

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK
MULTILATERAL INVESTMENT FUND

DOMINICAN REPUBLIC

**INCLUSION OF INFORMAL COLLECTORS IN INTEGRATED
SYSTEMS FOR MANAGEMENT OF RECYCLABLE SOLID WASTE**

(DR-M1046)

DONORS MEMORANDUM

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PROJECT SUMMARY
INCLUSION OF INFORMAL COLLECTORS IN INTEGRATED SYSTEMS FOR MANAGEMENT OF
RECYCLABLE SOLID WASTE
(DR-M1046)

Of the more than 11,000 daily tons of solid waste being generated in the Dominican Republic, an estimated 38% is recyclable material, the vast majority of which is discarded and taken to more than 328 open-air dumps. Against this backdrop, recycling is not only a necessity but also an income-generating opportunity: the Ministry of the Environment and Natural Resources estimates that the 7% of recovered recyclable material generated some US\$25 million to US\$30 million.¹

This is an opportunity to benefit informal collectors, a vulnerable population that is not part of the formal collection systems. This intervention aims to create inclusive formal collection systems that promote source separation and selective waste collection in the provincial capital (Santo Domingo Este) and in two priority municipios² (San Pedro de Macorís and Samaná).

The project is based on a model of social and economic inclusion of collectors. It will benefit 120 informal collectors who will form their own cooperatives, be integrated into collection routes, and run recycling centers with support from the municipios. The intervention uses a holistic approach that includes training for 35 municipal officials and activities to raise awareness on source-separation and selective-collection practices among 30 schools and 30,000 households to be included in the collection routes. These activities are expected to complement the incorporation of collectors into the formal sector by building relationships to help them raise their standard of living and join the recycling value chain on a sustainable basis.

The project will be executed by the Red Nacional de Apoyo Empresarial a la Protección Ambiental, Inc. [National Business Support Network for Environmental Protection, Inc.] (ECORED), a nongovernmental organization committed to promoting sustainable development by promoting good consumption and production practices in harmony with the environment. ECORED has interagency collaboration agreements with public- and private-sector stakeholders.

¹ 2013 data, taken from the figures on exports of recyclable materials from the Dominican Export and Investment Center.

² “Priority municipios” are a set of 21 municipios given priority in the Policy for Integrated Management of Municipal Solid Waste, because they generate around 80% of the country’s solid waste.

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ABBREVIATIONS

ECORED	Red Nacional de Apoyo Empresarial a la Protección Ambiental, Inc. [National Business Support Network for Environmental Protection, Inc.]
INE/WSA	IDB Water and Sanitation Division
IRR	Regional Initiative for Inclusive Recycling
MSMEs	Micro, small, and medium-sized enterprises
NGO	Nongovernmental organization
PSR	Project status report
RD\$	Dominican peso

EXECUTIVE SUMMARY

INCLUSION OF INFORMAL COLLECTORS IN INTEGRATED SYSTEMS FOR MANAGEMENT OF RECYCLABLE SOLID WASTE

(DR-M1046)

Country and geographic location:	Dominican Republic: The municipios of Santo Domingo Este (Santo Domingo province), San Pedro de Macorís (San Pedro de Macorís province), and Samaná (Samaná province)		
Executing agency:	Red Nacional de Apoyo Empresarial a la Protección Ambiental, Inc. [National Business Support Network for Environmental Protection, Inc.] (ECORED)		
Access area:	Access to Markets and Skills		
Agenda:	Linking Small Firms to Value Chains		
Coordination with other donors/Bank operations:	This project is part of the Regional Initiative for Inclusive Recycling, whose partners are the MIF, the IDB's Water and Sanitation Division (INE/WSA), Fundación Avina, Coca-Cola Latin America, and the Latin American Recyclers' Network (Red LACRE).		
Direct beneficiaries:	120 informal collectors (75% men and 25% women) 35 municipal officials		
Indirect beneficiaries:	600 persons (collectors' family members) who depend on the collection of recyclables and who live in vulnerable conditions. 30,000 households (150,000 residents) in the three municipios where awareness is raised regarding source separation.		
Financing:	Technical cooperation:	US\$398,383	46%
	Investment:	US\$ 0	
	Loan:	US\$ 0	
	Total MIF contribution:	US\$398,383	
	Counterpart:	US\$417,985	54%
	Cofinancing (if any)	US\$ 0	0%
	Total project budget	US\$816,368	100%
Execution and disbursement periods:	24 months for execution, and 30 months for disbursement.		

Special contractual conditions:

As conditions precedent to the first disbursement, (i) the project coordinator must be designated; (ii) letters of commitment/agreements must be signed with the governments of the municipios where the project will be executed; (iii) the annual work plan for the project's first year and the procurement plan must be submitted; (iv) the administrative and communication heads and the technical assistance providers must have been selected; and (v) the Advisory Board must be formed.

Environmental and social impact review:

This operation has been pre-evaluated and classified in accordance with the Bank's Environment and Safeguards Compliance Policy (operational policy OP-703). Given that the impacts and risks are limited, it has been proposed that this be classified as a category "C" operation.

Unit responsible for disbursements:

Country Office in the Dominican Republic (COF/CDR).

