

# GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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## General Project Information

### Project Title

Support for the management and reduction of food waste in the Bolivarian Republic of Venezuela

### Region

Latin America and the Caribbean

### GEF Project ID

12268

### Country(ies)

Venezuela

### Type of Project

MSP

### GEF Agency(ies):

FAO

### GEF Agency ID

761082

### Executing Partner

To be determined during formulation

### Executing Partner Type

### GEF Focal Area (s)

Climate Change

### Submission Date

12/31/2025

### Project Sector (CCM Only)

Mixed & Others

### Taxonomy

Peer-to-Peer, Knowledge Exchange, Capacity, Knowledge and Research, Knowledge Generation, Training, Course, Workshop, Learning, Indicators to measure change, Innovation, Capacity Development, Participation and leadership, Gender results areas, Gender Equality, Knowledge Generation and Exchange, Awareness Raising, Access to benefits and services, Beneficiaries, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Local Communities, Stakeholders, Behavior change, Communications, Public Campaigns, Individuals/Entrepreneurs, Private Sector, Financial intermediaries and market facilitators, Civil Society, Academia, Community Based Organization, Demonstrate innovative approaches, Influencing models, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Climate Change, Focal Areas, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, Energy Efficiency, Nationally Determined Contribution, United Nations Framework Convention on Climate Change

### Type of Trust Fund

GET

### Project Duration (Months)

24

### GEF Project Grant: (a)

1,549,596.00

### GEF Project Non-Grant: (b)

0.00

### Agency Fee(s) Grant: (c)

147,211.00

### Agency Fee(s) Non-Grant (d)

0.00

### Total GEF Financing: (a+b+c+d)

1,696,807.00

### Total Co-financing

7,980,000.00

|                                                                |                                    |
|----------------------------------------------------------------|------------------------------------|
| PPG Amount: (e)                                                | PPG Agency Fee(s): (f)             |
| 50,000.00                                                      | 4,750.00                           |
| PPG total amount: (e+f)                                        | Total GEF Resources: (a+b+c+d+e+f) |
| 54,750.00                                                      | 1,751,557.00                       |
| Project Tags                                                   |                                    |
| CBIT: No NGI: No SGP: No Innovation: No Competitive Window: No |                                    |

## Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B "project description". (max. 250 words, approximately 1/2 page)

The Bolivarian Republic of Venezuela faces some challenges in its agri-food system, with food loss and waste (FLW) reaching approximately 93 kg/person/year, driven by limited production planning and logistical gaps in distribution. This issue has a direct impact on climate change, as organic waste in unmanaged disposal sites is a growing source of methane emissions, while the loss of embedded energy in the food chain increases the country's carbon footprint. Despite national efforts under the *Gran Misión Madre Tierra*, the lack of a specific regulatory framework, economic incentives, and institutional coordination hinders the effective prevention of FLW at the source.

The project aims to reduce greenhouse gas (GHG) emissions by fostering resource efficiency and circularity within the agri-food system, specifically through the prevention of food loss and waste. This will be achieved by establishing a robust National FLW Prevention Policy and enhancing the institutional, legal, and financial frameworks to create a conducive environment for sustainable practices. By focusing in upstream prevention, the project aligns national sectoral policies with the 2030 GHG reduction targets and the Enhanced Transparency Framework of the UNFCCC.

At the operational level, the project will strengthen technical capacities at municipal and community levels, focusing on the implementation of incentives and best practices for food preservation. Pilot interventions will be conducted in three (3) Municipal Wholesale Markets (MWM) to implement cold chain optimizations, improved logistics, and food donation protocols with a strong gender-responsive approach. These pilots will serve as scalable models to be integrated into national guiding instruments, ultimately reaching 60 municipalities and 5,338 community organizations. The intervention is expected to contribute to avoid the emission of **3,410,763** tCO<sub>2</sub>e during a 20 years period, and directly benefit 10,000 people (50% women).

## Indicative Project Overview

### Project Objective

To reduce the generation of food waste and associated greenhouse gases in agri-food systems by implementing upstream actions across the value chain that prevent avoidable losses before they occur, while increasing resource efficiency during distribution and commercialization phases.

## Project Components

### 1. Strengthening the Institutional Framework for the prevention and reduction of food loss and waste (FLW) in the agri-food sector

|                            |                   |
|----------------------------|-------------------|
| Component Type             | Trust Fund        |
| Technical Assistance       | GET               |
| GEF Project Financing (\$) | Co-financing (\$) |
| 491,500.00                 | 1,995,000.00      |

Outcome:

1.1. Public institutions have an improved regulatory framework to reduce waste generation in the agri-food sector.

1.2. The governing body (MINEC) has improved access to information to promote standardization in FLWR and monitor GHG reduction in the food distribution and marketing sector.

Output:

- 1.1.1. Interinstitutional coordination committee on FLWR, created and operational.
- 1.1.2. Sectoral policy on FLWR with goals defined for 2030 and currently under implementation.
- 1.1.3. Standards for FLW in the distribution and marketing phases, defined and under implementation.
- 1.1.4. Public-private partnership mechanisms designed for fiscal incentives and public procurement policy for companies that promote FLWR.
- 1.1.5. Mixed fund for financing community innovation projects in FLWR, designed.
- 1.2.1. Characterization document of the food waste (FW) situation at the distribution and marketing level, developed.
- 1.2.2. Food Waste Index (FWI) measurement system developed and implemented.

1.2.3. Development of a system for capturing and tracking information on waste reduction that feeds into the monitoring system of SINAICC (National System for Climate Change Information) and contributes to subsequent estimates of GHG reduction from FLWR.

## 2. Strengthening capacities at the municipal, local, and community levels of the different participants in agri-food systems on incentives, sustainable practices and prevention for in FLWR.

|                            |                   |
|----------------------------|-------------------|
| Component Type             | Trust Fund        |
| Technical Assistance       | GET               |
| GEF Project Financing (\$) | Co-financing (\$) |
| 226,000.00                 | 1,596,000.00      |

Outcome:

2.1. Municipalities as well as communities and schools, increase their knowledge of sustainable practices on **prevention for** FLWR.

