

Request Submission Form for CTCN Technical Assistance (version 1.0 - January 2014)

APPLICANT/CONTACT:

National Designated Entity: Ministry of Environmental and Sustainable Development - Climate Change Division

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COUNTRY: *Colombia*

TITLE: *Development of a Mechanical-Biological Treatment (MBT) pilot project of the Waste NAMA.*

GEOGRAPHICAL FOCUS: *National*

Community-based *Sub-national* *National* *Multi-country*

Despite the implementation of this pilot project of waste NAMA would be at local level, the possibility of its replication represents a crucial step in the national government efforts to shift the conventional waste management and to promote the recognizing of alternative treatment methods between public and private stakeholders and policymakers of the country.

SECTOR/THEME *Adaptation: Early Warning/Disaster Reduction*

<i>Mitigation:</i>	<input type="checkbox"/> <i>Energy</i>	<input type="checkbox"/> <i>Forestry</i>
	<input type="checkbox"/> <i>Transport</i>	<input type="checkbox"/> <i>Water Resources</i>
	<input type="checkbox"/> <i>Industry</i>	<input type="checkbox"/> <i>Coastal Zones/Oceans</i>
	<input type="checkbox"/> <i>Agriculture</i>	<input type="checkbox"/> <i>Terrestrial Ecosystems</i>
	<input type="checkbox"/> <i>Forestry</i>	<input type="checkbox"/> <i>Human Health</i>
	<input checked="" type="checkbox"/> <i>Waste</i>	<input type="checkbox"/> <i>Infrastructure/Human Settlement</i>
	<input type="checkbox"/> <i>Cross-sectoral</i>	<input type="checkbox"/> <i>Tourism</i>
<i>Adaptation:</i>	<input type="checkbox"/> <i>Early Warning/</i>	<input type="checkbox"/> <i>Businesses</i>
	<i>Disaster Reduction</i>	<input type="checkbox"/> <i>Education</i>
	<input type="checkbox"/> <i>Agriculture/Fisheries</i>	<input type="checkbox"/> <i>Cross-sectoral</i>

OTHER RELEVANT SECTORS:

None

PROBLEM STATEMENT (up to half a page)

The Colombian government (through the Ministry of Housing, City and Territory and the Ministry of Environment and Sustainable Development) reformed the solid waste management regulation that now favors alternative treatment technologies and not only landfill disposal. As part of the solid waste Nationally Appropriate Mitigation Action (NAMA), Colombia is proposing the promotion of new technologies such as mechanical-biological treatment (MBT) facilities that can process waste diverted away from landfills to produce commodities such as recyclables, compost, and refuse derived fuel (RDF).

Some of the barriers identified are the lack of both a coordinated solid waste management national regulation and city-level action for integrated waste management policies, as well as tariff structure that does not recognize alternative treatment methods (recycling, compost, RDF, etc) as a part of a waste public service. The national government has already started to modify regulations to include recycling technologies and the next step is to establish the national tariff methodology. Therefore, there is a need to develop a pilot project that allows government to foster private investment in alternative treatment methods, strengthen national confidence and local government levels of compromise. The early identification of these needs has allowed concluding that the city of Cali is the best alternative for the placement of a pilot project due also to the political support of the city's high level officials; additionally, technical, financial and market studies have been conducted to determine the most feasible conditions to do so. Nevertheless, there is a lack of capacity building and technology access in the country that make it necessary to ask for the technical assistance of CTCN in the development of this MBT pilot project.

DEVELOPMENT OF THE REQUEST (up to half a page)

In order for Colombia's waste sector emissions per capita to decrease, new policies and technologies will need to be promoted in the country. The country has done well in the last 10-15 years to promote collection and sanitary disposal of solid waste; the basic foundation to conventional solid waste management. Currently, the country is attempting a paradigm shift in the way solid waste is viewed. Policymakers are now trying to transition towards Integrated Solid Waste Management that considers waste disposal as a last option, with policies such as waste minimization, recycling, energy recovery, etc as preferable.

To start the transition away from landfills towards alternative treatment technologies, Colombia has already started to consider the range of proven technologies already used globally. A pre-feasibility study was performed as part of a solid waste NAMA design process, where it was found that not all technologies are suitable for Colombia.

At the forefront of this NAMA effort are the Ministries of Environment and Sustainable Development and the Ministry of Housing, City and Territory, the two most important policy making entities in the national government for solid waste. In addition to these, many other national, regional, and local entities play a key role in how the country's solid waste is managed. At a regional level, the Regional Autonomous Corporations are important in the regulation of landfills, as well as funding of environmental programs. Finally, at the local level, the municipalities are the most important entity in operating the solid waste management system, whether through direct service or through private sector contracts. All these entities have been working on the analysis of conditions, barriers and needs to make feasible the shift of paradigm of the conventional waste management in the country.