I. BACKGROUND AND RATIONALE

A. Diagnostic assessment of the problem to be addressed by the project

- 1.1 The Dominican Republic generates an estimated 11,000 tons of solid waste per day—a 120% increase over the 5,000 daily tons collected in 2001.³ Of the solid waste that is generated, 38% is recyclable material of which the vast majority is discarded. Against this backdrop, recycling is not only a necessity but an opportunity to generate economic activity. The Ministry of the Environment and Natural Resources estimates that the 7% of recovered recyclable material in 2013 generated some US\$25 million to US\$30 million.⁴
- 1.2 Today, the vast majority of recyclable material ends up in the more than 328 open-air dumps throughout the country. The recyclables are recovered by informal collectors (known as *buzos*) who separate waste on the street or in dumps under extremely hazardous working conditions, as their handling of waste without proper protection exposes them to accidents and disease. Though specific studies on the topic are lacking, the country has an estimated 5,000 informal collectors who work primarily in dumps. The recycled materials are sold to intermediaries, who reap most of the profits from their sale.
- 1.3 There is no nationwide system for integrated solid waste management to promote the social inclusion of collectors and source separation.⁵ In response to this problem, the Ministry of the Environment and Natural Resources launched its Policy for Integrated Management of Municipal Solid Waste⁶ in early 2014. This policy prioritizes intervention in 21 municipios⁷ targeted because they generate about 80% of the country's solid waste. This project will focus on the provincial capital (Santo Domingo Este) and two priority municipios (San Pedro de Macorís and Samaná):
- 1.4 *Santo Domingo Este* is the country's largest municipio, with some 966,000 residents. It is an eminently urban municipio that encompasses more than 200 socioeconomically diverse neighborhoods. Among its most important neighborhoods are Alma Rosa and Ensanche Ozama, where the proposed action will be carried out, since the municipio has a high level of commercial and economic activity, with more than 2,000 businesses along its major thoroughfares.
- 1.5 In 2010 the municipio's unemployment rate was 5.8% for men and 8.7% for women, compared to the nationwide rate of 14.4%. Regarding basic services,

³ http://www.cedaf.org.do/Programas3Rs/seminarios/jica_2014/16.pdf

⁴ http://opd.org.do/images/PDF_ARTICULOS/republica-dominicana-genera-11000-toneladas-de-basura-por-dia.pdf

⁵ An exception is the municipio of Las Placetas, which implemented a “Zero Waste” program in 2010.

⁶ <http://www.ambiente.gob.do/IA/Presentacion/Documents/Politica-Residuos-Solidos-Municipales.pdf>.

⁷ <http://listin.com.do/la-republica/2014/2/4/309490/Lanzan-politica-para-la-gestion-integral-de-residuos-solidos>.

- approximately 99% of the municipio's households have access to electricity, but only 54% have in-home water service, and 18% have no garbage collection service. ECORED's 2013 characterization study found that 91.41% of the municipio's solid waste is recyclable material.
- 1.6 Santo Domingo Este produces some 1,200 tons of waste per day. The municipio is divided into three districts. One district has a container-based collection system operated by the municipal government. The other two subcontract their collection service to a private company that is paid a specified amount per ton of transported waste. Final disposal of the waste occurs at the Duquesa dump, located in the municipio of Santo Domingo Norte and operated by Lajun Corporation, a private company.
 - 1.7 The informal collectors generally work in the streets, collecting and selling primarily glass bottles and metal to intermediaries, who in turn sell the material to companies. There is also a waste transfer point⁸ where another 120 collectors separate plastic, cardboard, and metal for direct sale to intermediaries, who purchase the material at the transfer point several times per week.
 - 1.8 *San Pedro de Macorís* has some 275,000 residents,⁹ or 81% of the province's population, which is mostly urban (89.21%). Much of the municipio's economy revolves around industry in the free-trade zone,¹⁰ along with significant commerce and liquor production.
 - 1.9 The province's unemployment rate is above the national average (14.4%); the municipio has a poverty rate of 41.6% and an extreme poverty rate of 4% (2002). Twelve percent of the province's population has never attended school, which is indicative of a high illiteracy rate.
 - 1.10 As for basic services, 95% of the province's households have access to electricity, 59.5% of its population has water service in their home or yard, and 38.39% of its households have no garbage collection service. Generally, where there is no formal collection system, communities tend to dump waste along river banks or in ditches or they burn it, causing health and safety problems. ECORED's 2014 characterization study found that 98% of the solid waste generated in the municipio is recyclable material.
 - 1.11 San Pedro de Macorís produces some 300 tons of waste per day, and its collection services are subcontracted to a private firm for a flat monthly fee. Operational controls are lacking at the current municipal dumps, where 180 to 220 collectors

⁸ Transfer points or stations are facilities where waste is brought from municipios located at a distance from the final disposal site (treatment plants, sanitary landfills, or dumps) for more efficient transportation of the waste generated. Generally, collection trucks drop the waste at the transfer station, where it is compacted in containers for transportation to the final disposal site.

⁹ Projected in 2007 by the National Statistics Office, based on the 2002 national census.

¹⁰ A free-trade zone is a specific territory offering certain tax benefits, such as exemption from import duties on goods and/or from specific taxes.

- pick out cardboard, plastic, metal, and fabric for sale to companies and intermediaries that send trucks to pick up these materials directly from the dump.
- 1.12 *Samaná* has 58,156 residents (according to the 2010 national census), 79.24% of whom are classified as urban. Its unemployment rate is well above the national average (20.3% for men and 28.68% for women) and that of the other two municipios where the project will be implemented. Moreover, 15.61% of its population has never attended school; 58% is living in poverty, and 10% is in extreme poverty.
 - 1.13 As for basic services, 87.54% of the province's households have access to electricity, only 37.97% of its population has water service in their home or yard, and 68.34% of its households have no garbage collection service. ECORED's 2014 characterization study found that 79% of the solid waste generated in the municipio is recyclable material.
 - 1.14 *Samaná* is a small municipio and a tourist destination that produces some 35 tons of waste per day. The municipal government collects the waste and transports it to the municipal dump. For more than a year now, the Ministry of the Environment and Natural Resources has been pursuing the construction of a provincial landfill that would leave the collectors who work at the existing dump with no source of income. An alternative is therefore needed, allowing them to maintain or increase their level of income.
 - 1.15 Most of the estimated 50 informal collectors work on a steady basis collecting plastic for sale to a recycling company, which removes the material from the dump once a week. The other collectors sporadically collect organic waste for sale as pig feed.
 - 1.16 **The problem.** Informal collectors are not part of the formal collection systems, and these systems do not promote selective waste collection. This results in low standards of living and insufficient income levels for recyclers working in hazardous, unhealthy conditions. The main causes of this problem are the following:
 - 1.17 *Informal status of collectors.* Although recyclers have organized into groups in a number of Dominican municipios over the past five years,¹¹ collectors in the target municipios work on their own under conditions of social exclusion, as their work is not recognized by the municipal authorities or the general public. Little knowledge exists as to the number of collectors and their socioeconomic conditions at the national level.