Output:

2.1.1. Sustainable practices training program on **upstream prevention and** FLWR implemented for municipalities, ecosocialist committees, and the Technical Recycling and Cleaning Boards (METRAS) and other community organizations, **focused on avoidance protocols, food redistribution, and reducing waste generation at the source** with a gender equality approach.

2.1.2. Awareness campaign in schools and communities on sustainable practices related to **prevention and** FLWR implemented, considering differentiated approaches according to gender.

2.1.3. Incentive programme on good practices and innovative solutions, including food donation, storage and cold chain, tax incentives, digital tools for FLWR, developed, disseminated, and available to participants in **agri-food systems at the distribution, marketing, and consumption links.**

## 3. Pilot interventions with a gender equality focus in Municipal Wholesale Markets (MWM).

|                            |                   |
|----------------------------|-------------------|
| Component Type             | Trust Fund        |
| Investment                 | GET               |
| GEF Project Financing (\$) | Co-financing (\$) |
| 507,500.00                 | 2,486,584.00      |

Outcome:

3.1. Pilot initiatives on FLWR in prioritized Municipal Wholesale Markets (MWM) implemented and promoting large-scale change.

3.2. MWM improve their capacity to monitor FLWR by category, facilitating the provision of inputs to measure GHG reduction.

Output:

3.1.1. Pilot implementation of cold chain optimization, storage practices and logistics management systems in three (3) Municipal Wholesale Markets (MWM) to prevent food loss and enhance resource efficiency.

3.1.2. Feasibility and viability studies, on fiscal incentive options (reduced fees, tax benefits), implemented to promote FLW prevention.

3.1.3. Food donation protocols, for MWM implemented with the leading participation of women, creating commercial opportunities as well as safe and dignified employment.

3.1.4. Other participants (street and open-air markets, supermarkets, and food supply centers) in the food system at the retail commercialization stage adopt actions and good practices to prevent and reduce FLW.

3.2.1. Database on input, output, and FLW by category, designed, implemented, and available.

3.2.2. Monitoring and tracking of the reduction in the volume of food waste, by category sent to landfills, quantified and recorded.

#### 4. Monitoring, evaluation, and dissemination of good practices for the food waste sector.

|                            |                   |
|----------------------------|-------------------|
| Component Type             | Trust Fund        |
| Technical Assistance       | GET               |
| GEF Project Financing (\$) | Co-financing (\$) |
| 196,570.00                 | 1,197,000.00      |

Outcome:

4.1. Municipalities and communities promote FLW prevention, drawing on Food Waste Breakthrough (FWB) Global Community of Practice interactions, knowledge and training.

Output:

4.1.1. National Network of Innovation and Good Practices in FLWR of the various participants in the agri-food system, at the distribution, marketing, and consumption links, constituted and active.

4.1.2 Training packages, field demonstrations, and farmer-to-farmer activities developed to accelerate the adoption of Practices that increase soil carbon stocks (e.g., improved rotations, cover cropping, agroecological soil management).

4.1.3. National scalability and replicability plan for interventions.

#### M&E

|                            |                   |
|----------------------------|-------------------|
| Component Type             | Trust Fund        |
| Technical Assistance       | GET               |
| GEF Project Financing (\$) | Co-financing (\$) |
| 54,236.00                  | 325,416.00        |

Outcome:

4.2 The implementation of the project is supported by a monitoring and evaluation strategy with a gender equality focus, based on measurable and verifiable results through adaptive management.

Output:

4.2.1. Monitoring and Evaluation (M&E) strategy developed and implemented.  
4.2.2. Final evaluation conducted.

## Component Balances

| Project Components                                                                                                                                                                            | GEF Project Financing (\$) | Co-financing (\$)   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------|
| 1. Strengthening the Institutional Framework for the prevention and reduction of food loss and waste (FLW) in the agri-food sector                                                            | 491,500.00                 | 1,995,000.00        |
| 2. Strengthening capacities at the municipal, local, and community levels of the different participants in agri-food systems on incentives, sustainable practices and prevention for in FLWR. | 226,000.00                 | 1,596,000.00        |
| 3. Pilot interventions with a gender equality focus in Municipal Wholesale Markets (MWM).                                                                                                     | 507,500.00                 | 2,486,584.00        |
| 4. Monitoring, evaluation, and dissemination of good practices for the food waste sector.                                                                                                     | 196,570.00                 | 1,197,000.00        |
| M&E                                                                                                                                                                                           | 54,236.00                  | 325,416.00          |
| <b>Subtotal</b>                                                                                                                                                                               | <b>1,475,806.00</b>        | <b>7,600,000.00</b> |
| Project Management Cost                                                                                                                                                                       | 73,790.00                  | 380,000.00          |
| <b>Total Project Cost (\$)</b>                                                                                                                                                                | <b>1,549,596.00</b>        | <b>7,980,000.00</b> |

Please provide justification

## PROJECT OUTLINE

### A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as

population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

The Bolivarian Republic of Venezuela has a land area of 916,445 km<sup>2</sup>, with a projected population (based on the 2011 census [1]<sup>1</sup>) of 34,090,650 inhabitants, concentrated mainly in urban areas (90.04%)[2]<sup>2</sup> and mostly in the central-northern region of the country, which, representing 22% of the territory, houses 68% of the population[3]<sup>3</sup>. This concentration of urban population is one of the highest in Latin America. The Nation is based on an economy mainly relying on the extraction and refining of oil and other minerals, as well as on multiple agricultural and industrial activities, including fishing and aquaculture, production of fertilizers, cement, electric and electronic industries, processed foods, beverages, manufacturing, construction, transportation, along with forest products, which are developing in a transition towards a post-oil economy.

Venezuela is a country with low greenhouse gas emissions, accounting for 0.48% of global emissions, but it is vulnerable to the impacts of climate change, which have been increasingly evident over the last 25 years with the occurrence of natural events associated with extraordinary hydro-meteorological phenomena, representing a socio-environmental risk. In addition to this environmental and socioeconomic vulnerability, the country faces significant negative impacts from the imposition of Unilateral Coercive Measures. These measures hinder investment and obstruct the implementation of policies, programs, and projects.

