Colombia has achieved a high standard of solid waste disposal with about 94 percent of urban solid waste being disposed of in sanitary landfills. Despite this success, Colombia faces challenges in the future due to an increase in waste generation resulting from high economic growth and increased urbanization. In addition to more waste generated, Colombia must work to improve the working and living conditions of its vast network of informal recyclers, who currently collect 50 percent of recycled waste, working in difficult conditions. In the coming years, Colombia seeks to move into the next generation of waste management which incorporates the goals of waste reduction, reuse and recycling ahead of disposal. In doing so, Colombia can achieve multiple objectives of reducing greenhouse gas (GHG) emissions, achieving sustainable economic growth, ensuring environmental protection, improving urban life, and uplifting socially and economically vulnerable citizens.

Colombia could drastically reduce emissions in the solid waste sector (which comprise 5.7 percent of total GHG emissions, 6.18 million tons/yr) by undertaking a national program for integrated solid waste management that creates incentives for the private sector that could catalyze actions to: divert organics from landfills (thereby reducing methane emissions as part of landfill gas), increase recycling (thereby reducing indirect emissions by avoided production of virgin materials), generate refuse-derived fuel (thereby displacing conventional fossil fuel use), and promote alternative uses of landfill gas.

Overcoming Barriers and Promoting Alternative Treatment Technologies

A nationally appropriate mitigation action (NAMA) will support the Colombian government in reducing the carbon footprint of its solid waste sector by overcoming existing policy, financial, market and social barriers. The NAMA program is designed as a comprehensive package of policy solutions, a financial mechanism, and capacity building activities, including:

- **Regulatory change** to put alternative technologies on a level economic playing field with landfills. The most important of these changes concerns the method by which the solid waste tariff is calculated. Under the current solid waste tariff structure, it is much more profitable for waste companies to dispose of waste in landfills instead of diverting waste to recycling or composting plants. A tariff reform is currently underway that will help overcome this economic challenge by providing the same tariff per ton of waste whether it is disposed of in a landfill or through mechanical biological treatment (MBT) or other alternative waste reduction technologies.

- **Promotion of new technologies** that divert waste away from landfills to produce commodities such as recyclables, compost and refuse derived fuel, which can be reincorporated back into the economy and/or generate energy.

- **Creation of appropriate financial mechanisms** that leverage internal public resources of Colombia and NAMA finance from donor countries to maximize private sector investment in order to achieve the goals of the NAMA.

- **Capacity building and technical assistance** for alternative treatment technologies, which employ 6-10 times as many people compared to landfills.

- The design of policies and business models to **include informal workers in the modernization of the sector**, allowing them opportunities to work in the formal economy and increase the standard of their working and living conditions.
In order to implement material recovery or mechanical-biological treatment facilities at the municipal level, the NAMA proposes creating an Equity Fund that would provide concessional equity financing support for alternative waste treatment projects being implemented as part of the NAMA. NAMA projects will be able to leverage equity support to attract additional private sector equity investments and commercial bank loans. The proposed NAMA Equity Fund would be revolving in that returns from project investments would be used to fund future projects that form part of the NAMA.

**A Programmatic Approach to Low-Carbon Transformation in the Waste Sector**

In addition to a set of finance-ready pilots, international donor funds will support a sector-wide program administered by the government of Colombia to catalyze a pipeline of transformational projects and mobilize private-sector investment. The NAMA plans to begin providing, on a competitive basis, equity investments to the best municipal project proposals in Colombia. Three cities are prepared to be the first projects. Additional proposals from municipalities will be selected for funding at the national level based on a set of criteria developed in-country and approved as part of the funding proposal. In the case of the Green Climate Fund, the Board will evaluate these criteria to ensure alignment with the investment framework and results management framework, and the approval process of individual NAMA projects will be undertaken by the national implementing entity. This programmatic approach will allow the Colombian government to support a pipeline of ambitious solid waste activities that align with the overall transformational objectives of the program, enhance country-ownership, and increase opportunities to catalyze investments from a variety of public and private sources.

Technical studies are an important part of the NAMA package that will allow for the development of a strong pipeline of low-carbon waste sector projects in the country. Therefore, in addition to equity financing, the NAMA proposal includes additional financial support for feasibility, market and engineering studies in each city to build an MBT facility or other appropriate alternative waste treatment technology.

**Support Requested**

The design of the Colombian Solid Waste NAMA incorporates international donor support to partially finance the program described above. National contributions would come in part from Colombia’s existing Public-Private Partnership framework which creates revenue support up to 20% of the investment cost of a project and offers a significant financial incentive for private sector investors. Municipalities could also contribute to individual projects by providing in-kind contributions such as land, project development support and awareness programs in their municipalities to encourage source separation of waste. In addition, a newly-proposed national landfill tax could be a part of the NAMA finance package and would also improve the competitive position of alternative waste reduction technologies as compared to landfills.

A number of technical and economic studies supporting the design of the NAMA and quantification of the support requested have been completed. Colombia is seeking approximately 15 million Euros from international donors to capitalize the Equity Fund and provide technical assistance. The Equity Fund would leverage other types of financing by a factor of 11, equivalent to 134 million Euros of total investment opportunities in the NAMA. The NAMA will further eliminate financial barriers by tightening regulatory standards, creating greater institutional capacity, and increasing investor appetite and public awareness.

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