Final Draft

REGIONAL COOPERATION PROGRAMME

Reducing methane emissions from organic waste and closing dumpsites in Latin America and the Caribbean

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1. Introduction and background

A call for a Regional Cooperation Programme for reducing methane emissions from organic waste and the closure of dumpsites was made by Ministers at the Special Session of the Forum of Ministers of Environment for Latin America and the Caribbean held in Rio de Janeiro in September 2024. This call for a regional programme aims to contribute to the transition towards circular economy models, as well as the reduction of methane emissions, in line with the Global Methane Pledge, taking into account the Roadmap of the Coalition for the progressive closure of dumpsites in LAC.

Subsequently, at the Climate and Clean Air Coalition's Ministerial held on the margins of the New York Climate Week 2024, Chile further reinforced the call for regional cooperation based on its leadership and commitment to strengthen methane reduction ambition in its NDC 3.0, including for the waste sector. As a result, nine Latin American and Caribbean countries (Brazil, Chile, Costa Rica, Colombia, Guatemala, Mexico, Panama, Peru, and Uruguay) made a declaration at COP29 in Baku, Azerbaijan, for the regional reduction of methane in waste management, committing to strengthening methane ambition from the waste sector in their NDC 3.0, accelerating regional cooperation for the closure of dumpsites, promoting enabling policies and capacity building for national and subnational[1] governments and developing innovative financial mechanisms to support sustainable organic waste management.

This initiative paralleled and complemented the initiative of the COP29 Presidency, the declaration on Reducing Methane from Organic Waste (ROW) that has been signed by 65 states who are collectively responsible for nearly 50% of global methane emissions from organic waste.[2] The ROW Declaration, signed by 11 LAC countries, highlights the need to work along the lines of Avoidance, Diversion, Valorization and investing in Infrastructure, emphasizing solutions at source (upstream solutions) to reduce the need for final disposal sites[3].

Taking into account this request and background, the Secretariat of the Forum, with the technical support of the UNEP-convened Climate and Clean Air Coalition (CCAC), developed a concept note of the Regional Programme, that was circulated to the High-Level Officers (HLO) of the LAC Forum of Ministers of Environment in January 2025. As a result of this regional consultation and feedback provided by countries, a revised concept note was finalized and shared with HLO on 13 May 2025.

Building on the concept note, this document further elaborates a detailed proposal for the regional cooperation programme, which has been developed in consultation with the Focal Points of the Coalition of the progressive closure of dumpsites in LAC, and with relevant stakeholders. This programme will be submitted to the Forum of Ministers for consideration at its 24th Meeting, to be held next 1-2 October 2025 in Lima, Peru.

[1] In general terms, the subnational level refers to any government jurisdiction below the national (or central) level, encompassing both the second level of government (e.g., states, provinces) and the third level (e.g., municipalities), depending on the country.

[2] The following states from the LAC region endorsed the COP29 Declaration on Reducing Methane from Organic Waste: Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Nicaragua, Panama, Peru, Trinidad and Tobago, Venezuela

[3] https://cop29.az/en/pages/cop29-declaration-on-reducing-methane-from-organic-waste

2. Context in Latin America and the Caribbean

a. Waste management and methane emissions: status and trends

Each year, over 234 million tonnes of municipal solid waste (MSW) are generated in the Latin America and Caribbean (LAC) region, equivalent to 1.02 kg per inhabitant per day.[4] Organic waste constitutes the largest share of this solid waste, accounting for approximately 50% of MSW.[5]

The region also produces hundreds of millions of tonnes of organic agricultural and agro-industrial residues annually, including crop residues, livestock manure, and food processing by-products. For example, Brazil alone generates over 100 million tonnes of cane bagasse each year[6].

Globally, agricultural waste is estimated to be over two and a half times greater than municipal solid waste.[7] While detailed regional data is scarce, it is reasonable to assume a similar ratio for LAC, reflecting the importance of agriculture in the regional economy and underscoring the scale of organic waste management challenges beyond municipal sources.

Population growth, urbanization (with 80% of the population now living in cities), economic development, and changing consumption and production patterns driven by predominantly linear economic models are key factors contributing to rising waste generation across all sectors in LAC.

Without urgent interventions, global MSW generation alone is projected to increase by more than 56% by 2050.[8] Coupled with current trends in expanding agricultural production and industrial activity, substantial increases in overall waste volumes across these sectors are expected, amplifying the region's waste management challenges.

One of the most serious byproducts of poor organic waste management is methane—a greenhouse gas 80 times more potent than CO_2 over a 20-year timeframe, responsible for about 30% of human-caused global warming since pre-industrial times. Despite methane's significant contribution to climate change, the Latin America and Caribbean region received only 1.8% of global methane abatement finance, highlighting a substantial funding gap.[9]

Methane is also a precursor of tropospheric ozone – which causes premature death and affects health and well-being, and disrupts photosynthesis, thereby reducing crop production, damaging ecosystems and negatively impacting biodiversity. Moreover,

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[4] UNEP (2024). Global Waste Management Outlook - 2024. United Nations Environment Programme.

[5] UNEP (2018). Waste Management Outlook for Latin America and the Caribbean. United Nations Environment Programme, Latin America and the Caribbean Office. Panama City, Panama.

[6] da Silva, H. M., & Cortez, L. A. B. (2017). Sugarcane bagasse: Production, composition, properties, and feedstock potential. In: Sugarcane Biofuels (pp. 1–26). Springer. https://doi.org/10.1007/978-3-319-50219-9_1

[7] Shinde, S. S., et al. (2022). Global crop residue production: An overview and implications for bioenergy. Annual Review of Resource Economics, 14, 123-145. https://doi.org/10.1146/annurev-resource-101422-090019

[8] UNEP (2024). Global Waste Management Outlook - 2024. United Nations Environment Programme.

[9] Climate Policy Initiative. 2023. "Landscape of Methane Abatement Finance 2023

inadequate waste disposal leads to open burning, either deliberately to reduce uncollected waste or landfill volumes, or spontaneously due to methane emissions from biodegrading waste. According to the GEO6 (the UNEP sixth Global Environment Outlook), waste and dumpsites, as well as biomass burning, are amongst the most significant sources of black carbon in the region.[10] Such burning not only releases black carbon but also known carcinogens, including dioxins and furans, contributing to local air pollution and causing serious health risks primarily to local and neighbouring communities.

Methane not only accelerates climate change and causes severe local health but also presents potential safety risks. It is a highly flammable gas that can accumulate in enclosed spaces and cause explosions, particularly near mismanaged landfills. These risks are heightened for vulnerable communities living near or working in dumpsites, who are also exposed to garbage landslides and gas buildup. Several deadly accidents across the region have led to fatalities and displacement, undermining the right to a healthy environment and compounding existing social and environmental injustices.

Solid waste is the third-largest and fastest-growing source of methane emissions globally. In the LAC region, solid waste disposal accounts for 11.57% of methane emissions, with manure management (1.54%) and biomass burning (1.35%) as additional sources. This is projected to increase further if current practices continue. To be consistent with Intergovernmental Panel on Climate Change (IPCC) 1.5 °C scenarios, methane emissions from the waste sector should be reduced by approximately 30-35% below 2020 levels by 2030 and nearly 55% by 2050.[11]

About 45% of all solid waste generated in the region still ends up in inadequate final disposal sites, including more than 10,000 dumpsites identified in LAC countries.[12] This situation may vary significantly between countries, although opportunities for improvement exist throughout the region. While regional collection rates are between 71-95%, over 35,000 tons of solid waste remain uncollected per day, a service gap which impacts on more than 40 million people (7%) of region's population.[13] According to data from the Solid Waste and Circular Economy Hub, in the region, less than 3% of organic municipal waste is being composted, treated by anaerobic digestion or otherwise treated in the region[14].

Solid waste separation at source is carried out at a limited scale and sometimes at low quality levels. This situation makes it difficult to implement some treatment and valorisation technologies and investments, which is why it is necessary to implement programs and actions that promote behaviour change, supported by decentralized infrastructure and services which support source separation.

Moving from end of pipe management to integrated and sustainable resource management with closed-loop approaches for waste reduction, through circular economy and applying the waste hierarchy, is urgent for the region in order to address waste issues

[10] UN Environment (2018). Waste Management Outlook for Latin America and the Caribbean. United Nations Environment Programme, Latin America and the Caribbean Office. Panama City, Panama.
[11] https://www.globalmethanepledge.org/
[12] UNEP (2021). Roadmap for the progressive closure of dumpsites in Latin America and the Caribbean. Secretariat of the Coalition for the progressive closure of dumpsites in LAC, UNEP LAC Office, June 2021.
[13] UNEP (2018). Waste Management Outlook for Latin America and the Caribbean. United Nations Environment Programme, Latin America and the Caribbean Office. Panama City, Panama
[14] IDB Solid Waste and Circular Economy Hub: https://hubresiduoscirculares.org/

and their detrimental impacts on human and ecosystem health as well as on climate through GHG emissions, air, soil and water quality. This is achievable, especially given that as much as 60% of waste-sector targeted methane mitigation measures have either negative or low cost. The greatest potential is in the prevention, re-use, improved treatment and safe disposal of organic solid waste[15].