¹¹ The municipio of Santiago has the Asociación de Recicladores del Ecoparque Rafey [Rafey Ecopark Recyclers' Association], which has joined the Red Latinoamericana de Recolectores [Latin American Recyclers' Network] (Red LACRE); and northern Santo Domingo has five community-based environmental sanitation foundations (Fundación Escoba, FUNDSACO, FUNDSAZURZA, FUNDEMAPU, and FUCOSACUSCIGUA-27) that provide services to the municipio such as cleaning/trash collection, garden maintenance, and others.

- 1.18 *Limited technical capacity at the municipal level.* Municipal officials in charge of street cleaning and trash pickup, and those who work in the Municipal Environmental Management Units, are generally responsible for waste management but often lack the technical capacity needed to design and operate recycling systems. Limitations in the oversight mechanisms of the Ministry of the Environment and Natural Resources exert greater pressure on the municipal governments that, in accordance with the Policy for Integrated Management of Municipal Solid Waste, are responsible for closing dumps and setting a rate schedule that reflects the costs associated with integrated solid waste management.
- 1.19 *Little awareness of the importance of recycling among the general public.* Most companies and other large-scale generators of waste (schools, offices, etc.) do not separate their waste. With waste production estimated at 0.6 to 1.2 kilograms per person per day,¹² public participation is key to raising environmental awareness and creating a change in people's behavior and attitudes in favor of source separation and recycling.
- 1.20 The project aims to create formal collection systems that include recyclers by promoting source separation¹³ and selective collection¹⁴ of waste in three of the country's municipios: Santo Domingo Este, Samaná, and San Pedro de Macorís.¹⁵

B. Beneficiaries

- 1.21 The direct beneficiaries of the project are 120 informal collectors (90 men and 30 women) in the municipios of Santo Domingo Este, Samaná, and San Pedro de Macorís whose work entails collecting recyclable material (particularly metal, glass bottles, plastic, paper, and cardboard) in the streets or at the municipal dumps. These collectors work in hazardous conditions and are exposed to a variety of vectors and diseases. Though precise figures on the recyclers' socioeconomic conditions are lacking, the Ministry of the Environment and Natural Resources estimates their average income in the range of US\$4 to US\$10

¹² <http://www.cedaf.org.do/Programas3Rs/presentaciones/PRESENTACION%20RESIDUOS%20SOLIDOS%20DGII.pdf>.

¹³ Defined as the act of separating solid waste that is deemed reusable. This act is permitted only if performed at the generation source (e.g., households, businesses, or industrial sites; or at facilities for the sale or reuse of organic solid waste). (This definition is taken from the *Manual para el Programa de Formalización de Recicladores y Recolección Selectiva de Residuos Sólidos del Ámbito Municipal* [Handbook for the Program for Incorporation of Recyclers into the Formal Sector and Selective Collection of Municipal Solid Waste], which resulted from the knowledge-transfer operation ATN/ME-10929-RG.)

¹⁴ This refers to the collection of potentially reusable solid waste from households, businesses, or activities generating similar waste. Source: *Ibid.*

¹⁵ The following selection criteria were used: (a) prioritization of municipios in the Policy for Integrated Management of Municipal Solid Waste; (b) political will of municipal authorities; and (c) opportunity for change, defined as continuation of a collection policy (e.g., Santo Domingo had already switched to a container-based collection system) or implementation of a new policy (e.g., construction of a provincial landfill in Samaná).

- per day, on the basis of data gathered in 2013. The project is expected to have an impact that would enable them to increase their income by 75%.
- 1.22 A census conducted by ECORED found that collectors who work in Santo Domingo Este did not complete primary school and have been working as collectors for an average of eight years.
 - 1.23 In San Pedro de Macorís, the collectors work—and many of them live—in the dump itself or in the immediate vicinity, under unhealthy and hazardous conditions. A small percentage of them—between 30 and 40 people—collect recyclable materials in the streets of the municipio’s urban areas.
 - 1.24 This intervention will train some 35 municipal officials who work in units responsible for street cleaning and trash pickup and in the Municipal Environmental Management Units, and who are the senior officials in charge of solid waste management in their jurisdictions, for the purpose of increasing the capacity to provide the service and develop environmental education strategies for the public at the municipal level.
- C. Contribution to the MIF Mandate, the Access Framework, and the Bank’s strategy**
- 1.25 The project will help increase the collectors’ income by promoting more inclusive collection systems and the formation of partnerships, providing them with training, and linking them to the recyclables market in a proactive, fair manner. All project activities are aimed at reducing the vulnerability of the beneficiary group, directly contributing to the MIF mandate of poverty reduction and support for economic growth.
 - 1.26 **Link to the Agenda.** The project will contribute to the results and knowledge products of the “**Linking Small Firms to Value Chains**” agenda. The impact of this agenda is to create better economic opportunities for low-income, vulnerable populations by developing practices for their economic inclusion in value chains, with a special focus on the recycling market. The outcome of the agenda is to test and systematize methodologies for generating business opportunities (for collectors, in this case) and reduce barriers to their effective incorporation into the recycling value chain. This project will directly contribute to this objective by generating a methodology for integrated waste management that will coordinate the efforts of public and private stakeholders to enable collectors to capitalize on economic opportunities, improve their working conditions, and increase their income.
 - 1.27 This project is framed within the Regional Initiative for Inclusive Recycling (IRR) (RG-M1179), a platform for strategic multisector partnerships between stakeholders in the recycling sector (collectors, recycling industry, consumer product firms, municipalities, knowledge institutions, and civil society organizations). The IRR provides a venue for stakeholders to engage in dialogue and take action so as to achieve greater scale and impact through specific

