a great pressure on municipal public services as well as on sanitary landfills.

For the year 2005 no more than 80% of wastes were collected by municipal public services and disposed in about 104 sanitary landfills (not all of them comply with the environmental norm for their location, design, building, operation, closure and ulterior monitoring) and 23 controlled dumping sites. In 48 cities several of the waste management services had been commissioned to private companies: 17% for household waste transport, 29% for industrial and commercial urban solid waste transport, 29% for waste final disposal and 25% for solid waste integral management.

In the middle of last Century about 60 a 70% of urban solid wastes were organic and by the year 2004 such composition changed to 51% organic wastes, 32% potentially recyclable wastes (15% paper and cardboard, 6% glass, 6% plastics, 3% metal and 2% textile) and 17% formed by a mixture of garbage. It is considered that 8 to 10 percent of such wastes are recovered by informal workers (scavengers) to be recycled.

⁵ Information provided by the Dirección General de Equipamiento e Infraestructura para Zonas Urbano-Marginadas of the Ministry of Social Development.

Some municipalities have shown leadership and have developed actions and systems to establish:

- Mechanisms for charging the cost of providing solid waste management services through a transparent and direct payment system, instead of considering it as part of the property taxes;
- Selective collection of waste streams separated at the source for the recovery of recyclable materials;
- Mechanisms to generate electricity using the biogas from their sanitary landfill;
- Programs for Waste Prevention and Integral Management or Zero Waste Programs;
- Waste management systems that allow them to obtain ISO-9000 certification;
- Used oils, tires, batteries, empty pesticide containers and empty PET bottles management plans;
- Compost plants;
- Campaigns to inform, educate and involve the public and elementary schools in waste management activities;
- Networks involving public servants, academic, industrial and social organizations in activities oriented toward the strengthening of local capacities for waste minimization and the integral waste management.

Social implications

As the reduction of poverty has been included as one of the United Nations Millennium Development Goals⁶, it is important to note that in Mexico people living in poverty pay more for having access to potable water and are exposed more heavily to the risks created by the inadequate handling of residual waters and solid wastes, that create problems of inequity.

It is also important to note that population groups living in poverty, children, adult women and men, as well as aged people, obtain their living from the trade of recyclable materials recovered from garbage in poor sanitary conditions that represent a risk for their health.

Mexico agreed at the Johannesburg Summit⁷ to establish a 10 year implementation plan to develop actions regarding sustainable consumption and production involving urban planning and solid waste management based on:

⁶ The goal 7 looks to guarantee the environmental sustainability through: a) incorporation of sustainable development principles in national policies and programs to revert the loss of environmental resources; b) reduction in half of the percentage of people that don't have sustained access to potable water and basic sanitation services by the year 2015; and c) a considerable improvement of the life of at least 100 million inhabitants of poor dwellings by the year 2020.

⁷ For additional information consult the following Web pages:

(www.uneptie.org/pc/sustain/10year/regional.htm),

(www.un.org/esa/sustdev/sdissues/consumption/Marrakech/conprod10Y.htm),

- The need of planning urban development with an holistic approach and at long term;
- The establishment of ties between different sectors policies;
- The informed, organized and responsible participation of every social sector in planning development and implementation processes;
- The use of a combination of regulatory and non regulatory instruments;
- The elimination of perverse subsidies;
- The dissemination of information, complemented with citizen education and training of key actors;
- Institutional and services infrastructure capacity building;
- Transparency of public administration and public accountability;
- The assessment of cost of inaction regarding environmental and sanitary externalities derived from the production and consumption patterns;
- The adoption of sustainable consumption policies at governmental offices;
- The internalization of environmental costs caused by productive activities and social agents.

New environmental waste legislation, policy and strategies

The project of General Law on Waste Prevention and Integral Management was elaborated looking forward to solve the problems created by wastes since their origin – production and consumption patterns- with the informed, organized and responsible participation of different sectors of society, in particular the big generators of wastes and producers (importers or traders) of products that create problems at the end of their lives.

The Congress published six books⁸ that provide information to the interested parties about the reasons behind the different provisions of the law, as well as examples of national and international experiences on waste management.

After the law was published the Ministry of Environment and Natural Resources promoted the organization in every federal entity of a network of interested parties from local governments, industry, waste management companies, academic sector and social organizations (Mexican Network on Environmental Management of Wastes or REMEXMAR)⁹, to support capacity building for waste prevention and integral management at local level. This activity was complemented by training courses on the new legislation. At the end of 2006 and the beginning of 2007 the Ministry published two books to help local legislators to develop their own laws on the subject and to explain

(www.un.org/esa/sustdev/csd/csd11/CSD_multiyear_prog_work.htm),
 (www.worldbank.org/participation/sdn/sdn71.pdf).

⁸ The books were written by the author of this document and are available for free at the Web page: www.cristinacortinas.net

⁹ Red Mexicana de Manejo Ambiental de Residuos (REMEXMAR)

the new regulation of hazardous wastes.¹⁰ In addition to these efforts the Ministry, with the support of the International Cooperation Agency of Germany (GTZ), has formed and trained networks of environmental promoters, developed a series of manuals and guidelines, and provided technical assistance to support local governments to develop their legislations and programs on waste prevention and integral management.¹¹ Last but not least the Ministry has published recently a Policy and Strategies for Waste Prevention and Integral Management in Mexico¹² based on waste reduction, reutilization and recycling (3R) that will be developed with the support of the International Cooperation Agency of Japan (JICA).

The Federal District was the first to develop a waste legislation according to the General Law (2003) and soon after other federal entities followed the example, by now about ten of the 32 federal entities have their law focused on a preventive approach and on waste reutilization and recycling.

Municipalities are taking longer to adopt the new legal approach and represent a challenge as municipal administrations only last three years and have a high turnover of public servants making difficult to strengthen their capacity for developing integral and environmentally sound waste management systems.

New projects are under way for the Ministries of Environment and Health to join forces to promote R3 Programs at local level to prevent littering and the transmission of dengue, with the support of health and environmental promoters and the informed, organized and active participation of municipal authorities and communities.

Conclusions

Thanks to the concerns created by the globalization of trade, the increase of the volume and complexity of the composition of solid wastes, the interest in adopting schemes to involve producers on end of life products recycling, and the participation of the country in multilateral organizations that promote pollution prevention, as well as sustainable production and consumption, Mexico has a new General Law on Waste Prevention and Integral Management that promotes public participation and more responsible behaviors to cope with the severe problems created by decades of improper and unsustainable management of wastes.

¹⁰ Semarnat. Bases para Legislar la Prevención y Gestión Integral de los Residuos. 2006. y Semarnat. La Regulación de los Residuos Peligrosos en México. 2007. Both books were written by the author of this document and are available for free at the Web page: www.cristinacortinas.net.

¹¹ For more information consult the Web page: www.giresol.org

¹² Semarnat. Política y Estrategias para la Prevención y Gestión Integral de los Residuos en México. 2007. Available at the Web page: www.semarnat.gob.mx