This issue is particularly important because inadequate organic waste disposal and management not only damages human health, the environment, and agricultural outputs, but also wastes valuable resources. These resources could instead be harnessed through a circular approach, such as creating fertilizers, animal feed or a renewable energy source, thereby closing production cycles, reducing reliance on virgin materials and improving community wellbeing, while boosting the economy and fostering sustainable agricultural production. Also, properly treating of organic waste can also improve the management of other inorganic waste streams, such as plastics, glass and metals.

In addition, the strengthening of solid waste management systems represents a significant opportunity for employment generation, both in technical and unskilled occupations. Currently, a considerable number of informal workers are involved in waste collection and sorting activities as a means of subsistence. However, these tasks are frequently performed in contexts of significant social, health, and labor vulnerability, and they also demonstrate low operational efficiency.[16] In this context, the structural transformation of the sector represents a pathway toward the progressive formalization of these actors, promoting their inclusion in organized value chains, access to social protection, and the improvement of their technical capacities, thereby contributing to local economic development and socio-environmental justice.

In Latin America, an estimated 4 million people[17] are engaged in informal recycling; being responsible for up to 50% of the recovery of recycled material in the region.[18] A substantial share of these workers are women, who are often concentrated in the most precarious and least profitable roles, earning less than men, with reduced access to protective equipment or more valuable recyclable materials. Despite this, they play a central role in sustaining household livelihoods and balancing care responsibilities with income generation. Yet, their contributions remain largely invisible in policymaking.[19] Recognizing the role of waste picker collectives in municipal waste management systems offers the opportunity for waste transitions in line with environmental and gender justice, while supporting livelihoods and skills development of the poorest and most vulnerable. Special attention must be given to

[15] United Nations Environment Programme and Climate and Clean Air Coalition (2021). Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions. Nairobi: United Nations Environment Programme. https://www.ccacoalition.org/sites/default/files/resources//2021_Global-Methane_Assessment_full_0.pdf

[16] According to the International Labour Organization (2023), in 2019 nearly 40% of workers in the informal economy were engaged in waste management and sanitation; of these, 45% were women and 38% were men, with wide regional variation (UNDP 2022b; Chen 2023; Khanal et al., 2023).

[17] Valencia, M., Fernanda Solíz, M., & Yépez, M. (2023). Waste picking as social provisioning: The case for a fair transition to a circular economy—ScienceDirect. https://wwwsciencedirect-com.ezproxy.its.uu.se/science/article/pii/S0959652623008041

[18] Inter-American Development Bank (IDB). (2021, July 1). Program to bring collectors of recyclable materials into the formal market launched with $8.4 million. https://www.iadb.org/en/news/program-bring-collectors-recyclable-materials-formal-market-launched-84-million

[19] In many countries with large informal sectors, women constitute a significant—sometimes majority—share of informal waste workers (OECD 2021). These roles are largely unregulated (GA Circular & Ocean Conservancy 2019; OECD 2021) and characterized by unsafe conditions, low status, and limited public support.

the design of inclusion and alternative livelihood plans during the closure of dumpsites, ensuring that women and men benefit equitably from sector reforms.

Latin America and the Caribbean has an important opportunity to advance sustainable waste management by expanding circular practices, protecting public health, and applying environmental justice principles. By investing in integrated and sustainable strategies, strengthening policies, and building local capacity, the region can tackle methane emissions at their sources—across municipal, agricultural, and industrial sectors—while fostering more resilient and equitable local economies.

b. Policy and technical actions in LAC countries

In LAC, a growing number of countries and local governments are starting to make progress in promoting the prevention of food loss and waste and improving organic waste management[11], shifting from a reliance on dumpsites to advancing the implementation of policies and **projects that contribute to avoiding, diverting and valorising waste**, supporting livelihoods and social inclusion, and accelerating progress towards a circular economy.

In recent years, a growing number of methane mitigation policies, commitments and projects have emerged in the region. These point to the growing recognition of the importance of methane mitigation, requiring the need to move away from dumpsite dependence.

Examples of actions, projects and initiatives taking place in LAC countries are shown in **Box 1**.

Box 1. Examples of measures and initiatives to reduce methane emissions and closure of dumpsites in the LAC region.

- **National Strategies and Regulations**: In recent years countries like Brazil, Chile, Peru or Ecuador have taken significant steps on the waste policy and regulatory agenda, including the adoption of new regulatory and policy frameworks, and the implementation of Circular Economy Roadmaps. Chile has made significant progress in tackling organic waste management and related greenhouse gas emissions. The *National Organic Waste Strategy 2020-2040* aims to valorize 66% of the municipality's organic waste by 2040, and a draft Law on Organic Waste is under discussion in the National Congress.[20] Brazil is also developing a national strategy for organic waste, focusing on reducing food waste, promoting composting, and recycling organic materials. This strategy aims to minimize methane emissions from landfills, increase recycling rates, and stimulate urban agriculture and agroecological practices. A key component is the development of composting systems and the potential valorisation of organic waste. Ecuador is advancing a low-carbon, circular development model through policies, such as the White Paper, the Law, the Inclusive Circular Economy Strategy, and the National Climate Change Mitigation Plan (PlanMICC 2024–2070), which prioritizes waste-sector emissions cuts. Complementary plans on integrated solid waste

[20] https://www.camara.cl/legislacion/ProyectosDeLey/tramitacion.aspx?prmID=16745&prmBOLETIN=16182-12

(National GIRS Plan) and plastic reduction will guide sustainable waste management, promote circularity, reduce GHGs, and strengthen governance in line with climate and development goals.

- **Food banks***: The Global Food Banking Network* has worked to create food banks around the world, 15 of which are in the region: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay and Peru.[21] In Mexico, for example, "Alimento para Todos" (APT) Program, with the support of over 3,500 volunteers, rescued 17,412 tonnes of food in 2023—primarily from Mexico City's Supply Center, the food industry, and retail stores—delivering food packages to over 161,312 people facing food insecurity, while also preventing 20,894 tonnes of CO_2 emissions.[22] Chile is in the final stages of developing its National Strategy on Food Loss and Waste, and in 2023, Uruguay launched its National Strategy for the Prevention and Reduction of Food Loss and Waste, including actions to promote food banks, among other measures.
- **Upcycling:** Across Latin America and the Caribbean, a growing number of upcycling initiatives are finding innovative ways to transform by-products into new products and value streams. For example, some Ecuadorian chocolate companies are beginning to upcycle cacao pulp (usually discarded) into juices, jams, and fermented beverages, helping to maximize cacao harvest value and create new revenue streams for small-scale growers.
- **Composting**: Composting facilities, whether government-owned, public-private, private, community-owned or owned by neighbour associations in countries such as Argentina, Bolivia, Brazil, Chile, Costa Rica, Mexico, Panama and Peru, have been present in the region for a number of years. For example, in Argentina, CEAMSE built in 2001 the composting plant Environmental Complex Norte III with a treatment capacity for 1,200 to 2,000 ton/month of green waste. The compost produced is distributed to amongst CEAMSE facilities (where it is used as covering material in sanitary landfills), as well as municipalities, educational organizations, hospitals and NGOs when the quality allows. The city of Rosario also has the composting plant Bella Vista, with a design capacity of 200 tonnes per day, which employs 12 informal waste pickers that make up 30 per cent of the plant's staff. In San José, Costa Rica, there is a successful project in the neighbourhood of Hatillo for the valorisation of waste which, thanks to the support of the Japan International Cooperation Agency (JICA), aside from providing training for waste separation, has implemented a composting centre in the school of Hatillo 3 which is operated by mothers. In view of the good results, the creation of a microenterprise for selling the resulting fertilizer is even being considered. Likewise, in Peru, public and private, municipal and non-municipal initiatives are promoted in the integrated management of solid waste. In this regard, under the Municipal Management Improvement Incentive Programme (PI), since 2018, local governments have been carrying out the recovery of municipal organic solid waste, which aims to include it in a productive cycle, through the process of compost or other alternatives such as humus or biogas, to reduce the amount of solid waste that is disposed of inappropriately. In this context, as of December 2024, a total of 545 local governments have developed actions for the recovery of organic solid waste through composting and vermiculture, managing to recover a total of 126 thousand tonnes of organic solid

[21] UNEP (2018). Waste Management Outlook for Latin America and the Caribbean. United Nations Environment Programme, Latin America and the Caribbean Office. Panama City, Panama.
[22] https://apt.org.mx/nosotros/

waste. The estimated GHG mitigation contributed by this Programme from 2018 to 2022 was 24,990 tCO_2 eq.