- initiatives to disseminate good practices and effective models for the economic inclusion of collectors. It is a joint effort of the MIF and Fundación Avina, with technical and financial support from the Bank's Water and Sanitation Division (INE/WSA) through the AquaFund, the Latin American Collectors' Network (Red LACRE), and The Coca-Cola Company.
- 1.28 The IRR seeks to bring about systemic change in: (i) the economic and social conditions of informal recyclers and their families; (ii) public policies, by improving municipal capacities to work with informal recyclers and to develop inclusive waste management systems, while strengthening the regulatory framework and creating laws for enforcing rules and policies in the sector; and (iii) the private sector, in various aspects that range from including collectors in value chains and encouraging greater market responsiveness and transparency to facilitating the traceability of recycled materials used as inputs. This project is consistent with the IRR's objectives.
- 1.29 In addition to projects in execution in Chile ("Inclusive Recycling: Government, Businesses, and Waste Pickers" (CH-M1055)), Mexico ("Creation of an Inclusive Recycling System in Torreón, Coahuila" (ME-M1085)), Panama ("Zero Waste: Recycling Routes in Guna Yala, Panama" (RG-T2050; ATN/OC-12906-RG)), and Brazil ("Strengthening of Selective Collection Systems with Social and Productive Inclusion of Recyclers in Municipios in the State of Minas Gerais" (RG-T2050; ATN/OC-13921-RG))—which have benefited 2,600 recyclers in 20 municipalities in these countries—the IRR has also achieved the following: (i) training of 16,600 people, including recyclers, local officials, and business owners; (ii) provision of technical assistance in the development of public policies and the structuring of national labor networks for the governments of Colombia,¹⁶ Peru,¹⁷ and Ecuador; (iii) support in formalizing and strengthening Red Nica in Nicaragua;¹⁸ and (iv) creation of three knowledge products on groundbreaking topics for the region, e.g., gender inclusiveness in projects, guidelines for designing and implementing plans for the inclusion of informal recyclers working at sites of final disposal of solid waste, and a comparative policy analysis of

¹⁶ Construction of the Alianza para el Reciclaje Inclusivo [Alliance for Inclusive Recycling], which for the first time brings together the national government, recyclers' organizations, and private companies in Colombia to implement a national strategy for inclusion and promotion of recycling.

¹⁷ Specialists and decision-makers from 64 municipios were trained. The Declaration of Piura, a public commitment to comply with national laws on integrated solid waste management, was signed; this includes implementation of selective collection programs with the inclusion of formalized recyclers.

¹⁸ The network consists of seven recyclers' cooperatives that have obtained legal status in La Chureca (Managua), Bluefields, La Centroamérica (Managua), Ciudad Sandino, Ometepe, Esteli, and Matagalpa. A meeting of Central American leaders was held on 21-22 September 2012 with the participation of recyclers from Costa Rica, Nicaragua, Guatemala, El Salvador, Honduras, Panama, and the Dominican Republic.

15 countries in the region, which examined regulatory, organizational, and market considerations.¹⁹

- 1.30 **Collaboration with the IDB Group.** The objective of the Bank's country strategy for the 2013-2016 period is to stimulate growth compatible with the creation of quality jobs, so as to enable a sustained reduction in poverty levels. It concentrates its action in six sectors within three key pillars: (i) strengthening the human capital base through interventions in the social protection, education, and health sectors; (ii) macroeconomic stability and public spending efficiency through support for fiscal management and efficiency and financial sustainability in the electricity sector; and (iii) productive development and competitiveness, with particular emphasis on linking different sectors and boosting the productivity of micro, small, and medium-sized enterprises (MSMEs). Gender, as a crosscutting action area, is incorporated in the human capital pillar sectors, while the climate change adaptation perspective is incorporated in the productive development and energy sectors. The country strategy establishes a mandate for the private-sector windows to support interventions promoting infrastructure development, human capital, and the productive sectors.
- 1.31 Due to its focus on inclusive recycling, this project fits within the productive development pillar, through proposed actions to achieve the economic and social inclusion of recyclers in three Dominican municipios, and to implement source separation and selective collection through a pilot plan to be developed. The incorporation of the proposed recyclers' associations into the formal sector is aligned with increased MSME productivity and market access, emphasizing job creation in high-poverty areas.

II. OBJECTIVES AND COMPONENTS

A. Objectives

- 2.1 The expected **impact** of the project is an increase in collectors' income and an improvement in their working conditions. The expected **outcome** is the inclusion of collectors in efficient systems for selective waste collection in three Dominican municipios.

B. Description of model/solution/intervention

- 2.2 Source separation and selective collection²⁰ entail a change in the municipio's solid waste management. This change will generate impacts such as savings on the cost of waste management for the municipio, specifically in collecting and transporting waste, as well as improved working conditions, increased volumes of

¹⁹ [Preparing Informal Recycler Inclusion Plans: An Operational Guide](#), [Characteristics of the Informal Recycling Sector in Latin America](#), and [Gender and Recycling: Tools for Project Design and Implementation](#).

²⁰ For definitions, see footnotes 8 and 9.

- material, and hence increased income for recyclers, all of which will have an impact on the recyclers' standard of living.
- 2.3 The project calls for a comprehensive, sustainable model that actively involves the public sector, the private sector, and the residents of beneficiary municipios through partnerships. In each municipio, stakeholders such as the municipal government, health centers, schools, and the general public will become involved, with the understanding that each municipio has unique characteristics that make the project sustainable and should be taken into account at all times. The executing agency will work simultaneously on multiple fronts:
- 2.4 *Municipios.* Through the Dominican Federation of Municipios and the Dominican Municipal League, the executing agency established initial contacts with interested municipios. The signing of collaboration agreements has formalized the commitment of three mayors to collaborate on the implementation and sustainability of the initiative. The project will develop individual plans for each municipio, which will include (i) a characterization study, (ii) surveys of a sampling of collectors, (iii) a census of collectors, (iv) interviews of key municipal personnel, and (v) onsite evaluations. Project-related activities will be periodically validated with the mayors and municipal officials.
- 2.5 *Collectors.* At the heart of the model for the management of recyclable solid waste are the informal collectors. The project includes training on recycling-related topics (endorsed by the Ministry of the Environment and Natural Resources), advising on how to form cooperatives, and assistance during the first year of selective waste collection at the household level. Collection routes will be assigned and subsequently supervised by municipal staff. Materials are expected to be delivered to the collection centers at least eight times per month.
- 2.6 The three new collectors' cooperatives will oversee three collection centers, to be located near the pilot areas. The physical space and equipment for the centers will be donated, or the right to their use granted, by the municipal governments. The provision of space for cooperatives to store materials is one of the main in-kind contributions of the municipal governments, and it is set forth in the agreements they have signed as one of their responsibilities for the project. The collection centers will be provided for exclusive use by the collectors' cooperatives. Utilities (power, telephone, and water) will also be paid for by the municipal governments for the first 18 months of operation,²¹ during which time the cooperatives will increase their revenues to the point where they can pay for all utilities. Thereafter, for the tracking of materials, the collection centers will maintain daily logs, and each collector will be given a receipt stating the weight and type of material

