

## TC Document

### I. Basic project data

▪ Country:	Regional
▪ TC Name:	Update of the Latin-American and Caribbean Urban Solid Waste Sector Regional Evaluation
▪ TC Number:	RG-T2704
▪ Team Leader/Members:	Alfredo Rihm (INE/WSA), Team Leader; German Sturzenegger; Diana Rodriguez, Horacio Terraza, Federico Scodelaro, and Liliana López (INE/WSA); Betina Hennig (LEG/SGO); and Martin Soulier (INE/ESC)
▪ Indicate if: Operational Support, Client Support, or Research & Dissemination:	Research & Dissemination
▪ Date of TC Abstract::	November 13, 2015
▪ Beneficiary:	Latin-America and the Caribbean
▪ Executing Agency:	Inter-American Development Bank through the Water and Sanitation Division (INE/WSA)
▪ Donors	Multidonor AquaFund (MAF)
▪ IDB Funding Requested:	US\$750.000
▪ Disbursement period (which includes execution period):	Disbursement: 24 months Execution: 24 months
▪ Required start date:	December 2015
▪ Types of consultants:	Individual consultants and firms
▪ Prepared by Unit:	INE/WSA
▪ Unit of Disbursement Responsibility: (UDR)	INE/WSA
▪ Included in Country Strategy (y/n):	n/a
▪ TC included in CPD (y/n):	n/a
▪ GCI-9 Sector Priority:	Infrastructure for competitiveness and social welfare

### II. Objective and Justification

- 2.1 This Technical Cooperation will finance the update of the 2010 Latin-American and Caribbean Urban Solid Waste Sector Regional Evaluation Report.
- 2.2 The current Latin-American and Caribbean Urban Solid Waste Sector Regional Evaluation Report (EVAL 2010)<sup>1</sup>, has been a useful tool to support the preparation of operations, technical cooperations (TC), and knowledge documents of the IDB<sup>2</sup>. Additionally, it has been a valuable source of support for clients, academic and private sector entities, and other stakeholders, in their efforts and activities in the Solid Waste Management sector. The information available in the EVAL 2010 includes:

<sup>1</sup> BID/PAHO/AIDIS, Report of the Regional Evaluation of Solid Waste Management in LAC 2010; Washington, IDB 2011. Financed with the TC: RG-T1721, Upgrading Regional Assessment Services Management of Municipal Solid Waste (MSW) in Latin America and the Caribbean (LAC), with overall funding of US\$584,000 (Multidonor Aquafund US\$378,000), and in collaboration with external partners (PAHO and AIDIS). Including also a web platform located in the IDB server.

<sup>2</sup> For instance: it has been used for the preparation operations such as, BL-L1021(Solid Waste Management Project II in Belize, in preparation); BR-L1383; (Environmental Sanitation Program for Federal District - Brasília Sustentável II, Brazil, in preparation); PE-L1092 (Development Solid waste Program in Priority Areas, Peru); BO-L1073 (*Programa para la Implementación de la Gestión Integral de Residuos Sólidos en Bolivia*); AR-L1151 (Integrated Solid Waste Management Program, in Argentina); Jamaica, RG-T2356 Caribbean Conference on Solid Waste Management; and Dominican Republic (DR-L1078) Integrated Touristic Development Program for Colonial Santo Domingo (in preparation). Regarding knowledge it has been used in the preparation of the Guideline for the Formalization of Informal Recyclers, 2013, IRR, IDB)

- i. Information on Municipal Solid Waste (MSW)<sup>3</sup>, giving data and analysis in the following aspects: a) socio-economic situation in the region: b) population growth and urbanization; c) economic growth, poverty, employment, and inequality.
- ii. Institutional Framework and Sector Organization: a) institutional framework for MSW management; b) regional organization; c) planning: legal and regulatory framework for solid waste management.
- iii. Provision of Services: a) methods of delivery, b) municipal human resources and contract employees, c) financial sustainability and financial-economic factors, d) Unit Costs for Service: Invoicing: amounts and forms of payment.
- iv. Waste Generation, Coverage, and Quality of Services: a) solid waste generation in LAC, b) public area and street sweeping, c) collection and transportation, d) transfer, e) treatment systems, f) recycling (qualitative approach), g) composting (qualitative approach), h) thermal treatment (qualitative approach), i) final disposal; and j) sorting and recycling by the informal sector.

