

<b>City</b> Antananarivo	
<b>Country</b>	Madagascar
<b>Population</b>	3,000,000
<b>Title of policy or practice</b>	“Zéro déchets” dans les marchés d'Antananarivo (“Zero Waste” In The Markets Of Antananarivo)
<b>Subtitle (optional)</b>	Management and reduction of food waste in urban areas
<b>URL video</b>	
<b>Category</b>	Food Waste
<b>SDGs</b>	SDGs: 11, 12, 13, 17.
<b>Brief description</b>	<p>The production of household waste in Antananarivo amounts to 320,000 tons per year, which is 875 tons of household waste produced per day, meaning 0.5kg of household waste produced per inhabitant per day (2017). Thus, 65% of such waste out of all the household waste in the city is fermentable matter. The Urban Municipality of Antananarivo (CUA) works in close collaboration with the Service Autonome de Maintenance de la Ville d'Antananarivo (SAMVA, Autonomous Maintenance Service of the city of Antananarivo) on the Antananarivo landfill. Today, more than two million tons of waste are accumulated in the municipal landfill, contributing to global warming because of the methane emissions and polluting the water-tables of the city. In order to contribute to waste reduction, the CUA recently launched the Plateformes décentralisées de valorisation des déchets alimentaires project (“decentralized platforms for food waste recovery”), which aims to produce compost from the city's food waste, meeting a need of vegetable producers from urban and peri-urban areas. The goal is to install four sites in the four cardinal points of the city in close proximity to the fruit and vegetable market areas. The sites will be connected to the peri-urban productive areas as well. These waste-to-energy plants may also become eventually real purchase sites of products from the work of peri-urban farmers who use urban compost in their production process. In parallel, the CUA wishes to develop advanced fruit and vegetable harvesting systems in municipal markets to reduce food waste. These products will be harvested to be processed or redistributed in the assistance circuit for vulnerable populations (NGOs and food banks).</p>
<b>Date of start and state (ongoing/completed)</b>	2015 Ongoing
<b>Actors and stakeholders involvement</b>	Project leader: Urban Municipality of Antananarivo Technical partners: SAMVA, Madacompost (private company), NGO Gevalor
<b>Approach</b>	<ol style="list-style-type: none"> <li>1. New waste collection unit - preliminary cost-benefit study;</li> <li>2. Pilot platform for organic matter recovery at the municipal nursery;</li> <li>3. Selection of four sites for the four composting plants;</li> <li>4. Capitalization of actions.</li> </ol>
<b>Innovation</b>	<p>The practice presented shows once again a concrete commitment of the CUA toward the formulation of a food policy aimed at motivating the development actors to address priority issues of the city by choosing food as the engine of development. For the CUA: food and food waste are two sides of the same coin. This practice falls within the MUFPP category related to waste management, but at the same time it proposes initiatives that can be included in other cross-cutting categories such as food production, supply and equity in vulnerable sectors of the population.</p>

<b>Impact</b>	<p>Another positive environmental impact to highlight is the visible contribution to the cleanliness of the city by recycling organic waste for composting: a 150 m<sup>2</sup> composting plant make it possible to reduce CO<sub>2</sub> emissions by 1.40 tons per year, while the need to transport green waste to the landfill is significantly reduced. In addition, the project plans to reduce food waste in four markets that each week fill waste containers with food that could be converted into consumer products for vulnerable sectors of the population. This ecological, social and responsible model aims to increase the population's awareness of urban food waste as a first step, in order to encourage other actors to join the Zero Déchets initiative.</p>
<b>Inclusion</b>	<p>This project integrates the three possible types of inclusion proposed by the MUFPP (thematic, territorial and stakeholder inclusion). Promoting a local food policy by integrating the food waste recovery is an effective way of ensuring the improvement of the three dimensions of sustainable development: social, economic and environmental dimension among the poorest. Increasing vegetable farming in urban and peri-urban areas contributes to preserve green belts in urban areas and to produce local food. Thus, combining waste recovery with the reduction of food waste and the distribution of local products can effectively contribute to eradicate hunger and poverty by creating circular economies within the city itself.</p>
<b>Adversity coefficient</b>	<p>Madagascar is affected by its extreme vulnerability to climate-related natural disasters. It is among the 10 countries most exposed to risks related to climate hazards (cyclones and tropical storms) and it is classified as the least resilient country to natural disasters (2017, Global Climate Risk Index - Germanwatch). Between 2016 and 2017, two major events occurred: the passage of tropical storm Chedza (January 2016) and cyclone Enawo (March 2017). These two episodes caused countless damages in Malagasy cities, which called for the mobilization of financial means of assistance to the urgency of the international community. The city of Antananarivo has recorded between 557 and 900 damaged houses (Sources: local media). The city-region of Tanzania suffers each year from the impact of climate change that affect the most vulnerable part of the population, but also the food supply system of the city. In this context, waste recovery is a fundamental challenge in order to guarantee the reduction of GHG emissions through waste reduction, but also to raise awareness among citizens about reducing waste to the benefit of the population (access to food and creation of income-generating activities). Waste reduction is an essential part of a more resilient city model adapted to the context of environments made threatened by climate change.</p>