The high population concentration generates increasing demand on the national agri-food system, which, combined with scarce production planning, results in overproduction in some sectors. Vertical value chains hinder coordination among the supply chain links, coupled with limited post-harvest capacity and poor food management in processing and transportation, as well as narrow marketing channels and limited food handling capacity. This situation further shifts losses due to spoilage or unsold products directly onto the producer. The scarcity of food recovery programs for foods suitable for consumption leads to food losses and waste throughout the supply chain. At the household level, approximately 93 kg of food per person is wasted per year[4]<sup>4</sup>, a figure similar to the regional average of 95 kg per person per year. The stages in the supply chain where most food is wasted are at the consumer household level (28%), in distribution through wholesale and retail markets or supermarkets (17%), and at the industrial processing level with 6%[5]<sup>5</sup>, which together account for 51% of total FLW. Notably, while distribution accounts for 17% of FLW, its impact is catalytic; poor handling at this stage invisibly degrades the shelf life of products, directly driving the 28% of waste later seen at the household level.

The country generates 258,542 tons of solid waste residues per month (SWR)[6]<sup>6</sup>, of which 41% is from organic origin at a national level. Notably, residential sources account for 30% of total SWR, and within this domestic stream, up to 65% consists of organic (putrescible) waste, primarily food scraps[7]<sup>7</sup>. This can be attributed to local consumption patterns and the national economic situation affecting the population, which tends to purchase more perishable food products as opposed to more expensive processed foods. SWR are disposed of indiscriminately, creating unsanitary conditions due to improper handling. This poses a threat to people's health, causes economic and environmental damage, and occupies land with agricultural potential. 80% of these Waste

Disposal Sites (WDS) and Solid Waste Sites (SWS) are unmanaged, and only 18% are sanitary landfills<sup>[8]</sup>. It is estimated that at least one-third of the total organic waste originates from food waste, representing a source of methane emissions. Methane contributes to global greenhouse gas emissions (GHG)<sup>[9]</sup> and is 80 times more potent than CO<sub>2</sub> over a 20-year period. It is responsible for approximately 30% of human-induced global warming since the preindustrial era.

In the Latin America and Caribbean 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 figure is expected to increase if current practices continue. The National Greenhouse Gas Inventory (INGEI2024) indicates that, in Venezuela, the waste and residue sector represents, on average, 2% of the total GHG emissions of the country, and together with wastewater, accounts for 5.4%. The estimates were made applying the IPCC (2006) Tier 1 method, and only the estimates of GHG (CH<sub>4</sub>) emissions from WDS were included<sup>[10]</sup>. The GHG emissions included in the waste and residue sector inventory for 2022 were 327.54 Gg CH<sub>4</sub> and 0.55 Gg N<sub>2</sub>O. Regarding the estimated categories for the sector, the 1990–2022 balance accounts for a total of 9,317.65 kt CO<sub>2</sub> equivalent emissions. Notably, the disposal of solid waste and residues showed a 5.09% reduction in GHG emissions during the 2010–2022 period, which can be associated with the described economic effects and with the implementation of sectoral national policies.

Although there are regulations in the country for waste management, there is a critical regulatory gap regarding the promotion of food waste prevention at the source (upstream). Current notable regulations, such as the Law on Hazardous Substances, Materials, and Waste (Official Gazette No. 5,554, November 13, 2001), and various Decrees like Decree No. 2216 'Standards for the management of solid waste of domestic, commercial, industrial, or any other non-hazardous nature' (Extraordinary Official Gazette No. 4,418, April 27, 1992), Decree No. 230 'Sanitary standards for the design and operation of sanitary landfills for non-toxic solid waste' (Extraordinary Official Gazette No. 34,600, November 22, 1990), and Decree No. 2635 'Standards for the control of hazardous material recovery and hazardous waste management' (Extraordinary Official Gazette No. 5,245, August 3, 1998), are strictly focused on the handling, transport, and final disposal of waste already generated. Even the Integrated Waste Management Law (2010), which remains largely unimplemented due to the absence of a National Sectoral Plan, lacks specific mechanisms to incentivize resource efficiency, food donation, or loss prevention across the agri-food value chain.

Consequently, the national legal framework remains downstream-oriented, leaving a gap in economic incentives and standards that could prevent avoidable losses before they reach the waste stream. This regulatory gap is further exacerbated by the current operational crisis in urban sanitation services. The disruption of collection routes and the lack of equipment in main cities have led to uncontrolled waste accumulation and methane emissions. In this context, focusing on upstream prevention is not only a policy priority but a logistical necessity. By reducing the volume of organic matter entering an already strained management system, the project offers the most cost-effective path to achieving significant and permanent GHG mitigation.

A critical sector for national food distribution and a major contributor to food waste is the Municipal Wholesale Markets (MWM), where waste is predominantly organic (90%). These centers handle massive volumes of perishable foods, for example, the Mercabar market in Barquisimeto recorded the entry of over 172,000 tons of food in just the first quarter of 2024. As Coche (in Caracas) is the largest commercialization hub in the country, its handling volume is significantly higher. The sheer scale of these operations means that even a 15% loss rate translates into an unacceptably high volume of greenhouse gas emissions. Consequently, these markets act as high-leverage systemic nodes, addressing waste generation at these single points is far more cost-effective than

intervening at thousands of individual retail locations. In the case of Coche, it alone accounts for 6.10% of all municipal organic waste sent to landfills.

However, these hubs face severe logistical vulnerabilities. In the western and Andean regions, the Táriba MWM in Tachira, transport logistics are uncoordinated and critically dependent on fuel supply, which directly disrupts the cold chain. This widespread fragility systematically exposes products to inadequate temperatures, leading to avoidable spoilage. Furthermore, limited cold infrastructure and chronic power supply failures discourage investment in refrigeration, making food waste an almost inevitable operational cost. Currently, waste management is handled directly by market administrations, creating additional operational burdens and hindering circular management. The existence of significant volumes of recoverable food in markets like Coche indicates that discards are often driven by market failures, such as overproduction or cosmetic defects, rather than total spoilage, highlighting the deep economic inefficiency and the untapped potential for upstream prevention and recovery.