2.3 Although the EVAL 2010 provides relevant information, it has a number of limitations that have already been identified; this has led to establish several lessons learned, among which are the following, that could be summarized as follows:

Regarding data limitations:

- i. There is an actual lack of information with respect to different phases of solid waste management in LAC municipalities, particularly in those with small population (less than 15.000 inhabitants).
- ii. Regarding recycling and thermal treatment, both areas are still in consolidation and development in the region, which limits the availability of systematized information<sup>4</sup>.
- iii. The lack of financial information for the sector is a recurring problem regardless of the size of the municipality, especially with respect to fees, the cost of services, and municipal budgets allocated to waste management.

Technical Issues:

- iv. There is no unique standard system for the definition of technical indicators<sup>5</sup>.
- v. The EVAL 2010, documented differences across the countries of the region in the use of certain technical terms<sup>6</sup>. This posed a challenge to technical teams in search of comparable information between countries.

Impact and use:

- vi. The EVAL 2010 has been thoroughly cited in operations and TCs of the Bank since its publication.
- vii. However, the web platform has not been established as an alternative to disseminate the publication.

<sup>3</sup> Solid or semi-solid waste produced through the general activities of a population center. Includes waste from households, commercial businesses, services, and institutions, as well as common (non-hazardous) hospital waste, waste from industrial offices, waste collected through street sweeping, and the trimmings of plants and trees along streets and in plazas and public green spaces.

<sup>4</sup> As far as recycling is concerned, it has been estimated that only 2.2% of all MSW in LAC is recycled under some sort of formal arrangement. Only few countries have the formal infrastructure required to classify and recycle MSW. On the issue of waste-to-energy, municipalities throughout the region have shown interest in implementing this type of technology, and several countries have launched preliminary assessments and considered potential projects.

<sup>5</sup> For instance, the information is reported sometimes referred to population, and other waste quantity (e.g. tons of waste sent to a sanitary landfill, or population with service of sanitary landfill), by volume or by weight.

<sup>6</sup> For instance, there is no universal definition for basic infrastructure, such as sanitary landfill. In some cases, the term was used to refer to another type of final disposal such as controlled dumps.

- viii. To date, it has not implemented a formal mechanism for updating these EVALs (PAHO previously worked on the 2002 version, being unable to systemize a process of updating).

2.4 **Regarding the need to update this document now, and periodically:** during the last years (2010 until today) there have been a number of changes regarding the state of the art solid waste management, such as: a) population growth, b) intensive migration, c) new materials entering into the waste stream; d) a growing concern regarding the effects of some specific streams (such as hazardous waste) and materials (such as plastics and micro plastics)<sup>7</sup>, having a deep impact in national policies and regulations; e) changing the consumption patterns, f) the continuous concern about the relation of solid waste management and climate change<sup>8</sup>, g) the growing importance of the informal sector in the collection and recycling, and its formalization process<sup>9</sup>; and h) the enactment or consolidation of new legal bodies, regulations and standards in the region, including: more stringent requirements on the operation and construction of waste management infrastructure, establishing restrictions on the use of landfill towards recycling and treatment, greater involvement of informal recyclers; extended producer responsibility, integration of new waste streams to the agenda<sup>10</sup>. Recently and due to local initiatives, new legal requirements and/or international agreements, several initiatives of national or regional outlooks of solid waste<sup>11</sup> or declaration platforms<sup>12</sup> have been generated with the objective to report their management practices. In both cases it has begun to build an information database of best quality in the region, which is still incipient, although

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<sup>7</sup> a) UNEP: Year Book 2014 emerging issues update Plastic Debris in the Ocean, 2014; b) STAP: Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions, 2012; c) GEF STAP: Marine Debris as a Global Environmental problem Introducing a solutions based framework focused on plastic, 2011.

<sup>8</sup> European Commission: Communication from the Commission to the European Parliament and the Council. The Paris Protocol. A blueprint for tackling global climate change beyond 2020. COM (2015) 81 final/2. 2015.

<sup>9</sup> This topic is addressed by the bank with the TC RG-T2050 Support to the Regional Initiative for the Social and Economic Inclusion of Informal Recyclers; and a new TC (in preparation), RG-T2699 Regional Initiative for Inclusive Recycling.