- **Black-Solider-Fly**: Several countries in LAC are beginning to explore the use of black-soldier-fly for the treatment of organic waste. For example, in Chile, a BSF facility run by Food for Future (F4F) collaborates with major retailers, which enables them to secure 200 MT of its feedstock from surplus supermarket food waste and produces 35–40 MT of insect protein monthly. In 2022 F4F launched Chile's first pilot program with salmon producer and feed supplier utilizing insect-based protein in aquaculture. In Lima, Peru, the CCAC-supported project examined the feasibility of a large-scale Black Soldier Fly (BSF) facility to process organic waste—about 50% of the city's 8,630 t/day municipal waste—to reduce methane emissions and create high-value protein by-products for animal feed and organic fertilizer. The study focused on a modular plant capable of handling 250 t/day from local markets and industries, providing insights for potential investors and municipalities on technical, economic, and regulatory requirements. Findings highlighted that BSF technology can achieve financial viability, with estimated capital costs (~ US $25 million for 250 t/day) and a projected internal rate of return of ~12.9% over 20 years. BSF bioconversion aligns closely with circular economy principles, when used under favorable conditions. While composting mainly produces soil enhancers, BSF rapidly transforms organic waste into several high-value products like insect protein, oil for animal feed, and frass as a fertilizer. By addressing both waste reduction and resource recovery, BSF systems provide a scalable, versatile solution with significant economic and environmental benefits[23]. In October 2024, the District Municipality of La Banda de Shilcayo, belonging to the San Martin region in Peru, and the company Stinville Biotech signed a specific inter-institutional cooperation agreement, which will be valid for three years, for the bioconversion of household organic solid waste from the black soldier flies. This demonstrates a scalable, circular solution to improve waste management, generate renewable revenue streams, and drive climate impact in Lima and San Martin in Peru and similar Latin American cities.
- **Semi-aerobic landfills:** In order to contribute to closing the gap in the final disposal of solid waste as well as in the mitigation of greenhouse gases, Peru, in coordination with local governments and the Japan International Cooperation Agency - JICA, is implementing the Programme for the Development of Solid Waste Management Systems in priority areas of the country, which includes the construction of 22 sanitary landfills with semi-aerobic technology based on natural ventilation and air advection to accelerate waste decomposition, stabilisation and reduction of greenhouse gases such as methane (the 'Fukuoka method'). Its implementation represents a 20% (conservative assumption) reduction of methane emissions.[24]. As of July 2025, there are 15 operational landfills with semi-aerobic technology and 7 in the process of implementation. Furthermore, within the framework of its NDCs in the waste sector, Peru has formulated a mitigation measure based on this technology called "Construction of sanitary landfills with semi-aerobic technology", whose potential reduction of GHG emissions in 2030 amounts to 130 thousand tCO_2eq. It should be

[23] Climate and Clean Air Coalition (2025). Transforming Organic Waste with Black Soldier Flies: A Guide for Decision-Makers, Entrepreneurs, and Implementers to Unlock the Organic Waste Potential of Black Soldier Fly Systems. Paris.

[24] Report: Opciones de mitigación de GEI en el sector de residuos sólidos municipales "Programa para el apoyo a las acciones de mitigación dentro del sector de manejo de residuos sólidos en el Perú" - Programa NAMA de Residuos Sólidos – Perú 2014

mentioned that this technological innovation proposal, which will allow the adequate management of solid waste and the reduction of GHGs, has been incorporated in the amendment of the Regulation of the Integrated Solid Waste Management Law, which is in the process of approval, in order to ensure a regulatory framework that allows local governments to implement it.

- **Eco-parks**: In Rio de Janeiro, the Caju Ecopark, operated by Comlurb, applies circular waste management practices that help reduce methane emissions. It incorporates technologies such as biomethanization, accelerated composting, and a food bank to process organic waste, lower emissions, and support local communities. In 2024, the Ecopark treated 4,300 tons of organic waste, generated renewable electricity for its operations and electric vehicles, and produced over 540 tons of organic compost. Its Food Bank supported over 700 vulnerable residents, distributing 16 tons of donated food. The compost is used in urban agriculture and reforestation efforts, contributing to a just and inclusive climate transition.
- **Anaerobic digestion**: Anaerobic digestion (AD) has been used in the region for many years for treating agricultural waste, but it is still not widespread for the treatment of the organic fraction of MSW. On the other hand, a methanization plant with a treatment capacity of 1,500 tonnes / month is being built in Rio de Janeiro, with an expansion project for 15,000 tonnes / month.[25]
- **Bioenergy**: Brazil and Argentina are among the leading countries in bioenergy production, which means they are particularly interested in using waste as the main raw material.[14] In addition, Brazil is also one of the leading ethanol producers globally, which demands more significant use of different types of organic waste to obtain this type of product.[15]
- **Landfill gas recovery**: Argentina, Brazil, Ecuador, El Salvador, Colombia, Mexico, Peru and Uruguay have, altogether, more than twenty sanitary landfills equipped with biogas energy recovery facilities.[26]
- **Closure of dumpsites**: Some countries in the LAC region have made progress in the closure of dumpsites. An example is the closure of the Estrutural dumpsite in Brasilia, which was considered the second largest in the world in operation in 2014. It was active for more than 50 years and received around 30 million tons of municipal solid waste [OBJ] Another significant experience was the closure of La Chureca dumpsite, in Managua, Nicaragua, which was intervened in 2016, being the largest dumpsite in LAC by then. There are also other initiatives underway aimed to the closure of dumpsites, such as La Duquesa in Dominican Republic[27] considered the largest dumpsite in LAC and the fifth largest in the world –, Puebla in Mexico, or Melipilla in the metropolitan area of Santiago, Chile.

An increasing number of countries in the region now have environmental legislation that establishes commitments for the collection and disposal of agricultural and urban waste, either through local governments, the private sector or agricultural producers. Furthermore,

[25] UNEP (2018). Waste Management Outlook for Latin America and the Caribbean. United Nations Environment Programme, Latin America and the Caribbean Office. Panama City, Panama.
[26]UNEP (2018). Waste Management Outlook for Latin America and the Caribbean. United Nations Environment Programme, Latin America and the Caribbean Office. Panama City, Panama.
[27] La Chureca arose from the accumulation of debris caused by an earthquake (1972) and received more than four million cubic meters of uncontrolled waste. For its integral recovery, several activities were implemented with the support of the Spanish cooperation agency (AECID), such as; the sealing of its surface, the construction of a technical separation plant for the recovery of materials, the installation of an organic waste management system, and the urbanization of housing in areas adjacent to it.

there is a general obligation to dispose of this waste in authorized sites, though provisions are scattered across different constitutions, health codes and sectoral regulations.

Most countries in the region already have waste management laws that define obligations for waste generators and managers, outline penalties for non-compliance, and prohibit practices such as dumpsite and open burning –restrictions in place for years in countries like Argentina, Mexico, Peru or the Dominican Republic. Although to a lesser extent, numerous countries have also specific plans for the progressive closure of dumpsites. However, an adequate regulatory and planning framework is a necessary but not sufficient condition to eradicate dumpsites, as this is a complex process which requires overcoming a number of challenges,[28] ensuring that prevention and recovery are systematically favored over final disposal.

In the LAC region, some countries have a national strategy of solid waste comprehensive management - final or under review, including Argentina, Brazil, Colombia, Costa Rica, Chile, Dominican Republic, Mexico, Panama, Peru and Uruguay are examples of the first group, while others are in process of development.

To encourage the reduction of methane emissions from organic waste, it is necessary to continue to strengthen regulations and the application of the law in terms of prevention of waste generation, separation of waste at the source and the inclusion of organic waste valorisation goals, with certain compliance deadlines. Simultaneously, a gradual restriction of dumping organic waste in landfills should be considered, alongside strong economic and fiscal incentives that promote the recovery and use of by-products—such as organic fertilizers, animal feed or biogas—while also fostering market development and sustained demand for these valorised products. Any policy should firstly encourage reducing the amount of organic waste that is currently being generated.

Several countries have started to include methane and waste management in their most recent NDCs. An analysis of 13 NDCs in LAC region[29] shows that solid waste management is addressed in 92% of the NDCs, and reducing waste at source is included in almost half of the countries, often as part of a broader circular economy approach. Mention is also made to improving collection (62% of NDCs), landfill improvement (80%), landfill gas capture (60%) and organic waste diversion (around 70%). However, only 30% of countries (4 out of 13) have quantified GHG emission reduction targets for this sector. Some examples are shown in **Box 2**.

Box 2. Examples of National Determined Contribution (NDC) addressing the waste sector.

Chile: The NDC of Chile (2020) considered in Chile´s Carbon Neutrality by 2050 scenario the mitigation assumption that by 2035, 100% of all urban municipal waste will be disposed in sanitary landfills with flaring systems or biogas capture. Also, Chile strengthened their NDC in 2022, including a commitment to peak methane emissions by 2025; to achieve this commitment it is essential to reduce emissions related to organic waste management. For the new NDC, Chile intends to reflect a greater ambition including a more concrete

[28] UNEP (2021). Roadmap for the progressive closure of dumpsites in Latin America and the Caribbean. Secretariat of the Coalition for the progressive closure of dumpsites in LAC, UNEP LAC Office, June 2021.
[29] ISWA/AFD (2025) Atlas on Waste Management and Climate Change Mitigation. Focus on integrating waste initiatives into NDCs.

consideration of the waste sector[30], considering challenges faced regarding the final disposal of waste in different regions.[31]

Ecuador: In the case of Ecuador, the Second Nationally Determined Contribution (NDC) sets out the country's commitments to climate change for the 2026–2035 period, with clear mitigation targets aligned with the Paris Agreement. Its purpose is to guide the reduction of greenhouse gas emissions in strategic sectors such as waste management, while also aiming to promote low-carbon, inclusive, and resilient development. The importance of this document lies in the fact that it constitutes the official roadmap supporting national climate action, serving to mobilize policies, financing, and international cooperation. Regarding organic waste, the NDC highlights the need to strengthen integrated management, encourage source separation, promote composting and energy recovery from the biodegradable fraction, and reduce disposal in dumpsites and landfills that generate methane, thereby contributing to emissions mitigation and the transition toward a circular economy[32].