While Municipal Wholesale Markets (MWM) handle a specific fraction of urban organic waste, they constitute the primary strategic hubs and logistical catalysts of Venezuela's agri-food system. These centers act as the mandatory transit points for the bulk of the nation's perishable goods. Therefore, inefficiencies at these nodes, such as cold chain breaks and suboptimal handling, act as a systemic multiplier of food loss. Upstream, by causing rejected loads at the farm gate due to market delays, and Downstream, by accelerating spoilage at the retail and household levels. Consequently, this project prioritizes MWMs not as mere disposal sites, but as high-leverage intervention points for systemic mitigation. By optimizing logistics and infrastructure in these wholesale hubs, the project triggers a multiplier effect that reduces the carbon intensity of the entire national distribution chain. This strategic focus transforms the MWMs into scalable models of resource efficiency, ensuring that GEF investment yields a significantly higher impact on GHG reduction than traditional downstream waste management.

Based on the above, Venezuela's priority is to address food waste generation, by aligning with the national climate change goals outlined in its Nationally Determined Contribution (NDC), which emphasizes the capture and utilization of methane emissions from the waste sector. Strengthening measurement mechanisms to support the adaptation of regulations and public policies is essential. However, significant barriers must be overcome to achieve these goals, as described below:

Barrier 1: Lack of a sectoral policy, legal, and financial framework to enable and incentivize food loss and waste (FLW) prevention.

The primary governance gap is the lack of a specific framework to incentivize resource efficiency and prevent food loss before it enters the waste stream. While the country's Nationally Determined Contribution (NDC) mentions the capture and use of methane emissions from the waste sector as mitigation actions, it does not specify how this will be achieved. This means there is no clear national roadmap to guide efforts for prevention at the source to reduce food waste. Existing environmental laws, such as Decree 638 of 1995 and Decree 1257 of 1996, are reactive, focusing on end-of-pipe atmospheric emissions rather than providing fiscal incentives for food donation, surplus redistribution, or improved post-harvest standards. This lack of financial support mechanism for upstream actions hinders the implementation of large-scale programs, the allocation of resources, and the enforcement of regulations that encourage stakeholders to reduce food waste. Without a supporting framework, initiatives are fragmented and lack long-term sustainability, and the policy 'pull' needed to shift stakeholder behavior toward circularity.

Barrier 2: Limited technical, technological, operational, and coordination capacities for FLWR prevention and efficient management.

The lack of trained personnel within municipal governments and market authorities is not limited to waste management but extends to a systemic lack of knowledge in supply chain optimization. Even with an adequate

policy framework, limited local capacity (technical, technological, operational, and coordination) is a critical impediment to effective implementation. There is a critical gap in technical expertise regarding cold chain integrity, inventory planning, and logistical coordination. Best practices for food waste prevention and valorization remain unknown. The lack of inter-institutional coordination between agricultural, environmental, and municipal agencies prevents a coherent whole-of-cycle approach, meaning food continues to be lost due to logistical friction rather than a lack of disposal technology. These institutional limitations result in food waste continuing to be disposed of inefficiently, contributing to GHG emissions.

Barrier 3: The main food collection and distribution centers in the country (Municipal Wholesale Markets) have limited operational frameworks related to FLW prevention

Municipal markets are identified by municipal collection services as “critical centers of high food waste generation”. They currently operate under frameworks that treat organic matter as an inevitable waste cost rather than a manageable resource. The limitation in their operational framework is not just the lack of segregation, but the absence of adequate infrastructure for food preservation, such as climate-controlled temporary storage and rapid-redistribution protocols. Daily practices, infrastructure, and procedures are not designed for FLWR. Current procedures are not designed for loss avoidance, instead, they facilitate the rapid disposal of recoverable food. This structural inefficiency forces high volumes of carbon-intensive products into landfills, where they generate methane, rather than keeping them within the human consumption chain.

Barrier 4: Limited knowledge about information related to sustainable practices and awareness of FLWR as improvements to the food system and the right to food

Lack of knowledge and awareness is a fundamental barrier to behavior change at all levels, from producers and sellers to consumers. This lack of awareness regarding resource efficiency as a climate mitigation tool prevents behavior change. If people do not understand the magnitude of food and waste problem, its environmental impacts (especially GHG emissions), economic and social consequences (such as food loss and its relations to food security), they are unlikely to adopt sustainable practices. Also, limited awareness among market vendors, consumers, and municipal authorities about environmental and economic impacts of food waste is a key factor perpetuating the problem. Vendors often perceive 'cosmetic defects' as total loss due to a lack of market-linkage information, perpetuating a cycle where food security and climate goals are undermined by a lack of actionable data on sustainable handling practices.

The GEF alternative is strategically built upon the technical foundations and lessons learned from previous and ongoing interventions in Venezuela. Specifically, it scales up FAO’s prior value chain diagnostics and stakeholder networks, transitioning from baseline agrifood assessments to concrete investments in upstream food loss prevention. Furthermore, the project internalizes key lessons from the MINEC’s circular economy framework and the ongoing efforts to implement the Nationally Determined Contributions (NDC), ensuring that food loss prevention and supply chain efficiency are fully integrated and measurably contribute to national mitigation goals, utilizing these existing platforms to ensure institutional buy-in. By aligning with UNEP’s global expertise in methane mitigation and local climate transparency efforts, such as the CBIT project/GEF ID 11662, the alternative ensures that its interventions are not isolated, but rather a practical application of the country’s strengthened monitoring capacities. This approach allows GEF resources to focus on closing the financing gap for climate-smart logistics and cold chain optimization, transforming localized pilot experiences into a systemic national strategy for food waste prevention.

Future consumption patterns and urban demographic shifts are likely to increase food volumes in wholesale markets, potentially straining logistics and storage capacities. Additionally, market volatility may lead to temporary surpluses and higher waste at distribution nodes. From a physical perspective, climate-driven risks—such as extreme weather and rising temperatures—impact food stability by disrupting transport and accelerating spoilage. To ensure long-term resilience, the project incorporates climate-smart logistics and cold chain optimization to mitigate these vulnerabilities. This forward-looking approach ensures that interventions remain adaptable to future environmental and market shocks throughout the project’s lifetime.