<sup>10</sup> There are several examples in LAC: **a) Brazil:** The Law No. 12.305 of 2 August 2010 (Institui a Política Nacional de Resíduos Sólidos), which will come into full force in 2018, forcing the closure of dumps in the country, opening sanitary landfills, but also restricts their use after receiving wastes (rejects) mostly coming from recycling and/or treatment. The BR-L1383 –still in preparation- (Environmental Sanitation Program for Federal District Brasília Sustentável II) gives more details about this matter; **b) Colombia:** authorities are working on updating of the Decree 838/2005, which regulates the provision of domiciliary public collection and disposal service of solid waste. This will introduce new environmental standards because of increased demand and the need to incorporate the analysis of alternatives to landfill for treatment and waste utilization technologies. The Bank is assisting in the preparation of this document, with the TC CO-T1326 (Development and Strengthening of Strategic Policies Water and Basic Sanitation); **c) Chile:** it is in the process of enactment of the National Solid Waste Act, which includes the design and implementation of the extended producer responsibility (EPR) strategy, introducing specific streams of industrial and municipal solid waste; that is already impacting on waste diversion to new destinations (recycling) different from sanitary landfills.

<sup>11</sup> For instance: **a) Argentina,** the National Observatory for Integrated Management of Solid Waste (*Observatorio Nacional para la Gestión Integral de Residuos Sólidos Urbanos*), of the Secretary of Environment of Argentina; since 2015 (available at <http://observatoriorsu.ambiente.gob.ar/>); **b) UNEP:** Regional Waste Management Outlook (still in an early stage of developing), since 201; **c) Brazil:** The ABRELPE (Brazilian Association of Cleaning Companies.), periodically publishes the Panorama of Waste Solids. 2015.

<sup>12</sup> For example: **a) Chile:** The National Waste Reporting System (SINADER); it is a declaration system via web, which allows disposal facilities owners, and generators to inform the generation, handling and disposal methods. It includes industrial non-hazardous waste; sludge of POTW, and MSW. It is in force since late 2014; **b) Colombia:** the Single Information System Utility (SUI), available at <http://www.sui.gov.co/SUIAuth/logon.jsp>

promising; j) the remarkable growth and decline in economic activity in LAC; and k) since the release of the EVAL 2010 several projects of the Bank and other institutions, have changed in a relevant way, the local landscape of the management and solid waste<sup>13</sup>.

- 2.5 Considering IDB's activities, experience and background in the sector, an opportunity for improvement has been identified which will be covered in the updated EVAL, including the following topics:
- i. Integrated approach: Increase the coverage of numerical analysis of all the components of the solid waste management system, including the field of treatment and recycling, given that there is new information available.
  - ii. Incorporate (at least in an agglomerate way) information and analysis about other specific waste streams: such as hospital, industry, tourism industry, electronics and construction.
  - iii. Addition of the informal recycler's topic that includes the data collection related to the formalization process.
  - iv. Impact analysis on the Extended Producer Responsibility (EPR) Strategy in LAC.
- 2.6 The topics mentioned above justify the periodical updating of the EVAL Report in order to incorporate new variables and data available. This new information will be used in the design of sector-oriented interventions which ultimately will improve health and environmental conditions of the LAC countries. The updated report will also serve as a learning tool to strengthen the institutional capacity of governments.
- 2.7 In order to promote formal recycling practices in the LAC region, this TC will generate a simple tool that will support authorities to understand the dimension of the market for recyclable waste.
- 2.8 The main objective of this Technical Cooperation (TC) is to update the EVAL 2010 (new EVAL 2015), in order to incorporate the most recent statistics (2010 to the present), data, figures and values of the system, considering the impact of the new policies, regulations, investment, and infrastructure developed in the management system of solid waste in LAC during the last five years. The purpose is to enhance the information in some specific components, such as recycling and thermal treatment; and to incorporate additional waste streams in the analysis. To promote and facilitate their use by taking advantage of digital platforms, other objective is to create a public and user friendly on-line platform to disseminate the updated report (in addition to the publication in paper).
- 2.9 Taking advantage of the growing number of publicly or semi-publicly accessible data sources, a methodology should be proposed that considers the periodical updating of this evaluation (at least every five years). In addition, the TC will consider the preparation of two additional sub-portals for the on-line platform: a) an urban solid waste sector and risk management interactive decision-making resource for planning purposes (clients oriented); and b) an urban solid waste recycling sector value quantification tool in order to carry out preliminary assessments about feasibility of develop recycling activities.

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<sup>13</sup> See IDB: Solid Waste Management in Latin America and the Caribbean, one pager publication, available at <http://brik.iadb.org/handle/iadb/90797>. 2015

2.10 This TC directly contributes the Ninth Replenishment of the Inter-American Development Bank (GCI-9) related to "Poverty reduction and equity enhancement.", by providing information that will allow to make informed decisions, and therefore, by promoting an adequate solid waste management system in the region. Additionally, the TC will meet the requirements of environmental sustainability "Support for climate change initiatives, energy efficiency and environmental sustainability." The TC is aligned with INE/WSA Sectorial Framework Document (SFD) approved by the Bank at the end of 2014<sup>14</sup>. This TC is also aligned with the document GN-2487 *Proposal for the establishment of the Multidonor AquaFund*, specifically, with section VII A by promoting "improvement in legal framework and regulatory reform support as well as institutional strengthening with respect to regulatory functions in the sector".