Mexico: Mexico's updated NDC covers all sectors and greenhouse gases, including specific measures to reduce methane emissions in the waste sector. These actions focus on improving integrated municipal solid waste management, advancing treatment of both municipal and industrial wastewater, and promoting practices such as recycling, composting, and biodigestion. Mexico also strives to capture and utilize biogas from sanitary landfills and wastewater treatment plants, reinforcing its commitment to comprehensive waste management and methane reduction[33].

Peru: On 12 December 2020, the President of the Republic of Peru announced at the Climate Ambition Summit that Peru will increase its ambition to reduce carbon emissions from 30% to 40% by 2030, with the firm prospect of becoming a carbon neutral country by 2050[34], which leads all sectors of the country and in particular the waste sector to increase the reduction of GHG emissions, mainly oriented towards medium and large-scale solid waste recovery projects. Likewise, in that year, Legislative Decree 1501 was published, which modified Legislative Decree No. 1278, which approves the Law on Integrated Solid Waste Management, where the obligation to implement source segregation programmes and selective collection of municipal solid waste was incorporated and emphasised, with the aim of facilitating the recovery of both organic and inorganic waste.

Uruguay: Uruguay's Third Nationally Determined Contribution (2024) demonstrates a strong commitment to tackling methane emissions and food waste through ambitious waste sector measures. By 2035, Uruguay aims to ensure that all final disposal sites for household waste meet proper environmental standards and use methane-reducing technologies. The country also commits to halving food loss and waste and establishing

[30] Some of the measures considered by Chile in its 2025 NDC Update include the promotion of a law encouraging the ~~recovery of organic waste (by 2027), ensure that at least 50% of regions have regional strategic waste recovery plans~~ (by 2028), and developa National Strategy to Reduce Food Loss and Waste (by 2026).

[31] It is estimated that 75% of the country's landfills have shortened their useful life by 12 years considering the current rate of waste generation.

[32] Documento de 2da NDC Ecuador 2026-2035. https://unfccc.int/sites/default/files/2025-02/Segunda%20NDC%20de%20Ecuador.pdf

[33] https://unfccc.int/documents/624282; https://unfccc.int/documents/645206

[34] Nota de Prensa del 12.12.2020. https://www.gob.pe/institucion/minam/noticias/320326-peru-incrementa-su-ambicion-climatica-para-reducir-en-40-sus-emisiones-de-carbono-hacia-el-ano-2030

organic waste valorisation and source separation systems in all departments. In addition, Uruguay plans to prioritize surplus food for human consumption, channel remaining food waste to animal feed, and enhance material circularity to further reduce greenhouse gas emissions. These integrated efforts reflect Uruguay's determination to align climate action with food system sustainability and a circular economy approach.

In most countries in the region, integrated solid waste management is closely linked to the availability of financial resources. Even though payment and collection systems have been implemented through rates (property taxes), which are mainly collected by the municipal administrations, in general, waste collection levels do not account for service costs, which affects the sustainability of the activity and limits the introduction of quality improvements, including prevention, reuse and recovery measures.

c. Barriers to methane reduction projects in the waste sector

Compared to sectors such as energy and transportation, the waste sector has historically attracted less investment for emission reduction efforts. In addition, funding on waste has tended towards final treatment and disposal rather than investing across the waste hierarchy. Projects in the waste sector that aim to cut methane emissions have not been extensively implemented across the LAC region, where waste management typically centres on building landfills or designating dumpsites for final disposal. This discrepancy is partly due to a higher perceived level of risk and both actual and perceived challenges, many of which are specific to waste management projects, and which include:

Regulatory and Policy Barriers

- Weak Legal Frameworks and Enforcement: Many jurisdictions lack mandatory integrated and sustainable waste management regulations (e.g. organic waste bans, specific regulations aiming at reducing food waste) or fail to enforce existing rules, enabling open dumping, uncontrolled burning, and poor landfill management.
- Insufficient Policy Support for Prevention and Resource Recovery: Policies promoting prevention, source separation, valorisation goals, or market development for by-products are often missing or weak, contributing to over-reliance on landfilling.
- Absence of Economic or Fiscal Steering Mechanisms: Without pricing mechanisms (e.g., landfill taxes, collection fees or pay as you throw) or fiscal instruments (e.g. tax reduction for companies that donate food), waste continues to flow into low-cost, environmentally damaging disposal pathways.

Operational and Infrastructure Barriers

- Low Sorting Rates: Failure to separate waste at homes, institutions, and businesses leads to mixed waste streams arriving at treatment facilities, undermining the efficiency of composting, bio-based materials and energy recovery technologies but also hindering recycling of inorganic materials.
- Infrastructure/Limited and Inefficient Waste Treatment Facilities: Lack of transfer stations or valorisation facilities forces direct hauling to final disposal sites, increasing costs and contributing to illegal dumping and road pollution.

- Limited Public Education and Awareness: Lack of understanding the environmental and economic impacts of food waste, lack of culture and knowledge about how to separate and valorise organic waste, which hinder implementation of valorisation solutions and policies, lack of demand for valorised products.
- Community Concerns and Environmental Safeguards: New treatment facilities (e.g., composting plants, biodigesters, landfill gas capture systems) often face challenges related to land availability and low acceptance by local communities, which is frequently driven by legitimate concerns about inadequate control of emissions, odors, traffic, land use, or potential health risks. These elements can undermine public trust and limit acceptance of new projects.
- Informal Sector Integration Challenges: Complexities in formally including and recognising informal waste workers in new systems can generate social conflict and weaken project effectiveness if not managed inclusively.
- Lack of Accurate Data: the lack of robust information systems hinders the establishment of a baseline scenario and priority action, as well as evaluation and measuring impact, which is crucial to attract investments and made projects sustainable over the long term.

Capacity and Institutional Barriers

- Coordination Challenges: Unclear institutional responsibilities, lack of inter-municipal cooperation frameworks, and fragmented governance hinder integrated waste management solutions.
- Limited Technical Expertise: Local governments often lack the specialized skills and institutional capacity to plan, identify opportunities, implement, and manage waste prevention and valorisation projects.
- Limited Bankable Project Pipeline: Many countries struggle to convert Nationally Determined Contributions (NDCs) into implementable, finance-ready waste projects due to technical and financial capacity gaps.

Financial Barriers

- Low and Unstable Revenue Streams: Financial sustainability is affected by the lack of or low collection and disposal fees, unstable tariff collection rates, absence of cost-recovery mechanisms and the shortage of long-term contracts.
- Public budget allocations for integrated waste management are low: In general, integrated waste management is funded by local government budgets. Currently, the average proportion for municipal integrated waste management spending is about 10-20%.[35] In addition, what is spent is often restricted to specific funding categories (e.g., collection worker wages).
- Market Limitations for the circular economy Limited market uptake for compost/organic fertilizers, upcyclables, and biogas due to price competitiveness and lack of regulatory support lowers the economic viability of waste processing facilities, reduces market demand for by-products and discourages private investment.
- Investor Risk Perception: High perceived risk stemming from unstable revenue, weak regulations, lack of stable local budget allocations to the waste valorisation

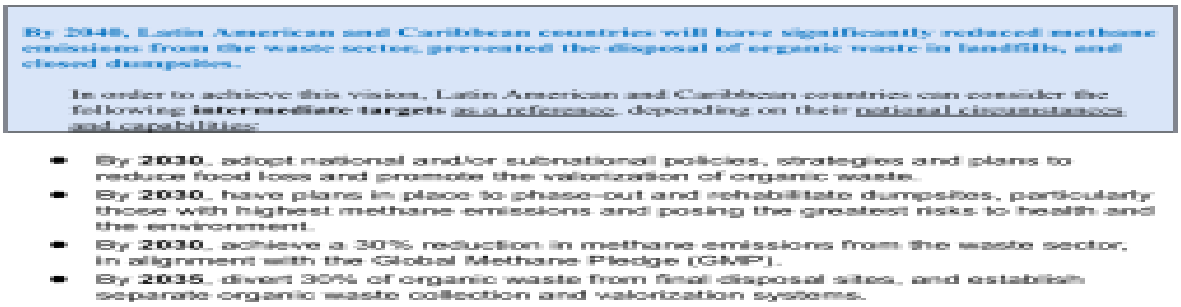
[35] Kaza, S., L.C. Yao, P. Bhada-Tata, and F. Van Woerden. 2018. What a Waste 2.0. A Global Snapshot of Solid Waste Management to 2050. Urban Development Collection. Washington, D.C.: World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/30317.

projects and operational challenges makes financing more difficult, especially from private or commercial sources.