[1] <https://ine.gob.ve/>. consulta 13/11/2025

[2] ECLAC (2021). Statistical Yearbook of Latin America and the Caribbean 2020.

[3] INE (2020). 2011 Census and Projections. National Institute of Statistics of Venezuela. Available at: [http://www.ine.gov.ve/index.php?option=com\\_content&view=category&id=98&Itemid=51](http://www.ine.gov.ve/index.php?option=com_content&view=category&id=98&Itemid=51)

[4] SÁNCHEZ R, BLANCO SALAS H, ALBERDI R, NAJUL M. Potential for the use of materials present in solid waste of domestic origin. Case study of the municipality of Chacao – Miranda state, Venezuela. Journal of the Faculty of Engineering U.C.V., Vol. 29, No. 1, pp. 27-36, 2014

[5] idem.

[6] It is calculated from the raw data in Tables 1 and 2 of the cited publication.

[7] idem

[8] MINEC (2024). National Inventory Document (NID) of Greenhouse Gases of the Bolivarian Republic of Venezuela to the United Nations Framework Convention on Climate Change (UNFCCC)

[9] Bogner, J., M. Abdelrafie Ahmed, C. Diaz, A. Faaij, Q. Gao, S. Hashimoto, K. Mareckova, R. Pipatti, T. Zhang, Waste Management, In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, UK and New York, NY, USA.

[10] The biological waste treatment category is excluded since to date the institutional strengthening to achieve the calculation that would support the data had not been completed.

## B. PROJECT DESCRIPTION

### Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

To address the described barriers, the project has been structured into four main components: the development of a policy and regulatory framework, capacity building and awareness-raising among participants involved in food distribution and commercialization, and the implementation of pilot interventions to reduce food loss and waste generation.

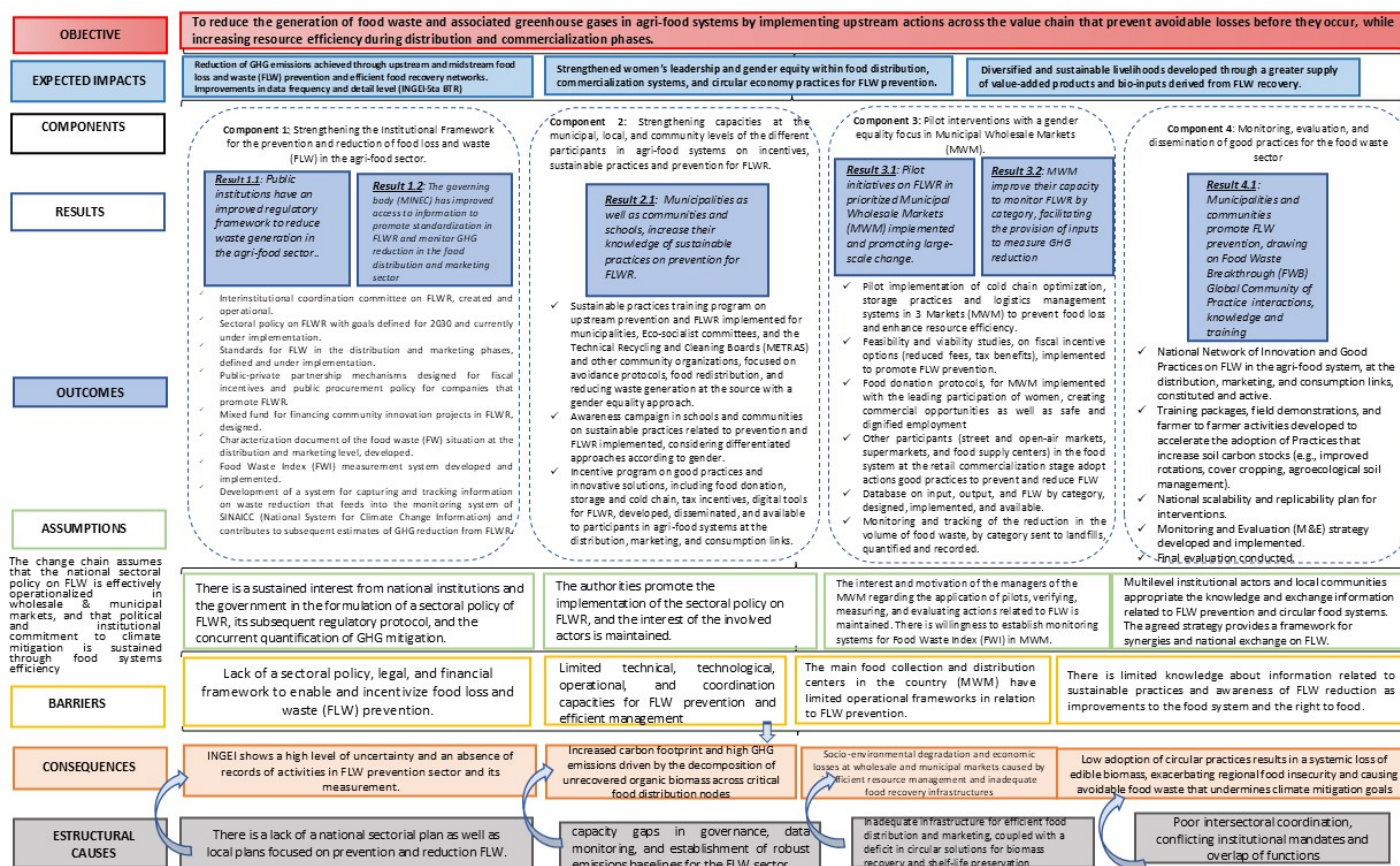
The proposed Theory of Change (ToC, Figure 1 shows the diagram) outlines a logical and coherent roadmap detailing how the planned interventions, through stakeholder collaboration, will lead to achieving the stated goal: reducing food waste generation and associated greenhouse gas emissions in agri-food systems by increasing efficiency during distribution and commercialization phases. This will support Venezuela in meeting its NDC targets by developing and initiating the implementation of a sectoral policy to reduce food waste, with a pilot focus on high-leverage municipal markets, as a key component of the national GHG mitigation strategy.