### III. Description of activities and outputs

3.1 The activities of the TC are described in the three components described below:

3.2 **Component I. Development of the new Latin American and Caribbean urban solid waste sector regional evaluation report (US\$560,000).** This component will finance the updated report, including all components of the integrated solid waste management system. The activities for this component will include the gathering, processing and analysis of the data of the solid waste management sector in the region with the result of the final document (EVAL 2015). Specifically the activities under this Component I are:

- Methodology systematization design: includes the review of the new data and reports available, and the comprehensive analysis of the previously used indicators (including calculation procedures). This activity will generate final set of indicators for review and validation.
- Data collection and processing procedures: It includes the collection of the available information in countries (regional and local), considering electronic data gathering.
- Publication of the final 2015 EVAL Report that will include final analysis and conclusions: final definition, edition and paper version publication.
- On-line platform development: hosting and uploading of the updated data. This product will be the main consultation tool for stakeholders. It will allow reviewing and updating information as it becomes available. It is an improved version of the existing platform of INE/WSA, and the platforms will be hosted by the IDB server<sup>15</sup>.

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<sup>14</sup> Inter-American Development Bank Water and Sanitation Sector Framework Document Water and Sanitation Division November 2014. "Solid waste management is another important issue, given its impact on the proper functioning of the sewerage system, including storm drainage, and on the quality of water bodies. Although the last decade has seen significant progress in trash collection (with urban coverage of 93%116) and street cleaning, and although the urban population with access to adequate sanitary landfills has doubled, there are still many challenges for integrated management"

<sup>15</sup> Currently in <http://www19.iadb.org/Residuos/bienvenida/Inicio.bid>

- Updating methodology: Considering the previous activities and outcomes, a proposal for a dynamic self-updating system will be incorporated. The financial proposal for the updating process will be also included as an output.

**3.3 Component II. Development of two additional on-line tools for the urban solid waste and recycling sectors public policy management (US\$140,000):**

This component will finance the development of two specific tools complementary to the EVAL (both tools will be hosted in the same site of the new EVAL):

- Urban solid waste sector and risk management interactive decision-making sub-portal: It will gather all the publications related to this topic available by the IADB with the objective to guide decision makers. It will also consider the preparation of basic toolkits for decision makers.
- Urban solid waste recycling sector value quantification sub-portal: to develop a simple tool to review the feasibility of having a sufficient market for recyclable waste in a specific area.

**3.4 Component III. Dissemination and promotion of the report, on-line platform and sub-portals (US\$50,000):**

- This component includes the participation<sup>16</sup> of different stakeholders<sup>17</sup> in seminars, workshops and meetings to promote and disseminate the main findings of the report. Additionally, this component will promote the use of the online platform and sub-portals. This component will be carried out in coordination with the Country Reps, in order to maximize the knowledge sharing activities. Also this component will finance the initial maintenance of the on-line platform.

**Indicative Matrix Output and Outcome Indicators**

Components	Output Indicators	Unit	Baseline 2015	Year 1 Goal	Year 2 Goal	Verification
Component I: Development of the new Latin American and Caribbean urban solid waste sector regional evaluation report	Methodology systematization design for data gathering and preparation of the final set of indicators approved by the Bank	Final reports approved	0	1	1	Report received and approved by IDB
	Data collection of solid waste management, and technical and statistical processing procedures completed and approved by the Bank	Final report on data gathered approved by the Bank	0	1	1	Report received and approved by IDB

<sup>16</sup> It includes local agencies responsible of the solid waste management, institutions and NGOs and consultants, technical associations, such ISWA, AIDIS (internationally), and others as ABRELPE (locally), and development institutions such as WB, CAF, as well as PAHO, UNEP, GEF and others. The specific group will be defined during the beginning of the execution of the TC.

<sup>17</sup> It includes local agencies responsible of the solid waste management, institutions and NGOs and consultants, technical associations, such ISWA, AIDIS (internationally), and others as ABRELPE (locally), and development institutions such as WB, CAF, as well as PAHO, UNEP, GEF and others. The specific group will be defined during the beginning of the execution of the TC.