- Weak Monitoring Frameworks: The absence of standardized Monitoring, Reporting, and Verification (MRV) systems makes it difficult to demonstrate methane emissions reductions, limiting eligibility for climate finance.
- Fragmented Funding Sources: Projects often require complex financing structures combining grants, loans, and private capital, each with differing requirements and timelines.

3. Objectives and scope of the Programme

a. Vision



b. General objective

The overarching objective of the Regional Cooperation Programme is to contribute urgently and significantly to the **reduction of methane emissions from the solid waste sector in Latin America and the Caribbean** through the promotion of integrated solutions focused on avoidance, diversion, valorization, and the development of adequate infrastructure (ADVI) for organic waste management, as well as through improving disposal site operations and progressively **closing dumpsites**.

The Programme also seeks to align national and regional policies with global climate commitments and the Sustainable Development Goals (SDG), by strengthening institutional capacity, enabling just and inclusive transitions, and generating co-benefits in public health, food security, decent job creation, and the environmental and socioeconomic resilience of local communities.

c. Specific objectives

1. **Support the alignment and mobilization of regional efforts** to establish and implement the Programme, coordinating national and sub-national actions to reduce methane emissions from the waste sector, promote circular approaches, and dumpsite closure and rehabilitation.
2. **Promote collaborative solutions to address shared regulatory, financial, and project-level barriers** that hinder investment in methane mitigation and alternatives to open dumping.

3. **Deliver targeted cooperation, training, and technical assistance** to implement methane reduction solutions, including actions on high-emission dumpsites, guided by regional strategic priorities and identified needs.
4. **Act as a catalyst for mobilizing technical and financial resources** to implement Programme activities and advance priority actions across the region.

d. Scope

The methane mitigating actions encouraged by this regional Programme consider the different stages in the waste hierarchy—from upstream (avoid), midstream (divert and valorise), to downstream (final disposal infrastructure)—as illustrated in Figure 1 below.

Figure 1: Methane Mitigation Opportunities[36]

Most final waste disposal sites in Latin America and the Caribbean lack gas collection systems altogether, allowing methane to escape freely into the atmosphere Even in engineered landfills with capture systems, methane collection efficiency remains limited by technical and economic constraints, with reported values generally in the range of 40–50%. As a result, landfills remain major methane emitters—even when controlled.

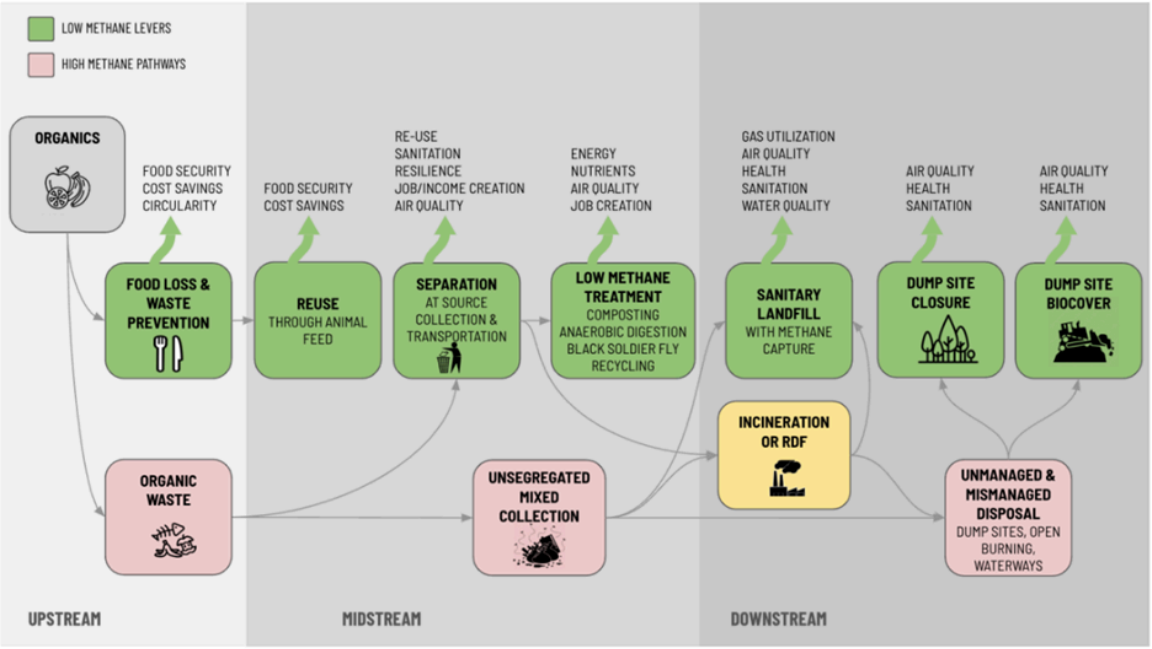
Relying solely on landfill improvements or closing dumpsites fails to address the root cause: the high volume of organic waste being disposed of. While downstream actions like dumpsite closure and efficient sanitary landfill development and operation are essential for

[36] https://www.ccacoalition.org/content/low-methane

safer disposal, they must be paired with upstream and midstream strategies that prevent organic waste from entering landfills.

Therefore, a transformational shift in waste management is needed—one that prioritizes waste prevention, source separation, and the development of organics collection and valorisation infrastructure. Only by combining landfill closure and control with robust measures to divert biowaste can the region achieve significant methane reductions and progress toward truly sustainable integrated waste management. This is illustrated in Figure 2.

Figure 2: LOW-Methane Mitigation Opportunities[37]



e. Solutions for methane mitigation in the waste sector

The table below presents a preliminary “menu” of methane mitigation technologies and solutions across different stages of the waste hierarchy. These actions are intended to be adapted and adopted by national and subnational governments in LAC, based on their specific needs and contexts.

This menu serves as a reference point for identifying priority areas where regional cooperation can add value by supporting the adoption and scaling of these solutions. In the following section, specific cooperative activities will be proposed—covering all stages of the waste hierarchy—to assist with implementation, foster knowledge sharing, and strengthen the technical and institutional capacities necessary to effectively apply these solutions across the region.

Upstream solutions: Prevention

[37] https://www.ccacoalition.org/content/low-methane

Methane reduction solutions	Description
Redistribution of food	Food redistribution programs are initiatives designed to redirect surplus edible food from producers, retailers, restaurants, and other sources to individuals and communities in need, thereby reducing food waste and addressing food insecurity. These programs collect excess food that would otherwise be discarded—due to overproduction, cosmetic imperfections, or nearing expiration—and distribute it through food banks, charities, or direct community outreach.
Post-Harvest Efficiency and Supply Chain Optimization	A range of practical solutions can be implemented across storage, transport, processing, and supply chain management. These include improving storage through cold facilities, hermetic systems, and aggregation centers; enhancing distribution and transport with better packaging, handling, and materials; and extending shelf life via traditional and modern processing methods. Cross-cutting measures such as food monitoring technologies, smart logistics, and company-level incentives further help reduce inefficiencies and prevent losses throughout the supply chain.
Hospitality tracking technology	Hospitality tracking technology helps businesses understand the scale and cost of food waste by providing tools to monitor, analyse, and manage it effectively. Through data analytics, sensors, IoT devices, and certification systems, businesses can assess the impact of waste reduction efforts. These solutions are adaptable across sectors such as restaurants, supermarkets, food processing, and institutional food services.
Public Procurement Policies	Government contracts that prioritize suppliers with food waste reduction practices can create economic incentives for change.
Fiscal incentives to reduce food waste	Governments can envisage tax deductions or credits for businesses that donate surplus food to charities or reduced VAT or sales tax on donated or near-expiry food to encourage redistribution instead of disposal.
Pay-As-You-Throw (PAYT) Schemes	Households or businesses are charged based on the amount of waste they generate, creating a direct economic incentive to reduce food waste.
Consumer Behaviour Change Programmes	Behaviour change programs are fundamental in that pilot and scale interventions for high food-wasting households effectively reduce food waste and methane emissions from waste management. These programs could focus on the reduction of food waste and on organic waste segregation for better collection and valorisation.