The ToC is based on the fundamental assumptions that, with sustained political will, commitment from authorities, and the willingness of private actors and organized communities, it is possible to transform the management of distribution and commercialization chains within food systems to use food more efficiently. This transformation contributes to reducing food waste generation at the source and improving its management by avoiding accumulation and GHG emissions. In essence, the ToC describes how the project, through an integrated approach combining policies, capacities, and practical demonstrations, and with the active

participation of all relevant stakeholders, will turn the challenge of food waste into an opportunity for climate change mitigation and sustainable development in Venezuela.

The expected intermediate results include the implementation of the National Sectoral Policy for FLWR, the adoption of practices to reduce food waste by various actors involved in the marketing and distribution of food systems. A key focus will be on maintaining food within the human consumption chain through improved preservation and redistribution. Additionally, to foster circularity, unavoidable food surplus and by-products will be valorized at early stages, such as through processing techniques that extend shelf life or transforming materials into animal feed and organic bio-inputs, thereby preventing organic matter from entering waste streams. In the long term, a reduction in GHG emissions is expected by avoiding food loss and waste at the source, which will enhance food security, improve urban environmental quality, and firmly embed circular economy principles into national food systems.

**Figure 1. Theory of Change (ToC) diagram**



Also uploaded separately in the GEF portal.

## 1. Project objective and main problem.

The project addresses the critical challenge of high Food Loss and Waste (FLW) generation, with a strategic focus on systemic nodes within the national agri-food system, especially the Municipal Wholesale Markets (MWM). These hubs currently act as major source of greenhouse gas emissions, especially methane (CH<sub>4</sub>), due to the lack of infrastructure and protocols for food preservation and surplus management.

Venezuela's Nationally Determined Contribution (NDC) identifies methane reduction in the waste sector as a priority, but the country currently lacks a specialized upstream sectoral plan to prevent losses before they become waste. The project's objective is to fill this gap by establishing a comprehensive policy framework and demonstrating scalable, technology-driven solutions at the distribution level. This approach aims to maximize

climate mitigation by ensuring that food remains within the human consumption chain, thereby reducing the carbon intensity of the entire food system.

## **2. Development of the Proposed Components and Their Causal Pathways.**

### **Component 1: Political Framework for Food Waste Reduction (FWR).**

**Causal Pathway:** This component serves as the enabling foundation. By transitioning from general waste management to a specialized upstream prevention policy, the project fills the current regulatory vacuum. Strengthening the institutional capacity of the Ministry of People's Power for Ecosocialism (MINEC) and municipal authorities ensures that FLWR is not an isolated effort but a core pillar of Venezuela's national climate strategy.

**Achievement of the Objective:** This component ensures that FLWR actions are integrated into Venezuela's national greenhouse gas mitigation strategy, providing the legal 'pull' and financial 'push' necessary to meet the NDC commitments through systemic change.

The component focuses on strengthening interinstitutional coordination and the design of the sectoral policy. to establish links in terms of procedures, authorizations, or licenses. For this, an interinstitutional coordination committee on FLWR will be formed to oversee the development of the sectoral strategy, providing inputs for a National Sectoral Plan with 2030 targets. A framework of food waste prevention actions will be defined for the distribution and commercialization phases, supported by a research and development program for universities. A protocol for innovation and good practices in FLWR for the food distribution and commercialization sector will be defined as a basis for processing a future National Standard. For this, the legal consultancy of MINEC will participate in this process to carry out internal procedures aimed at formalizing the developed national legal regulations. The creation of public-private partnerships, dialogues, and work networks will be encouraged to strengthen the policy and regulatory framework for FLWR and innovation project financing. Likewise, fiscal incentives will be determined, and public procurement policies for companies promoting FLWR will be updated.

As a catalytic element for sustainability, a mixed financing fund for community innovation projects will be designed. This mechanism will be structured as a hybrid window, combining seed grants for technical feasibility with risk-sharing instruments for private stakeholders. Its governance will be led by the inter-institutional committee to ensure transparency, while the design phase will define capitalization sources (public, private, and international cooperation) and financial instruments such as concessional loans or guarantees. The project will prioritize proposals emphasizing supply chain optimization, early warning, demand forecasting, efficient inventory management, and the valorization of non-edible byproducts. Fiscal benefits will also be considered as incentives.

**The outputs proposed for this component are:**

**1.1.1. Interinstitutional coordination committee on FLWR, created and operational.**

**1.1.2. Sectoral policy on FLWR with goals defined for 2030 and currently under implementation.**

**1.1.3. Standards for FLW in the distribution and marketing phases, defined and under implementation.**

**1.1.4. Public-private partnership mechanisms designed for fiscal incentives and public procurement policy for companies that promote FLWR.**

**1.1.5. Mixed fund for financing community innovation projects in FLWR, designed**

**1.2.1. Characterization document of the food waste (FW) situation at the distribution and marketing level, developed.**

### 1.2.2. Food Waste Index (FWI) measurement system developed and implemented.

1.2.3. Development of a system for capturing and tracking information on waste reduction that feeds into the monitoring system of SINAICC (National System for Climate Change Information) and contributes to subsequent estimates of GHG reduction from FLWR.

The assumptions associated with this first component relate to the continued interest of national institutions and government actors in the formulation of the public policy for FWR, its subsequent regulatory protocol, and the concurrent quantification of greenhouse gas mitigation.

## **Component 2: Strengthening Capacities and Awareness for Stakeholders.**

**Causal Pathway:** This component focuses on human capital and social acceptance. Through training vendors, administrators, and logistics handlers, technical and operational skills are improved for the prevention, cold chain integrity, and surplus management. Public awareness campaigns increase knowledge and promote behavior change among consumers and communities.

**Achievement of the Objective:** By empowering key stakeholders with knowledge and motivation, the adoption of sustainable practices is facilitated at all levels of the value and consumption chain, which is essential for effectively reducing waste volumes and, consequently, greenhouse gas emissions.