²¹ The assumptions are based on the experience of Ciudad Saludable in similar projects; the estimates use data from the characterization studies; gradual incorporation of households, schools, and companies into the program is assumed; this will gradually increase the amount of recyclable waste collected, together with the number of collectors participating in the program, which will boost the amount collected by broadening the area of influence and therefore increasing the sale of the materials.

delivered. The material will accumulate until there is enough volume to sell (at an estimated frequency of up to twice monthly), and each collector will be paid on the basis of collected volume at market prices.²² A percentage of sales revenues, estimated at about 10%, will be used to pay the collection centers' general expenses. It will take the collection centers an estimated 18 months to become financially sustainable. A feasibility analysis was used to project that the cooperatives will have enough revenues by that time to cover their operating costs.

- 2.7 *Schools and the general public.* Source separation in households and schools in the beneficiary municipios will be promoted, thereby raising awareness on the importance of waste management and the role of collectors in this value chain. For the general public, the accumulation of trash in containers is a related problem that can be resolved through a coordinated effort of residents, collectors, and the municipal government. For the participation of private enterprises and schools, partnerships will be formalized with the collectors' cooperatives through letters of agreement.

C. Components

Component I: Strengthening of municipios for integrated management of (recyclable) solid waste (MIF: US\$6,000; counterpart: US\$57,000)

- 2.8 The objective of this component is to build the municipios' capacities to achieve integrated management of their recyclable solid waste. Activities under this component will target municipal officials responsible for trash pickup and the environment and those who work in the Municipal Environmental Management Units. However, other officials (e.g., those who manage the dumps and those in charge of municipal revenues) are expected to participate in the workshops validating the municipio's diagnostic assessment and in the participatory development of the integrated solid waste management plan. A distinguishing factor in the proposed training is the focus on integrated management of solid waste within the framework of the project, which will ensure better learning of the model. The officials will receive training on something that they will soon see implemented in their respective municipios. The knowledge will be consolidated when the learning is put into practice.
- 2.9 This component includes the following activities: (i) determination of the state of waste management in each municipio, including the characterization of its solid waste, gathering of primary data, and a socioeconomic census of collectors; (ii) assistance in developing integrated waste management plans using a participatory approach; and (iii) training of municipal officials, including a workshop on source-separation and selective-collection systems that are inclusive

²² Material prices (in Dominican pesos) as of September 2014: polyethylene terephthalate (PET) plastic: RD\$2.50 per pound; plastic gallon containers: RD\$2.00 each; paper (bond and newsprint): RD\$3.00 per kilogram; cardboard: RD\$2.00 per kilogram; Tetra Pak containers: RD\$1.00 per kilogram; metal: RD\$2.00 per kilogram; tin cans: RD\$2.00 per kilogram; and aluminum cans: RD\$3.00 per kilogram.

- of recyclers, provided by ECORED's project coordination unit; analysis of the existing legal framework; and discussion roundtables with participants.
- 2.10 The following outcomes are expected by the end of the project: (i) 35 municipal officials trained, and (ii) three reports developed to contribute to the strategic plans for integrated management of (recyclable) solid waste.

Component II: Formalization and strengthening of informal collectors (MIF: US\$110,850; counterpart: US\$158,685)

- 2.11 The objective of this component is to organize informal collectors into three cooperatives (one per municipio), strengthening their capacities to participate in the recycling value chain as formal stakeholders. Work under this component will be carried out with the collectors already operating in the municipios, in settings that range from strictly urban (Santo Domingo Este) to primarily urban (San Pedro de Macorís) to dump-based (Samaná). In working with dump-based collectors in San Pedro de Macorís and Samaná, the change that this represents for them will be taken into account in their training, and the strongest reasons for them to leave the dump will be their improved living conditions and their occupational health and safety.
- 2.12 The following will be the main activities under this component: (i) dissemination of the project with collectors, to explain to them the model for project implementation; (ii) training on good practices and business management for recycling (12 hours); (iii) workshop to disseminate information to recyclers on available public and private programs for education, food, health care, and employment; (iv) formation of collectors' cooperatives (one per municipio); (v) provision of equipment to collectors (tricycle, uniform, caps, boots, gloves, masks, and identification cards) and designation to selective-collection routes; (vi) implementation of collection centers for sale of materials, which includes the outfitting of the physical space and the necessary monitoring of operations, including the monitoring and tracking of routes; (vii) organization of a workshop for business ideas and value added to recyclable waste; (viii) strengthening of the National Recyclers Movement, including actions identified by the recyclers themselves as necessary to build an active national movement, such as legal registration of the movement, a strategic planning meeting, monitoring of the various collectors' organizations and cooperatives in the country, and national gatherings and support for dissemination of the movement (creation of a website, brochures, identification cards, etc.); and (ix) awareness-raising and learning activities to improve recyclers' interaction with other stakeholders in the recycling value chain, so as to strengthen interagency coordination.
- 2.13 The following outcomes are expected by the end of the project: (i) 200 collectors trained, with the understanding that some of the collectors who receive the training will not join the formal sector; (ii) three collection centers equipped and in operation; (iii) 10 sales agreements signed between enterprises and the

collectors' cooperatives; and (iv) three new members of the National Recyclers Movement.

Component III: Strengthening of stakeholders in the recycling value chain (MIF: US\$84,100; counterpart: US\$138,400)

- 2.14 The objective of this component is to strengthen schools,²³ private enterprises, and a group of households in the municipios so that they can play an active role in the recycling value chain and recognize the work performed by collectors.
- 2.15 This component includes the following activities: (i) a door-to-door awareness campaign aimed at residents in the area where the pilot initiative will be carried out; (ii) an awareness and implementation campaign for schools; (iii) an awareness and implementation campaign for private enterprises; (iv) exchange of experiences in inclusive recycling, including a group of beneficiaries (recyclers as well as municipal and other government officials) traveling to another country and an event in which foreign recyclers and municipal officials can share their experiences, convey lessons learned in the projects mentioned in paragraph 1.29, and discuss topics related to integrated solid waste management;²⁴ and (v) strengthening of the executing agency, including advising for development of the procurement procedures manual and code of ethics, as well as participation in an international recycling event.
- 2.16 The following outcomes are expected by the end of the project: (i) awareness raised among 30,000 households; (ii) awareness raised among 20 enterprises; (iii) awareness raised among 30 schools; and (iv) at least two events held to exchange experiences (Dominican beneficiaries visiting another country, and vice versa).