As part of the development of waste NAMA, the national government has recognized the need to develop a pilot project that allows government to foster private investment in alternative treatments methods, strengthen national confidence and local government levels of compromise. Development of the MBT pilot plant in the framework of the Solid Waste NAMA will help Colombia attain its sustainable development goals, and simultaneously will reduce GHG emissions from the sector. This is why, after the identification of the lack of capacity building and technology access in the country it was decided to submit the request for the technical assistance of CTCN in the development of this MBT pilot project.

ASSISTANCE REQUESTED (up to one page)

The purpose of the requested technical assistance will allow to the government to test new technologies such as Mechanical-Biological Treatment (MBT) facilities that can process waste diverted away from landfills to produce commodities such as recyclables, compost, and refuse derived fuel (RDF). This way, the initiative would be replicable at other locations and give a big step towards the shift of the waste conventional solid waste management in the country according with the national sustainable goals. The development of the project would include:

- To install a MBT facility for the pilot project of the NAMA in the city of Cali, so it will be possible to test this technology and possibly to replicate it at other cities.
- To provide capacity building for the operation and later option to replicate this kind alternatives technologies at different locations.

We understand that the funds available from CTCN would be not enough to cover the costs of implementation of the technology needed. However we need a special support from CTCN in order to seek the funds needed from private or multilateral cooperation for proving and test the technology and to evaluate its replicability in other cities of the country.

ALIGNMENT WITH NATIONAL PRIORITIES (up to half a page)

Colombia is a leader in the region in solid waste management, and in the last decade has managed to build enough landfills for adequate disposal of 94% of the country's waste. This is a tremendous achievement from a public policy and health perspective, but landfills emit 88% of the sectors' GHG emissions, and do not capitalize on the remaining economic value of waste buried in landfills.

The next step of solid waste policy is a focus on alternative treatment technologies now that Colombia provides adequate collection and disposal for its citizens and is attempting to enter the Organization for Economic Co-operation and Development (OECD).

The Solid Waste NAMA fits neatly into the Colombian Low Carbon Development Strategy (CLCDS), a cornerstone of the National Climate Change Policy established in the National Development Plan 2010 – 2014. It is a medium and long term led development program by the Ministry of Environment and Sustainable Development (MADS), the Department of National Planning (DNP), and the sector ministries of Colombia. The CLCDS has developed Sector Mitigation Action Plans (SMAPs) for each productive sector. The preliminary version of the waste SMAP is strikingly similar to the waste NAMA according to a CLCDS stakeholder ranking of 27 identified plans, projects, and measures. Separation of waste streams for reuse and recycling, incorporation of separate collection costs within the tariff scheme (both ranked as #1). Inclusion of informal waste recyclers in the waste management system (ranked as #4)

In addition, the current SMAP development is also focusing on the following items, which are also present in the waste NAMA (members of the NAMA design steering committee are also involved in the SMAP design):

- Policy incentives for recycling and reuse activities.
- Development of technical regulation for new waste treatment technologies.
- Establishing education programs for source separation, recycling, and composting.

Once the SMAP is finalized at the end of 2013, the solid waste NAMA will be an ideal mechanism to enforce it.

Through international experience, it is becoming clear that economic opportunities are being missed by a sole focus on disposal of waste in landfills. Other treatment alternatives present multiple sustainable development benefits that are gaining in popularity and helping to change conventional thinking about solid waste management in Colombia, helping to integrate policy formulation with environmental protection, social and economic development.

The Solid Waste NAMA is a combination of unilateral and supported actions that include (a) regulatory and policy reform, (b) promotion of alternative waste management technologies and processes, (c) creation and funding of innovative financing mechanisms, (d) national and sub-national capacity-building efforts and (e) city-level action for integrated waste management policies, better environmental management and formalization of informal waste sector workers.

PAST AND ONGOING EFFORTS (up to half a page)

Colombia has managed to perform better than its peer countries on various core indicators in this sector, today, 94% of total solid waste goes to landfills, which is the highest level in Latin America, but it now faces future challenges due to increased waste generation resulting from high economic growth, greater environmental protection demands from its citizens due to increased awareness and greater social protection demands from its vast network of unorganized service providers.