This component focuses on strengthening capacities across national, state, municipal, and community levels, prioritizing the dissemination of sustainable practices followed by monitoring and control. In alignment with the “Madre Tierra Venezuela” Great Mission, a comprehensive training program will be developed for ecosocialist committees, as well as for METRAS (Technical Recycling and Cleaning Boards) and any other form of community environmental organization present in the territory, incorporating a robust gender equality approach to ensure inclusive participation. The strategy includes educational measures in schools and citizen awareness campaigns to promote behavioral shifts. A key output is the development of an Incentive Programme Manual on good practices, covering innovative solutions such as food donation protocols, optimized storage, and digital tools for FLWR, disseminated to participants in the distribution, marketing, and consumption links. To ensure effectiveness, a specific methodology and a technological application (app) will be established to monitor the Food Waste Index (FWI) in MWMs, facilitating real-time information management and sectoral transparency.

The outputs proposed for this component are:

2.1.1. Sustainable practices training program on upstream prevention and FLWR implemented for municipalities, ecosocialist committees, and the Technical Recycling and Cleaning Boards (METRAS) and other community organizations, focused on avoidance protocols, food redistribution, and reducing waste generation at the source with a gender equality approach.

2.1.2. Awareness campaign in schools and communities on sustainable practices related to prevention and FLWR implemented, considering differentiated approaches according to gender.

2.1.3. Incentive programme on good practices and innovative solutions, including food donation, storage and cold chain, tax incentives, digital tools for FLWR, developed, disseminated, and available to participants in agri-food systems at the distribution, marketing, and consumption links.

The assumptions relate to the sustained interest of governmental, local, and community agents in implementing FWR practices and the continued commitment to Food Waste Index (FWI) monitoring systems once the methodology is adopted. It also depends on the active assume of roles by all agents, particularly women in leadership positions, and the consistent promotion of these policies by authorities.

### **Component 3: Pilot Interventions for Food Loss Prevention and Systemic Efficiency.**

**Causal Pathway:** This component provides tangible proof of concept and direct global environmental benefits. By implementing FLWR practices that promote resource efficiency and optimized logistics in select municipal markets, the technical and economic viability of these solutions is demonstrated under real-world conditions.

**Achievement of the Objective:** Measurable reduction in the volume of food loss and waste, and the corresponding decrease in GHG emissions, directly contribute to NDC mitigation targets. These successful demonstrations serve as replicable models for national scale-up, ensuring that food remains within the human consumption chain.

A pilot phase will be implemented in three Municipal Wholesale Markets (MWM) of local and national influence: Coche (Caracas), Mercabar (Barquisimeto), and Táriba (Táchira). The core intervention consists of the pilot implementation of cold chain optimization, storage practices, and logistics management systems to prevent food loss at the source. To ensure economic sustainability, the project will conduct feasibility and viability studies on fiscal incentive options, such as reduced fees or tax benefits for traders who adopt efficiency standards. A cornerstone of this component is the establishment of food donation protocols, specifically designed with the leading participation of women, creating commercial opportunities and ensuring safe, dignified employment within food recovery networks.

To achieve a multiplier effect, the project will ensure that other participants in the food system, such as street markets, supermarkets, and retail supply centers, adopt these good practices to prevent and reduce FLW at the retail stage. These interventions will be supported by a robust data-driven framework, including a database on input, output, and FLW by category, which will allow for the monitoring and tracking of the reduction in the volume of food waste sent to landfills. By quantifying and recording these reductions, the project ensures a transparent Monitoring, Reporting, and Verification (MRV) process, demonstrating the direct link between improved logistics and GHG mitigation.

To ensure a systemic impact the interventions follow a Circular Economy approach. The project will implement a Food Recovery Program for social and community organizations, followed by the transformation of surplus into valued-added products (e.g., jams, juices, pre-cut vegetables, flours, soups, etc.), to extend shelf life, thus avoiding disposal and creating new business opportunities. Only organic matter strictly unsuitable for human consumption will be directed to aerobic composting, closing the loop by returning nutrients to agricultural producers via optimized return transport routes. Other measures will include Valorization of Organic Waste not Suitable for Human Consumption (Methane Emission Reduction) and Large-scale composting through the installation of composting plants, implementing or facilitating access to composting plants inside or near the wholesale market to process organic waste (fruit scraps, vegetables, etc.). Aerobic composting primarily generates CO<sub>2</sub>, which is considered carbon neutral, and prevents the production of CH<sub>4</sub> that is in landfills. The evaluation of return routes for trucks, after delivering food products, to allow them to transport compost to producers associated with a “Network of Good Practices”. Source separation: Establish a differentiated collection system for organic waste at all stalls and market areas, facilitating its handling and processing.

This entire flow is monitored through a robust Monitoring, Reporting, and Verification (MRV) system using the Food Waste Index (FWI) and an “Early Warning” app ensuring that every ton of food saved translates into measurable GHG mitigation. Progress reports on waste reduction and GHG emissions mitigation will be published to promote transparency and accountability. Measurement technologies will be implemented to monitor food and waste flows, identifying critical loss points and opportunities for improvement. Educational and awareness campaigns will be developed targeting vendors, workers, and market visitors to inform them about the environmental impact of food waste and the importance of its reduction. Training in sustainable practices will also be provided through workshops and guides on waste management, separation, composting, and other practices that help mitigate GHG emissions.

A recipe guide (APP) will be developed, providing guidance on healthy diets, family menu planning, and shopping tips for optimal food use with minimal waste. The creation of the Network of Good Practices will promote the exchange of experiences among market stakeholders, fostering the vision of a circular economy where waste is seen as a resource, encouraging reuse, recycling, and the valorization of all materials. The implementation of composting technologies, combined with a strong awareness campaign and logistical optimization, will be fundamental pillars to achieve substantial FLWR and, consequently, reduce GHG emissions in Venezuelan municipal wholesale markets (MWM).

The outputs proposed for this component are:

3.1.1. Pilot implementation of cold chain optimization, storage practices and logistics management systems in three (3) Municipal Wholesale Markets (MWM) to prevent food loss and enhance resource efficiency.