Midstream solutions: deviation and valorisation

Methane reduction solutions	Description
Source separation & organics collection systems	Source separation and organics collection systems are fundamental for the valorisation of organic waste to prevent contamination by non-organic materials such as plastics, metals, and glass, which can hinder or even make the recovery and processing of organic waste impossible. Without source separation, the quality and quantity of recoverable organic waste diminish significantly, reducing the environmental and economic benefits of waste valorisation and increasing reliance on landfilling. Therefore, source separation and organics collection serve as the foundational prerequisite for sustainable organic waste management and resource recovery.
Upcycling	Upcycled food products help prevent food waste by transforming surplus, imperfect, or byproduct ingredients—which would otherwise be discarded—into new, high-quality, marketable items.
Waste-to- feed	Transformation of food waste into animal feed solutions allow to repurpose surplus food nutrients for feed and can also help to reduce other major environmental impacts of producing feed crops like land, energy, and water use, while bolstering food security.
Black soldier fly	Black soldier fly (BSF) technology has become an innovative and sustainable solution for managing organic waste while producing valuable by-products. By converting waste into high-quality protein and nutrient-rich frass, within about two weeks, BSF larvae

	offers an environmentally friendly approach that supports waste reduction, agricultural sustainability, and new business opportunities. This technology is versatile and scalable, making it suitable for a range of operations, from smallholder farms to large industrial facilities.
Composting	Composting is a biologically based process that stabilizes organic matter, and once formed, can be used to amend soils by increasing fertility as well as the soil's ability to retain moisture. The collected organic matter undergoes controlled composting processes, where it is broken down into nutrient-rich compost. This compost can then be used to enrich soil in agricultural settings, promoting healthier and more sustainable food production, as well as for reforestation processes
Anaerobic Digestion	Anaerobic digestion converts organic waste into biogas and digestate through controlled microbial decomposition in the absence of oxygen. The biogas can be captured and utilized as a renewable energy source for electricity generation, heating, or as a vehicle fuel, amongst other uses. Simultaneously, the remaining material, known as digestate, is a nutrient-rich byproduct that can be used as a natural fertilizer in agriculture. Anaerobic digesters come in a wide range of types and scales, from small-scale, decentralized units commonly found in rural or low-income areas, to large, centralized industrial digesters designed for processing high volumes of organic waste in urban and commercial settings.

Downstream solutions: Final disposal infrastructure

Methane reduction solutions	Description
Landfill gas capture and utilization	A sanitary landfill is an engineered waste disposal facility designed, constructed and operated to minimize impacts on public health and the environment. Landfills undergo extensive planning from site selection to post-closure management. Although they require substantial financial resources, it has an advantage in the process of methane emissions control as they are usually equipped with technologies for the capture and use of biogas as an energy source, that can be used for electricity generation, or renewable natural gas. Moreover, energy recovery from LFG is only economically viable at scale, and many smaller or older landfills may flare the gas instead of using it productively. Thus, while sanitary landfills represent a substantial improvement over dumpsites, they are not a climate-neutral solution and require long-term, well-resourced management to minimize emissions effectively.
Landfill gas flaring without energy recovery	Landfill gas flaring without energy recovery is a fallback option used when energy utilization is not technically or economically feasible, and while it can help reduce odors, it is a significantly less preferred solution than landfill gas capture and utilization, as it offers no energy or revenue benefits. While it can achieve high methane destruction efficiencies—typically over 98%—its effectiveness can also be compromised by poor maintenance, inconsistent gas flows, or system malfunctions, particularly in aging landfills. As such, flaring should be considered a transitional or last-resort measure, not a long-term strategy for methane mitigation.
Landfill closure and capping (with or without gas utilization)	Closing and capping (e.g. through biocovers) a landfill or dumpsite is an important step in improving environmental conditions, controlling pollution, and reducing methane emissions. It helps prevent further degradation of the site and surrounding areas, contributing to better soil, air, and water quality. While the process can be complex—requiring solid planning, institutional coordination, financial resources, and community engagement—it offers a clear path to stabilizing the site through methane control and reducing long-term environmental and health risks. A well-designed closure

	plan should address technical, environmental, social, and economic factors to ensure effective and lasting outcomes.
Disposal site biocovers	Where landfill gas capture and utilization are not feasible, biocovers offer an effective and low-impact alternative for methane mitigation. These systems harness natural microbial processes to oxidize methane before it reaches the atmosphere, significantly reducing greenhouse gas emissions. Biocovers can take several forms—including full-surface covers, biowindows, or biofilters—making them adaptable to a wide range of site conditions. They provide a sustainable, passive solution that enhances environmental performance at disposal sites, especially where traditional gas recovery systems are impractical.
Semi-aerobic landfills	Semi-aerobic landfill technologies, such as the Fukuoka method allows for stabilization of waste through promoting aerobic decomposition, reducing methane emissions and the collection and treatment of leachate. This process expedites landfill control, transition and closure, allowing land to be used as parks and open spaces and even for the installation of civil infrastructure. This technology was accredited as a CDM methodology by the UN CDM Executive Board.

4. Areas of intervention and cooperation actions

a. Priority areas of action

This section outlines the priority areas for regional cooperation aimed at reducing methane emissions from the waste sector and closing dumpsite in Latin America and the Caribbean. For each area, proposed actions focus on facilitating knowledge exchange, experience sharing, joint initiatives, and the cooperative mobilization of financial and technical resources.

Across the region, countries face shared challenges in integrated waste management, often rooted in similar structural and operational issues. The proposed cooperation priorities reflect the most pressing and commonly identified needs at the regional level—those requiring collective focus and intensified effort in the short and medium term. These priorities are grouped into three strategic cooperation areas, designed to accelerate methane mitigation, enhance sustainable integrated waste practices, and support the progressive closure of open dumpsites throughout the region. The three areas are as follows:

1. **Strengthening legal frameworks and enforcement**
2. **Enhancing institutional and operational capacities, including MRV systems**
3. **Mobilizing finance for waste methane mitigation and dumpsite closure**

The following section includes a range of cooperation activities in each of these areas.

b. **Cooperation activities**

Cooperation action	Description	Milestones [a] (2026-2029)	Potential Partners [b]	Resources required [c]
A. Strengthening legal frameworks and enforcement				
A1. Develop a set of regional frameworks of policies and regulations to prevent and recover organic waste, phase out dumpsites, reduce dependence on them and support methane mitigation in the waste sector	The focus could be on policies and regulations that aim to: • Reduce food loss and waste at its source • Implement segregated collection of organic waste • Promote the valorisation of organic waste from municipal, industrial, agricultural and forestry sources into valuable products including through community-based projects • Strengthen and support end markets for organic-waste derived products • Restrict the landfilling of biodegradable waste • Make methane destruction at disposal sites mandatory	The following milestones are envisaged for each of these cooperation activities: 1. Conduct an extensive review of existing legal and institutional frameworks in the region (for A1) and of best practices in the LAC region and worldwide (for A2 and A3) 2. Develop an initial draft 3. Organize a consultative workshop with all relevant stakeholders to gather feedback 4. Finalize the draft based on consultations 5. Secure formal approval of the recommendations from all regional focal points 6. Support countries in adopting and adapting the frameworks at national and, where applicable, sub-national levels	UNEP CCAC LOW-M IDB ISWA LAC Circular Economy Coalition The Global FoodBanking Network (GFN) GMH	USD 500K - 1M
A2. Develop a common set of economic and fiscal incentives to support the closure of dumpsites, drive methane mitigation from the waste sector and promote the separate collection and valorization of organic waste from municipal, industrial,	The focus could be on incentives such as: • Landfill taxes or levies to discourage final disposal • Tax credits and reductions for organic-waste derived products, food waste prevention or on methane mitigation technologies			

agricultural and forestry sources	• Pay-As-You-Throw (PAYT) waste charging schemes • Public procurement favoring organic waste-derived products • Climate-aligned contract structuring that will provide guarantees and incentives to attract private sector investment • Feed-in tariffs for renewable energy from biogas • Low-interest loans and loan guarantees This could include developing and calibrating a tool to support evaluation of different policy alternatives and its effects in terms of methane mitigation.			
A3. Develop a common set of enforcement practices in order to strengthen the actual implementation of existing or new regulations	This may include: • Establishment of penalties and fines for cases of noncompliance • Establishment of surveillance and control systems • Incentives for compliance • Community engagement in monitoring • Use of technology for tracking and enforcement This could include guidance to local or regional governments to come up with contracting terms that are aligned with climate goals and at the same time offer clear guarantees and incentives for private sector investment.			
B. Enhancing institutional and operational capacity				

B1. Regional Capacity-Building Programme for Waste Sector Professionals in LAC.	This regional training and knowledge sharing activity could build the technical and financial capacities of waste service providers, national and municipal waste officers, and landfill operators through focusing on, for example: • Implementation of actions to prevent the generation of organic waste from various sources, including various productive, industrial and service sectors. • Operating and maintaining organic waste treatment facilities • Technical implementation of methane mitigation technologies (e.g. composting, biodigesters, bioconversion with the black soldier flies, gas capture, implementation, operation and maintenance of semi-aerobic landfills) • Preparing tenders and bankable projects • Market assessments and revenue generation from compost, digestate, or energy • Accessing financing, including carbon credits • Best practices for landfill operation • Best practices for dumpsite closure • Recognizing and professionalizing informal sector workers • Information systems that facilitate the identification of institutions that generate and recover organics	1. Identify priority capacity building needs and target groups through consultation with LAC countries and municipal stakeholders. 2. Design modular capacity building content tailored to different stakeholder groups (municipal officers, waste service providers, landfill operators, etc.) 3. Identify and publish relevant case studies in LAC countries 4. Conduct 2-3 trainings or knowledge exchange activities for each topic 5. Rely on existing knowledge hubs and virtual exchange platforms to encourage ongoing dialogue	METLAC LEDSLAC IDB (Too Good to Waste – Course on sustainable finance) ISWA LAC University Consortium on Waste Management AIDIS UIM UNEP	USD 250K-500K