Component IV: Knowledge generation and strategic communication (MIF: US\$14,800; counterpart: US\$0)

- 2.17 This project will help reduce knowledge gaps in the “Linking Small Firms to Value Chains” agenda by generating knowledge and lessons learned to help identify an effective methodology for the inclusion of recyclers in the formal recycling market in the Dominican Republic. The objective of this component is to systematize, document, and disseminate the experience and knowledge

²³ In the case of schools, the executing agency will coordinate with the Ministry of Education through the Environmental Education Department, and with the Ministry's regional offices and the school districts of the participating schools. All this coordination will take place with the municipal governments through their environmental management departments.

²⁴ This activity is expected to be funded by the IRR, not by the project.

- generated on the project so as to activate and expand the knowledge transferred through operation ATN/ME-10929-RG.²⁵
- 2.18 The following audiences have been identified for the purposes of disseminating and communicating the knowledge and experiences generated by the project: (i) other municipios and municipal officials interested in implementing selective-collection systems; (ii) NGOs and international development agencies interested in developing similar projects; and (iii) private enterprises, schools, and persons interested in the environment, recycling, and conservation of natural resources. The main vehicles for reaching these audiences will be awareness campaigns in the field, organization of activities in coordination with the Recycling Roundtable, and dissemination of knowledge products.
- 2.19 To satisfy these audiences' knowledge needs, the following knowledge products will be developed as part of the project: (i) project infographic; (ii) case study; (iii) audiovisual aid; and (iv) closing event with the participation of beneficiaries and intermediary entities, featuring activities to disseminate outcomes, good practices, and lessons learned from the project.
- 2.20 ECORED will, on an annual basis, update the project fact sheet (model provided by the MIF), which contains basic information on the project, its challenges, the intervention strategy, and outcomes.
- 2.21 The following outcomes are expected from this component by the end of the project: (i) at least three knowledge products available through various communication channels, and (ii) at least 50 entities participating in the events organized as part of the project.

D. Project governance and execution mechanism

- 2.22 ECORED will form an execution unit that will be directly responsible for project implementation (including the work schedule, expected outcomes, and deliverables). The executing agency will have a team consisting of a project coordinator, two technical assistants (one for the formalization component, and one for the awareness-raising component), a part-time administrative officer, and a part-time communications officer.
- 2.23 ECORED is locally recognized both in the private sector and by third-sector and government entities such as the Ministry of the Environment and Natural Resources, the Ministry of Industry and Commerce, the National Energy

²⁵ The project titled "Transferencia de conocimiento a la Red Nacional de Apoyo Empresarial a la Protección Ambiental para generar las bases de desarrollo del mercado del manejo integral de residuos sólidos reciclables en la República Dominicana" [Knowledge Transfer to the National Business Support Network for Environmental Protection to Lay the Foundation for the Market for Integrated Management of Recyclable Solid Waste in the Dominican Republic] was implemented in October 2012 by ECORED. Its objective was to transfer knowledge from, and adapt the methodology of, the project titled "Development of the Market for Integrated Management of Recyclable Solid Waste in Peru" (PE-M1052), executed by the NGO Ciudad Saludable.

Commission, the National Council on Climate Change and the Clean Development Mechanism, and the Dominican Municipal League.

- 2.24 *Advisory Board.* To guide the overall strategy and decision-making, an advisory board will be formed and coordinated by ECORED's board of directors. The Advisory Board will include representatives of the collectors' cooperatives, the municipios, the MIF, and private-sector partners. It will serve in a consulting capacity.

E. Sustainability

- 2.25 The project's sustainability is based on the opportunity to make a small up-front investment to spur an actual change in behavior that will bring meaningful economic benefits to the municipio (reduced waste-management costs) and collectors (increased income). Over the medium and long terms, these stakeholders are expected to promote the continuity of the program and the sustainability of the model after the MIF's involvement ends.
- 2.26 With support from the National Coordinating Committee for Integrated Solid Waste Management, ECORED has forged ties with major entities related to the sector, such as the Ministry of the Environment and Natural Resources; the Ministry of Education; the Ministry of Public Health; the Ministry of Economy, Planning, and Development; and the Dominican Municipal League. This support has helped ECORED secure the municipal governments' commitment and formalize the mayors' willingness through agreements that will help develop sound institutional arrangements to ensure the continuity of the project. The activities to be carried out with participating companies and schools are being designed with an eye toward expansion and an emphasis on raising awareness among officials and strengthening the units responsible for trash pickup.
- 2.27 Six months before the end of the project, a **sustainability workshop** will be held with all involved entities to identify the measures needed to ensure the continuity of the project's actions once funding is exhausted.

F. Lessons learned from the MIF or other institutions on the design of the project

- 2.28 The IRR (RG-M1179) takes a comprehensive approach to working with informal collectors. One of its fundamental pillars is the development of strategic projects whose lessons are included in the design of this operation: (i) Ensuring public-sector participation is a success factor in projects for inclusion of recyclers: Municipal support not only translates to provision of key infrastructure (e.g., physical space and personnel for collection centers), but it also ensures the project's medium- and long-term sustainability; (ii) Organizing recyclers into cooperatives or associations is a necessary but insufficient condition for raising their standard of living: Incorporation into the formal sector should be complemented by the building of relationships with materials-purchasing firms and training on laws and requirements related to integrated solid waste