Considering these local conditions, Colombia is well-poised to catapult its solid waste management into the next generation of policies, processes and infrastructure. Next generation waste management techniques focus on the top of the pyramid objectives such as waste reduction, reuse and recycling rather than disposal. In doing so, Colombia can achieve multiple objectives of achieving sustainable economic growth, ensuring environmental protection, improving urban life and uplifting socially and economically vulnerable citizens. Formulation of Waste NAMA is part of the national efforts towards sustainable development and reduction of greenhouse gas emissions.

The formulation process identified the change of the national regulation of the waste public service to include technologies other than landfilling within the alternatives to be included in the tariff. This regulation was successfully changed and published in December 2013. The change of the way that solid waste tariff is calculated is another important ongoing effort due to the under the current tariff structure, it is much more profitable for waste operators to dispose of waste in landfills instead of diverting waste to recycling, composting, or waste-to-energy (WTE) plants. The NAMA feasibility studies have included assistance to the national regulatory agency to help them determine the true economic cost of alternative waste treatment methods in order to devise a new tariff structure. Apart from the above crucial steps, the government is also working on other regulatory changes such as removing unfair barriers to use non-hazardous waste as fuel in cement kilns and development of policies such as Extended Producer Responsibility (EPR).

The Solid Waste NAMA is designed at the federal level but implementation will always be done at the municipal level. Actions by the municipalities such as a decision to do source separation policy, awareness and education programs, formalization of informal waste pickers, or the implementation of a MBT facility, can all be combined under one policy and integrated as a project under the NAMA.

Some cities in Colombia, such as Cali, are currently designing a source separation policy in their city. These policies are optimal because they increase the quality of recyclables taken from the waste stream, as well as the quality of compost produced from organic waste. Cali is responsible for 8% of the national waste generation, extensive background research has been performed and the NAMA has strong buy-in of the local government; which makes it an ideal candidate for the first MBT facility of the program. Several scenarios have been considered for Cali's MBT facility; where recycling activities are formalized, and waste is converted into compost and RDF, creating products that are useful for the industry.

Additionally, a national market study, as well as technical and financial studies for the city of Cali, have been already done. A local market study to analyze the opportunities of commercialization of MBT outputs¹ is being developed today at this specific location.

EXPECTED BENEFITS (up to half a page)

The development of the MBT pilot project of the NAMA will allow national government to foster private investment in alternative treatments methods, strength national confidence and local government levels compromise to implement alternative treatment methods.

- Modernize solid waste management (maximize the economic value in waste that currently goes to landfills)
- Provide example to region in transition to alternative treatment options.
- Avoid environmental problems with land disposal (i.e. leachate production, contamination of aquifers, health effects, etc)
- Create jobs – 6-10 times more compared to land disposal of waste
- Solve social problems such as informal waste pickers
- Remove barriers to private investment
- Make waste sector more efficient (less transport of waste, extend life of landfills, reduce leachate treatment)

EXPECTED TIME FRAME

The expected time frame for this project is one (1) year.

KEY STAKEHOLDERS

Stakeholder	Role in the response
<i>Local government of the city of Cali</i>	Local government instance that allow the infrastructure development of the project pilot in the city’s territory and will assure that the development of the project have the need policy and institutional framework to be well developed according to the city context, market and needs.
<i>Ministry of Environment and Sustainable Development</i>	National Designated Entity which guarantee the technical assistance will be developed according to National context and ongoing efforts of the country. Support of the project if it is required as national environmental authority and evaluate the replication of the project in other cities.

MONITORING AND EVALUATION

By signing this request, I affirm hat processes are in place in the country to monitor and evaluate the assistance provided by the CTCN. I understand that these processes will be explicitly identified in the Response Plan in collaboration with the CTC, and that they will be used in the country to monitor the implementation of the CTCN assistance.

¹ The principal output commodities of an MBT facility can be recyclables, compost and refuse derived fuel (RDF) through a potential mix of source separation and mixed municipal solid waste processing activities.

I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country.

DATE AND SIGNATURE

*NDE: Ministry of Environment and Sustainable
Development – Climate Change Division*

Date: March 19th, 2014

Responsible Person: Rodrigo Suarez Castaño

Signature: 

****PLEASE LIST ANY RELEVANT BACKGROUND DOCUMENTS AND PROVIDE THEIR WEB LINKS (IF WEB LINKS ARE NOT AVAILABLE PLEASE ATTACH THEM AS PDF FILES TO THE APPLICATION)**

THE COMPLETED FORM SHALL BE SENT TO THE CTCN@UNEP.ORG

Need help? The CTCN team is available to answer questions and guide you through the process of submitting a request. The CTCN team welcomes suggestions to improve this form.

>>>Contact the CTCN team at ctcn@unep.org