	• Developing self-sustainable models for organic waste management			
B2. Develop a LAC Project Preparation Facility for Methane Mitigation from Organic Waste	This regional initiative will establish a Project Preparation Facility (PPF) to support eligible entities—such as technical consortia, advisory firms, and NGOs—in partnering with subnational governments, MSMEs, cooperatives, and the informal sector across Latin America and the Caribbean. The PPF will offer tailored technical, legal, and financial assistance to develop investment-ready portfolios of circular economy-based projects that reduce methane emissions from upstream and midstream organic waste flows, and which are aligned with national investment plans. By matching jurisdictions with expert advisors, the PPF will accelerate the pipeline of technically viable, socially inclusive, and financially sound methane mitigation projects in the LAC region.	1. Identification of a suitable financing mechanism and/or donor(s); 2. Preparation of a proposal or concept note to mobilize required funds 3. Establishment of the PPF mechanism and selection of delivery partners 4. Launch of regional call for proposals targeting local governments, cooperatives, private sector and other eligible entities 5. Selection of pilot jurisdictions and TA providers 6. Development of champion project portfolios (pre-feasibility, market analysis, business models) 7. Capacity building for local actors and informal sector inclusion 8. Investor matchmaking and readiness support for shortlisted portfolios 9. Dissemination of “champion” business models and replication toolkit	World Bank IDB (Too Good to Waste – call for proposals) GMH GCF GEF Multilateral and national development banks	USD 1M-5M

B.3 Promote development, adaptation and dissemination of technical guidelines for the operation and closure of dumpsites	• Updating, disseminating and facilitating access to technical reference guidelines (including technical, social, environmental and economic aspects) and other technical resources. • Promote the development of guidelines for priority issues in LAC. • Dissemination of the technical guidelines.	1. An updated register of existing guidelines is maintained and disseminated. 2. One emerging topic of interest have been selected for the design of the guidelines, taking into consideration emerging priority in LAC countries, and existing guidelines. 3. At least one guideline has been designed and developed, in consultation with all focal points. 4. The guideline(s) are available on the Coalition's website and are disseminated at events and through regional networks.	IDB ISWA LAC University Consortium on Waste Management AIDIS	USD 50K –150K
B.4. Establish a harmonized regional system for data collection, monitoring, reporting, and verification (MRV) on waste management and methane emissions.	This activity aims to strengthen the quality, consistency, and comparability of data across LAC to support effective waste policy planning and methane mitigation. It will promote harmonized MRV systems, build technical capacity to assess waste volumes and composition, and integrate emission monitoring into waste sector operations. It will support monitoring and reporting of progress on waste sector commitments under updated NDCs. The activity will also encourage countries to feed data into the “Solid Waste and Circular Economy Hub for LAC” and apply innovative tools like satellite imagery to identify high-emission dumpsites and track progress toward waste diversion and dumpsite closure. Ultimately, this will provide	1. Assess existing data systems and MRV practices in LAC countries and identify and reduce gaps. 2. Create a standard methodology for measuring waste composition, volume, and emissions, and align it with international MRV frameworks 3. Conduct regional workshops and technical training on waste quantification, emissions monitoring, and use of satellite and digital tools 4. Support countries in uploading data to the “Solid Waste and Circular Economy Hub,” including	IDB GMH UNEP	USD 500K

	a robust evidence base to guide national strategies and regional coordination efforts.	training government focal points on platform use 5. Implement pilot MRV systems at selected dumpsites and processing facilities, integrating continuous methane emissions monitoring 6. Support countries in using improved data to set measurable waste reduction and methane mitigation targets aligned with dumpsite closure goals		
B.5 Promote awareness raising and behavioural change	The focus could be on: • Avoiding food waste and losses throughout the life cycle • Separating organic waste to enable resource recovery (e.g., compost, energy) and support the local circular economy • Explaining the purpose and benefits of waste fee charges to build user understanding and trust • Promoting sound waste management throughout the entire lifecycle and highlighting the risks and environmental and health costs of poor practices	1. Best practices on education and awareness raising campaigns on proper waste management have been identified and compiled. 2. Develop a scalable model of public education and behaviour change at the regional level, which can then inform and feed into broader national awareness campaigns. 3. The materials are disseminated to the focal points for adaptation and use in the countries. 4. Data and information on the cost of inaction in dumpsite management is gathered and a briefing note is produced.	Ministries of Environment and Education, GAIA, GFN, other on-the-ground local associations and community programs, specialized behavioral change scientists and agencies IDB	USD 250K-500K
C. Mobilizing finance for waste methane mitigation and closure of finance				

C1. Strengthening domestic funding systems to establish self-sustaining methane mitigation solutions in the waste sector	This cooperation activity aims to develop self-sustaining financial mechanisms for methane mitigation across the LAC region, ensuring projects remain viable long after launch. It promotes cost recovery systems that leverage domestic funds to secure long-term financial autonomy. Solutions explored include utility-like business models, fee-based collection, public-private partnerships, pay-as-you-throw schemes, and the sale of compost or biogas as marketable products—each designed to cover operational costs, support infrastructure reinvestment, and enable project scaling.	1. Review current costs recovery mechanisms, identify financial shortfalls, and assess revenue opportunities 2. Create regional scenarios on self-sustaining financial mechanisms for organic waste management 3. Organize a multi-stakeholder workshop to refine scenarios and share lessons learned 4. Deliver a practical regional toolkit 5. Support countries and cities in integrating these mechanisms into national solid waste management frameworks, and municipal finance systems	Ministries of Economics and Finance, National Development Banks, National and Regional Climate Funds, Private Banks and Investors, Waste Management Companies, Subnational governments, LOW-M, GEF, GCF, IDB, CAF, CDB, WB, IFC, LAIF, GMH, bilateral donors, philanthropic funds	USD 500K-1M
C2. Capacitate financial institutions to scale methane reduction financing in the waste sector	This activity strengthens the capacity of local and regional financial institutions across the LAC region to develop new credit lines, enhance investment pipelines, and create relevant financial instruments for waste methane reduction projects. It will facilitate technical assistance and policy dialogue to support integration of waste sector projects into national green taxonomies, providing clear signals to attract private sector investment. It aims to raises awareness of methane mitigation potential, fosters collaboration, and mobilizes finance at scale to accelerate investments in methane solutions.	1. Create a network of local and regional financiers, identifying opportunities for collaboration and coordination 2. Evaluate existing capabilities and needs for credit line development, market scoping, and risk management. 3. Assist financiers in developing robust evaluation and impact measurement tools for methane projects and integration of waste project into their green taxonomies.		USD 500K

C3. Leveraging external finance mechanisms to mobilize additional funding for methane mitigation in the waste sector	This cooperation activity aims to identify, structure, and promote the use of external financing mechanisms—such as international climate funds, concessional loans, blended finance vehicles, and carbon markets—to mobilize additional capital for methane mitigation in the organic waste sector across the LAC region. Recognizing that domestic budgets are often insufficient or unavailable, the activity will support countries and cities in understanding how to blend external sources into national and local financing frameworks.	1. Map external financing sources and their requirements (e.g., GEF, GCF, IDB, CAF, WB bilateral donors, philanthropic funds, carbon markets, etc.) 1. Design practical scenarios showcasing effective use of blended external finance 2. Deliver a regional toolkit on leveraging and blending external finance for waste methane mitigation 3. Convene regional finance dialogues and matchmaking forums with external funders 4. Support integration of external finance mechanisms into national and municipal systems		USD 500K-1M

Notes:

[a] These **milestones** are envisaged to be implemented over a **4-year period** (2026-2029). As indicated in the section below on Monitoring and Evaluation, a biennial Work Plan may be developed by the Coalition, with specific actions and indicators to facilitate the monitoring of the implementation of the proposed activities above, which will allow for periodic refinement and review of the scope of activities, potential partners to be engaged, and resources to be mobilized. This will serve to assess progress to date, with particular attention to opportunities for strengthening regional cooperation, and to adjust the scope of activities and partnerships as needed before completion of the full 4-year cycle.

[b] The list of potential **partners** in each section is indicative, based on feedback provided by countries and partners. As indicated below, coordination, cooperation and synergies will be sought with a range of potential partners, to facilitate the implementation of the Programme, and avoid duplication of efforts.

[c] The amount of **resources** required to implement the different activities is indicative and estimated based on previous experiences, projects, and preliminary feedback from partners. The intention of reflecting this information is to estimate the amount of resources to be mobilized, and by no means imply a financial commitment of the potential partners listed in the same table.

5. Implementation strategy

a. Coordination

The Steering Committee of the Coalition for the progressive closure of dumpsites, with the support of the Forum of Ministers Secretariat (UNEP Latin America and the Caribbean Office), will be the coordinating entity for the implementation of this Programme, in close collaboration with the Climate and Clean Air Coalition (CCAC) and other relevant entities. To do this, it will hold periodic coordination meetings to supervise and guide the implementation of the Programme.

- The **Coalition for the Progressive Closure of Dumpsites in Latin America and the Caribbean** was established per Decision 1 of the XXI Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean (Buenos Aires, October 2018), in which countries agreed to make the necessary efforts to strengthen integrated solid waste management, by developing policies and strategies to progressively eliminate unsound waste management practices, including dumpsites and open burning. The Steering Committee of the Coalition is the body in charge of coordinating, guiding, supporting and monitoring the Coalition's activities, and facilitating resource mobilisation. The Committee is comprised by 8 members, including five government representatives, and three non-governmental focal points.