- management; and (iii) Advocacy on public policies can be boosted through project-specific dissemination activities: Previous projects have shown that by creating venues for multistakeholder dialogue or for horizontal training and exchange between recyclers, a venue can also be created for co-creation of a legal framework for effective solid waste management.
- 2.29 Several countries in Latin America have developed recycling projects with the inclusion of collectors and have successfully raised the collectors' standard of living by increasing their income, improving their working conditions, and making them visible to the general public. Among the most notable examples is Brazil, one of only two countries to have developed national programs to train recyclers and their organizations. In addition, some international cooperation agencies are financing projects to support small-scale initiatives for source separation in a given country, such as the "Zero Waste" program implemented by the German technical-cooperation agency GIZ in Las Placetas, San José de las Matas, for a population of 3,000 residents. This program was successful in getting residents to separate their waste at the source in order to tap its potential through recycling and composting.
- 2.30 This project is based on a highly successful model for social and economic inclusion of recyclers, which was developed and implemented in Peru over the course of several years. Thanks to the MIF's South-South Knowledge Transfer Facility,²⁶ which provides financing for the transfer of knowledge and capacity-building from one organization partnering on a MIF project to other organizations in Latin America and the Caribbean, with the aim of replicating the impact of innovative MIF experiences. Ciudad Saludable (a Peruvian NGO) transferred to ECORED the knowledge generated and acquired through the project, "Market for Integrated Management of Recyclable Solid Waste," (PE-M1052) that is going to be tested in this pilot, identifying the items or criteria that need to be adjusted for successful implementation in the Dominican Republic.

G. MIF additionality

- 2.31 **Nonfinancial additionality.** The MIF and the IRR will provide the technical experience needed to continue the initial effort made through the transfer of knowledge in 2012 and 2013. The IRR's collaboration will be vital to increasing the new project's credibility and recognition and will help leverage private-sector resources in the form of counterpart funding.
- 2.32 **Financial additionality.** The municipios' contribution is primarily in kind (physical space and equipment for collection centers, supervisory personnel, etc.). The MIF's cash resources are vital support for ensuring execution of key activities, such as the training of municipal officials and collectors and awareness-raising among other stakeholders in the value chain.

²⁶ Operation ATN/ME-10929-RG.

H. Project outcome

- 2.33 The expected outcome of the project is the formal incorporation of 120 recyclers into selective waste collection systems in three Dominican municipios, with specific indicators for the various stakeholders participating in this value chain.
- 2.34 The following indicators are proposed: (i) 120 collectors (90 men and 30 women) formally incorporated in the selective-collection system (CRF 230200); (ii) three new firms (cooperatives) established (CRF 230300); (iii) 30 educational institutions adopting source-separation and selective-collection practices (CRF 230100); (iv) 20 private enterprises participating in the recycling value chain (purchasing, selling, donating); and (v) 30,000 households adopting source-separation and selective-collection practices (CRF 230100).

I. Project impact

- 2.35 The expected impact of the project is an increase in the income of informal collectors and greater efficiency in the municipios' collection system. The recyclers who are organized into cooperatives are expected to increase their monthly income from US\$200 to US\$350 (75%) by the end of the project.
- 2.36 The following indicators are proposed: (i) average growth in collectors' monthly income from the sale of recyclables (CRF 320100).

J. Systemic impact

- 2.37 This project contributes to systemic change by promoting (i) the adoption of source-separation and selective-collection systems in three prioritized municipios (CRF 450100); and (ii) the coordination and adoption of new practices by municipios, collectors' organizations, and the general public (CRF 450300). This project will be the first experience in source separation and selective collection of recyclables tailored to the characteristics of heavily populated Dominican municipios; the model and knowledge products to be developed will increase the potential for replication not only in the Dominican Republic but in other countries of the region as well.

III. MONITORING AND EVALUATION STRATEGY

- 3.1 **Baseline.** The executing agency has gathered the data needed to establish the baseline from primary sources (interviews, surveys of a sampling of collectors, and visits to selected municipios). While this data has already been analyzed for Santo Domingo Este, it is still being processed for San Pedro de Macorís and Samaná. The gathering of this data will result in a characterization study and a census of collectors, which will aid in conducting a diagnostic assessment of the current state of waste management in each municipio.
- 3.2 **Monitoring.** The project will use a specific monitoring system with indicators to measure outcomes and impact. This system will be compatible with the IRR's monitoring system and will use data from the collection centers' records. The

- executing agency will submit project status reports (PSRs) to the Bank every six months within 30 days after the end of each six-month period or, under special circumstances, whenever determined by the MIF, provided that the executing agency receives at least 60 days' notice. The PSRs will be in a format previously agreed upon with the MIF and will report on progress in project execution, fulfillment of milestones, outcomes attained, and contribution toward project objectives, in accordance with the Logical Framework and other operational planning instruments. They will also report on problems encountered in execution and possible solutions. Within 90 days after the end of the execution period, the executing agency will submit to the MIF a final report (final PSR) detailing the outcomes attained, the sustainability plan, and lessons learned.
- 3.3 **Evaluation.** Two evaluations will be conducted by independent consultants selected and hired by the Bank using operation resources. The midterm evaluation will be conducted 12 months into the execution period to evaluate the project's operational viability, and the final evaluation will be conducted at the end of the execution period. Some of the questions to be covered in the evaluation are: (i) How critical was the transfer of knowledge to bringing this process to more municipalities?; (ii) How important was the MIF technical advising both through the IRR and that provided by the supervision team?; and (iii) What adjustments were needed in order to achieve the project outcomes?
- 3.4 **Closing workshop.** At the proper time, the executing agency will hold a **closing workshop** to evaluate the outcomes with other involved entities, identify additional tasks to ensure the sustainability of actions initiated by the project, and identify and disseminate lessons learned and best practices.

IV. COST AND FINANCING

- 4.1 The total cost of the project is US\$816,368, of which US\$398,383 (46%) will be provided by the MIF and US\$417,985 (54%) by the counterpart. The execution period will be 24 months, and the disbursement period will be 30 months.
- 4.2 **Retroactive recognition of counterpart resources.** The Bank may recognize, as part of the resources from the local contribution, up to **US\$96,655** in expenditures for activities²⁷ carried out before the operation is approved but after it becomes eligible, in order to achieve the established outcomes in due time and form, provided that the procedures established by the Bank have been followed.

²⁷ Start of the characterization study, start of the data compilation work for the waste management plans, consulting services for registering cooperatives and incorporating them into the formal sector, preparation of training for recyclers, and household and school awareness campaigns.