	2015 Regional Evaluation of Solid Waste Management published	Final publications printed	0	0	1	EVAL 2015 published
	On-line platform development of the 2015 Report implemented and online	Number of web platforms implemented and online	0	0	1	EVAL2015 platform hosted in IDB server
	Updating mechanism for the Regional Evaluation proposed and approved by the Bank	Final reports printed	0	0	1	Report received and approved by IDB
Component II. Development of two additional on-line tools for the urban solid waste and recycling sectors public policy management	Urban solid waste sector and risk management interactive decision-making sub-portal designed and implemented online	Number of sub-portals implemented and online	0	0	1	platform hosted in IDB server
	Urban solid waste recycling sector value quantification sub-portal developed and implemented online	Number of sub-portals implemented and online	0	0	1	platform hosted in IDB server
Component III. Promotion of the report, on-line platform and sub-portals and their use	Seminar on EVAL2015 completed	Seminars delivered	0	1	2	Seminars held

Components	Outcome Indicators	Unit	Baseline 2015	Year 1 Goals	Goal (end of project)	Verification
Component I, II and III	Bank driven knowledge or disseminated produced on urban solid waste management has been used for operations or by clients (knowledge produced)	Number of citations for the 2015 report and online portals	0	0	6	Operations quoting the 2015 Report
Component I, II and III	Client driven knowledge produced or disseminated has been used by policy/regulatory institutions (knowledge produced)	Number of citations for the 2015 report and online portals	0	0	3	National or local policy frameworks quoting the 2015 Report

3.5 The total amount of funding is US\$750,000 which is financed by the Multidonor Aquafund. The structure of the budget is presented in the table below ([detailed budget](#)).

**Indicative Budget (in US\$)**

Component	Description	IDB/Fund Funding	Counterpart Funding	Total
Component I	Costs are related to the development of the updated and updatable report and its publication versions	\$560.000	N/A	\$560.000
Component II	Costs are related to the development and publication of the on-line platform's two sub-portals	\$140.000	N/A	\$140.000
Component III	Dissemination	\$50.000	N/A	\$50.000
<b>TOTAL</b>		<b>\$750.000</b>	<b>N/A</b>	<b>\$750.000</b>

#### IV. Executing agency and execution structure

4.1 This is a Bank originated TC focused on updating, developing, promoting and putting to use an innovative knowledge and decision-making toolkit (report, on-line platform and sub-portals) developed by the IDB Water and Sanitation Division. Therefore, the IDB will be the executing agency. The Bank will contract individual consultants, consulting firms, and non-consulting services in accordance with Bank's current procurement policies and procedures.

#### V. Project risks and issues

5.1 The major risk in achieving the objectives of this TC is the potential low interest on the toolkit from regional governments. To mitigate that risk, a strategy for engaging relevant stakeholders in developing the toolkit and promoting the benefits of its use will be designed and applied through Component 3 of the TC, including the delivery of 3 seminars disseminating results and promoting the use of the online tools.

#### VI. Exceptions to Bank policies

6.1 No exceptions to Bank policies.

#### VII. Environmental and Social Classification

7.1 Following ESG's project classification process (Safeguard Policy Filter and Safeguard Screening Form) requirements, it has been determined that this project falls under Category C. No environmental assessment studies or consultations are required for Category "C" operations. ([Safeguard Policy Filter Report](#)).

#### Required Annexes:

- Annex I: [Terms of Reference I](#);  
[Terms of Reference II](#);  
[Terms of Reference III](#)
- Annex II: [Procurement Plan](#)

UPDATE OF THE LATIN-AMERICAN AND CARIBBEAN URBAN SOLID WASTE SECTOR REGIONAL  
EVALUATION

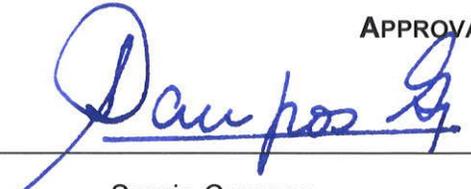
RG-T2704

CERTIFICATION

I hereby certify that this operation was approved for financing under the Multidonor AquaFund (MAF) through a communication dated November 13, 2015 signed by Felipe Caicedo, ORP/GCM. Also, I certify that resources from said fund are available for up to **US\$750,000** in order to finance the activities described and budgeted in this document. This certification reserves resources for the referenced project for a period of four (4) calendar months counted from the date of eligibility from the funding source. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in US dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this operation. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.

  
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Sonia M. Rivera FC  
Chief  
Grants and Cofinancing Management Unit  
ORP/GCM

12/09/2015  
Date

Approved:   
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Sergio Campos  
Division Chief  
Water and Sanitation Division  
INE/WSA

APPROVAL

12/09/2015  
Date