- The Climate and Clean Air Coalition (CCAC), hosted by UNEP, is a voluntary partnership of over 160 entities working to reduce short-lived climate pollutants (SLCPs) like methane, black carbon, HFCs, and tropospheric ozone. As Secretariat of the Global Methane Pledge (GMP), CCAC drives collaborative action to cut methane across key sectors, including waste, through policy, technical assistance, and financing solutions—particularly via its Waste and Agriculture Hubs and the Lowering Organic Waste Methane (LOW-M) Initiative. Since 2012, it has backed 128 methane mitigation projects in 75 countries, including 52 in the waste sector and 47 in agriculture, while helping over 50 countries develop national methane action plans.

b. Synergies and partnerships

The Programme will leverage work already carried out in this area to enhance impact and avoid duplication. It aims to build on and collaborate with existing initiatives, institutions, and stakeholders to promote synergies and ensure effective coordination throughout its implementation, exploring collaboration with existing initiatives such as:

- **Recycle Organics Program,** which aims to accelerate the implementation of methane mitigation projects in the waste sector and create enabling conditions for a sustained expansion of integrated organic waste management technologies. Funded by the Global Methane Hub (GMH), Environment and Climate Change Canada (ECCC) and the Climate and Clean Air Coalition (CCAC) and implemented by the Center for Clean Air Policy (CCAP), ImplementaSur and LEDS LAC, the program currently supports 15 Latin American and Caribbean countries.

Potential role in the Programme: The Programme could rely on the technical expertise, capacity building activities and the pipeline of bankable projects that were identified and developed by Recycle Organics Program.

- **The Community of Practice on Methane Reduction from Organic Sources in Latin America and the Caribbean (MetLAC)** brings together public institutions, NGOs, private companies, and academic bodies from 10 countries (Argentina, Barbados, Belize, Brazil, Chile, Colombia, Grenada, Honduras, Mexico, and Peru). Through dialogue, knowledge exchange, and capacity building, MetLAC supports the development of policies, business models, and investments aimed at cutting methane emissions from organic waste. Key focus areas include composting, anaerobic digestion, food loss and waste reduction, and other sustainable practices.

  Potential role in the Programme: The Programme could rely on MetLAC to engage experts across a range of priorities and activities, exchange best practices, and disseminate information.

- **Lowering Organic Waste Methane Initiative** is a partnership working and collaborating on data, policies, technical assistance and finance solutions to subnational governments and their national government counterparts to accelerate the delivery of the Global Methane Pledge and the Paris Agreement by cutting 1 million tonnes of annual methane emissions from the solid waste sector before 2030. The LOW-Methane Initiative works with jurisdictions to help them identify ambitious actions to reduce waste methane emissions and unlock implementation by mobilizing partner support. The LOW-M initiative is hosted by the CCAC Secretariat.

  Potential role in the Programme: The Programme will rely upon the LOW-M established contacts on sub-national level and on the jurisdictions prioritized by LOW-M. It will also count upon the expertise of the partner organizations of LOW-M, especially on topics like finance, data collection and policy development.

- **The Inter-American Development Bank's "Too Good to Waste" initiative** aims to contribute to reduction in methane emissions in solid waste operations in Latin America and the Caribbean financed by the Bank. The initiative finances the structuring of solid waste management projects with concrete results in methane reduction; generating financial instruments and leveraging revenues for waste management projects; monitoring and verification of methane emissions mitigation and capacity building and knowledge dissemination.

  Potential role in the Programme: The Programme can build up on the ongoing activities of IDB related to methane emission reduction from the waste sector. IDB could provide its expertise, especially for building a portfolio of bankable projects considering that it is the main source of multilateral financing for development in Latin American and Caribbean.

- **The Solid Waste and Circular Economy Hub**, managed by the Inter-American Development Bank, is an open data platform at the forefront of digital transformation in Latin America and the Caribbean. It provides critical information on solid waste

management, the circular economy, climate change, and the Sustainable Development Goals (SDGs), addressing the lack of reliable and up-to-date data. The Hub has driven technical cooperation with several countries in Latin America and the Caribbean, advancing the development of national information systems and integrating waste management into official statistics to strengthen planning, financing, and policy design. Through strategic partnerships, the Hub also promotes the exchange of good practices, methodological harmonization, and capacity building.

Potential role in the Programme: The Programme can leverage the Solid Waste and Circular Economy Hub, managed by the IDB, as a regional platform to harmonize data by encouraging countries to upload information, track methane reduction and dumpsite closure, and exchange best practices. Countries could also access technical cooperation and benefit from strategic partnerships that strengthen planning, financing, and policy design.

- **The World Bank's Global Methane Reduction Platform for Development (CH4D),** focusing on accelerating efforts to mitigate methane in agriculture and in managing solid and liquid waste. CH4D supports client countries by engaging in policy dialogues to standardize methane reduction diagnostics and integrate strategies at national levels. It provides investment support through technical assistance for affordable technologies and financing in priority sectors. The platform also develops a knowledge base by updating methodologies and data systems for measurement and reporting applicable across sectors.

  Potential role in the Programme: The Programme can build up on the ongoing CH4D activities in LAC countries ensuring that the methane mitigation aspects are being covered in the approved and ongoing waste related WB projects.

- **Global Methane Hub (GMH)** is a philanthropic organization dedicated to reducing methane emissions globally and significantly boost philanthropic resources allocated specifically to methane reduction. The GMH funds and convenes organizations that are reducing methane on the ground, serve as a hub for information about methane mitigation, and advocate for free data sharing.

  Potential role in the Programme: GMH could provide co-funding for some planned activities and be part of the Programme Steering Committee in order to help shaping and ensure effectiveness of methane reduction projects on the ground.

The Programme will actively engage with relevant stakeholders—such as ISWA, leveraging their proven global track record and extensive work on dumpsite closure; WIEGO, whose research, advocacy, and organizing support have been instrumental in strengthening recognition of informal waste pickers and improving livelihoods, health, and gender equity; the Global Alliance of Waste Pickers and their members from the LAC region, as direct representatives of waste picker organizations advocating for rights, recognition, and improved working conditions from the ground up; and GAIA, whose community-based zero-waste approach promotes climate resilience and equitable waste management, among other benefits. Related initiatives will be also considered, such as the

UNEP's Food Waste breakthrough initiative[38], or the Subnational Methane Action Coalition[39]. The Programme will also collaborate with the many on-the-ground local associations across LAC countries that are leading innovative, context-specific initiatives in waste management and social inclusion, ensuring that regional knowledge, cultural relevance, and community engagement remain at the forefront of the transition away from open dumpsites toward sustainable, circular waste systems.

c. Resource mobilization

Resource mobilisation is essential to ensure the effective implementation of the activities proposed in the Regional Cooperation Programme, as well as the functioning of the coordination mechanism between governments and with relevant stakeholders (regular meetings, Secretariat tasks, dissemination and translation of documents, simultaneous interpretation at meetings and events, among others). To this end, it is necessary to:

1. **Position the Regional Programme** as a key cooperation and coordination mechanism in the Latin American and Caribbean region on reducing methane emissions from waste and closing dumpsites, highlighting its status as a multi-sectoral platform between governments and relevant stakeholders in the region, through visibility, communication and alliance-building actions.

2. **Maximise synergies, joint work and in-kind contributions** of different entities, through the promotion of South-South cooperation to facilitate technical cooperation and knowledge exchange.

3. **Mobilize financial resources to support the implementation of Programme activities** by developing project concepts and funding proposals aligned with Programme priorities. This includes pursuing public and multilateral sources—such as the Global Environment Facility (GEF), Green Climate Fund (GCF), multilateral and national development banks, and bilateral development cooperation—as well as leveraging market-based and private finance mechanisms, including blended finance, impact investment funds, philanthropic contributions, and green bonds.

4. **Establish additional partnerships** with different stakeholders and entities to support the implementation of the Programme's activities, including agencies of the United Nations System and other intergovernmental organisations, non-governmental organisations, professional organisations, the private sector, academia, among others.

It is proposed to develop a **Resource Mobilization Strategy**, that further consider associated costs of the implementation of the cooperation and technical assistance activities proposed in this Programme as well as possible partners, sources, and funding opportunities.

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https://www.unep.org/events/unep-event/food-waste-breakthrough-tackling-food-waste-essential-climate-action-0

39 https://www.unep.org/events/unep-event/food-waste-breakthrough-tackling-food-waste-essential-climate-action-0

6. Monitoring and evaluation

The Steering Committee of the Coalition for the progressive closure of dumpsites with the support of the Secretariat, will monitor the implementation of this Programme as part of its tasks during its regular meetings, based on the milestones agreed in the Programme or indicators.

To this end, a biennial Work Plan may be developed by the Coalition, with specific actions and indicators to facilitate the monitoring of the implementation of the proposed activities above.

The Steering Committee will present annual reports on the progress of the actions to the rest of the national focal points of the Coalition and to the High-Level Officers of the Forum of Ministers, and a biennial final report to inform the corresponding sessions of the Forum of Ministers of the Environment on the implementation progress of this programme.