	MIF	Counterpart	Total
Project components			
Component 1: Strengthening of municipios in integrated management of (recyclable) solid waste	6,000	57,000	63,000
Component 2: Formalization and strengthening of informal collectors	110,850	158,685	269,535
Component 3: Strengthening of stakeholders in the recycling value chain	84,100	138,400	222,500
Component 4: Knowledge management and strategic communication	14,800	0	14,800
Execution and supervision components			
Executing agency/administrative	66,900	63,900	130,800
Monitoring system	12,000	0	12,000
Midterm evaluation	10,000	0	10,000
Final evaluation	10,000	0	10,000
Ex post reviews	25,000	0	25,000
Contingencies	15,000	0	15,000
Subtotal	354,650	417,985	772,635
% of financing	46%	54%	100%
Institutional strengthening (advising/training on financial management and/or procurement, if applicable)	8,000	0	8,000
Impact evaluation account (5%)	15,733	0	15,733
Agenda account	20,000	0	20,000
Total	398,383	417,985	816,368

V. EXECUTING AGENCY

- 5.1 The Red Nacional de Apoyo Empresarial a la Protección Ambiental, Inc. [National Business Network for Environmental Protection, Inc.] (ECORED, formerly known as RENAEPa) will be the executing agency for this project and will sign the agreement with the Bank. ECORED is a not-for-profit nongovernmental organization (NGO) accorded legal status²⁸ in 2006. Its mission is to promote the integration of the business sector in developing a culture of conservation and sustainable management of natural resources and the environment in the Dominican Republic. Its vision is to be a national and regional benchmark for the business sector vis-à-vis sustainability. Its objective is to promote sustainable development by encouraging good consumption and production practices in harmony with the environment.
- 5.2 ECORED, with 91 members that include private enterprises, has significant drawing power. Membership is granted only after an evaluation process whereby ECORED ensures that the applicant is in compliance with current environmental laws and/or ECORED advises and trains the enterprise on processes and programs

²⁸ Pursuant to Law 122-05 on the Regulation and Promotion of Nonprofit Organizations of 9 April 2005, through Resolution 00086 of 20 September 2006.

- to help bring it into compliance with national regulations related to the environment, sustainability, and corporate social responsibility.
- 5.3 In addition having member enterprises from nearly every productive sector in the country,²⁹ ECORED has interagency collaboration agreements with public- and private-sector entities that enhance its members' relationships and positioning. In the public sector, agreements are in effect with the Ministry of the Environment and Natural Resources, the Ministry of Industry and Commerce, the National Energy Commission, the National Council on Climate Change and the Clean Development Mechanism, and the Dominican Municipal League. In the private sector, agreements are in effect with the American Chamber of Commerce in the Dominican Republic; the German-Dominican Chamber of Commerce, Industry, and Tourism; and the British Chamber of Commerce in the Dominican Republic; as well as with the Asociación de Navieros de la República Dominicana [Shipping Association of the Dominican Republic], the Asociación de Industrias de la República Dominicana [Industrial Association of the Dominican Republic], the Asociación Dominicana de Productores de Cemento Portland [Dominican Association of Producers of Portland Cement], the Asociación Nacional de Jóvenes Empresarios [National Association of Young Entrepreneurs], and the Consejo Nacional de la Empresa Privada [National Council on Private Enterprise].
- 5.4 ECORED has the capacity to manage development projects and administer international-cooperation funding.³⁰ Its experience from previous projects is bolstered by the recent knowledge-transfer process for the model for municipal solid waste management originally developed by the Peruvian NGO Ciudad Saludable (PE-M1052) and financed by the MIF through the South-South Knowledge Transfer Facility.³¹
- 5.5 ECORED will establish a project execution unit and the structure needed to execute project activities and manage project resources effectively and efficiently. It will also be responsible for submitting progress reports on project implementation. The structure of the project execution unit and the requirements for the progress reports are detailed in Annex 7, in the technical files for this operation.

VI. RISKS

- 6.1 *Macro risks.* These risks include the lack of a nationwide legal framework to support the collectors' work, and limited knowledge and understanding of the

²⁹ E.g., banking, energy, waste, services, and manufacturing. For a detailed list, see <http://www.ecored.org.do/empresas-afiliadas>.

³⁰ Between 2010 and 2012, ECORED was the beneficiary of a project for its institutional strengthening, financed by the United States Agency for International Development and co-administered with another local NGO. This project was for approximately US\$450,000, and its duration was 24 months.

³¹ Operation ATN/ME-10929-RG.

importance of recycling among the general public. To mitigate this risk, the project includes specific activities to raise public awareness and train municipal personnel to support the collectors' work and the source separation of recyclable waste. Moreover, ECORED has done significant work to promote a general and inclusive law on solid waste.

- 6.2 *Sector-related risks.* The informal status to which the collectors are accustomed could translate to a lack of commitment or interest in the early stages of the project. These considerations have been taken into account in designing the training methodology and selecting the facilitators, so as to keep the beneficiaries interested and actively involved. For the municipios, administrative processes and a lack of continuity in policies established under a given administration may result in a lack of commitment from municipal officials. As a mitigating measure, awareness-raising and training activities are planned to empower and impart a comprehensive vision to municipal personnel in charge of solid waste management.

VII. ENVIRONMENTAL AND SOCIAL IMPACTS

- 7.1 Collectors are a historically vulnerable, excluded group. Implementation of the proposed model is expected to have positive external impacts. In social terms, the collectors' income will be increased and recognition of their day-to-day work will be enhanced. The process of incorporating them into the formal sector also entails obtaining or updating identification cards as the first step for collectors to gain access to government social programs. The executing agency is using the "Gender and Recycling: Tools for Project Design and Implementation" Guide developed by the MIF and INE/WSA to ensure equity in women's access to project resources.
- 7.2 As for positive environmental impacts, greater public awareness is expected to lessen pressure on the indiscriminate use of natural resources.

VIII. FULFILLMENT OF MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS

- 8.1 **Results-based disbursements and fiduciary arrangements.** The executing agency will commit to the standard MIF arrangements regarding results-based disbursements, procurement, and financial management specified in Annex 8.

IX. ACCESS TO INFORMATION AND INTELLECTUAL PROPERTY

- 9.1 **Access to information.** The information in this document is considered public in accordance with the Bank's Access to Information Policy.