3.1.2. Feasibility and viability studies, on fiscal incentive options (reduced fees, tax benefits), implemented to promote FLW prevention.

3.1.3. Food donation protocols, for MWM implemented with the leading participation of women, creating commercial opportunities as well as safe and dignified employment

3.1.4. Other participants (street and open-air markets, supermarkets, and food supply centers) in the food system at the retail commercialization stage adopt actions good practices to prevent and reduce FLW

3.2.1. Database on input, output, and FLW by category, designed, implemented, and available.

3.2.2. Monitoring and tracking of the reduction in the volume of food waste, by category sent to landfills, quantified and recorded.

**Component 4: Monitoring, evaluation, and dissemination of good practices for the food loss and waste sector.**

**Causal Pathway:** This component ensures the effectiveness, transparency, and sustainability of the first three components through rigorous data management and knowledge exchange.

**Achievement of the objective:** This component is vital for continuous progress tracking, collecting impact data (including GHG reductions and the number of beneficiaries), and adapting strategies under the Enhanced Transparency Framework of the Paris Agreement. It ensures that results are measurable, verifiable, and ready for national scaling.

With the project's implementation based on a results-oriented approach, the Monitoring, Evaluation, and Knowledge Management component ensures a review of the project's progress with timely evaluations and documentation of lessons learned. Progress reports will be prepared. Means of verification will be designed to analyze the causes that may lead to deviations, and measures will be established to correct the project's activities.

As part of the project's contribution to knowledge management, and compliance with international and national goals of food waste prevention, an agreement among government, national academic institutions, and the private sector will formalize the "National Network of Innovation and Good Practices on FLW," which will generate research priorities to avoid GHG emissions and produce educational tools, including a cookbook guide and shopping tips for optimal food utilization. Furthermore, the project will implement training packages and farmer-to-farmer activities designed to accelerate the adoption of practices that increase soil carbon stocks (e.g., improved rotations and agroecological management), creating a bridge between urban food recovery and rural soil health. Likewise, other lessons learned in the project will be disseminated regarding information and knowledge exchange on food waste reduction, the gender dimension in the later stages of the food system,

strengthening the organization and technical capacities of communities and their families, and alternative practices promoted for sustainable utilization and livelihood support.

The Project will implement a robust strategy for knowledge management, establishing a centralized system for data collection on food waste volumes and GHG reductions. Successes and challenges will be documented in case studies and best practice guides. To ensure long-term impact, a national scalability and replicability plan will be developed to provide a roadmap for expanding interventions to other municipalities. FAO's global networks and strategic communication plan will ensure that results and lessons learned are effectively disseminated.

The outputs proposed for this component are:

4.1.1. National Network of Innovation and Good Practices on FLW in the agri-food system, at the distribution, marketing, and consumption links, constituted and active.

4.1.2 Training packages, field demonstrations, and farmer-to-farmer activities developed to accelerate the adoption of Practices that increase soil carbon stocks (e.g., improved rotations, cover cropping, agroecological soil management).

4.1.3. National scalability and replicability plan for interventions.

4.2.1. Monitoring and Evaluation (M&E) strategy developed and implemented.

4.2.2. Final evaluation conducted.

The Project will adopt a cross-cutting approach to gender equality and women's empowerment, ensuring that interventions promote equitable participation and equal access to benefits for women and men across all components. During the preparation phase (PPG), a gender analysis will be conducted to identify differences in roles, access to resources, capacities, barriers, and opportunities within the food chain, with particular emphasis on wholesale markets and community participants involved in food waste management. This analysis will include sex-disaggregated data, as well as an assessment of training, financing, and decision-making needs.

The project will incorporate specific measures to:

- Ensure active participation and leadership of women in the project's governance bodies, ecosocialist committees, METRAS, and the National Network for Innovation and Good Practices.
- Achieve a minimum level of female participation in decision-making processes and secure at least 50% female beneficiaries in technical, business, and leadership training activities.
- Facilitate women's access to economic opportunities resulting from FLW reduction and food recovery (food banks, specialized logistics, and high-value processing), including microcredit and seed funding mechanisms.
- Design training programs adapted to the realities and responsibilities of women, considering flexible schedules and specific modules on leadership and management.

Gender-responsive indicators will be incorporated into the results framework, such as:

- Percentage of women trained in sustainable FLW practices.
- Percentage of women in leadership positions in project committees and networks.
- Number of women-led enterprises linked to food recovery and resource efficiency.
- Percentage change in the income of women participants.

Monitoring and reporting on progress in gender equality will be carried out semiannually, using both quantitative and qualitative data, with strategies adjusted based on feedback from beneficiaries and communities. To enhance the effectiveness of this approach, the project will establish strategic partnership with the Ministry of the People's Power for Women and Gender Equality (MinMujer), organized community groups, and women's network, to ensure coherence, sustainability, and scalability of the actions. These partnerships will enable the integration of the gender component not only as a cross-cutting principle but also as a key enabling factor for achieving project results, ensuring that women are not only beneficiaries but also key participants agents of change in reducing food loss and waste and mitigating GHG emissions in Venezuela. The project will also strengthen the technical capacities of participating institutions that will support the project's social activities, focusing on gender, cultural sensitivity, and enhancement of community capital, among other aspects, so that these institutions have the appropriate tools for their work and can monitor the fulfillment of designed actions. This task will require inter-institutional collaboration among MINEC, MinEDu, MinMujer, MinComunas, and social movements.

### 3. Collaborative interaction among stakeholders.

The Theory of Change (ToC) highlights that achieving the objective is a collaborative effort, with each stakeholder playing a vital role:

**MINEC (Executing entity):** As the leading agency for environmental policy, MINEC provides political leadership, regulatory framework, and significant co-financing, ensuring the Project aligns with national priorities and it is integrated into government planning. Its commitment is essential for developing, adopting, and implementing the sectoral plan.

**FAO (GEF Agency):** FAO with its extensive global experience in sustainable food systems and natural resources management, provides technical assistance, international best practices, and project supervision. Its role is crucial for ensuring technical quality and compliance with GEF standards.

**Municipal Authorities:** They are key participants in local implementation. Their support for infrastructure, enforcement of local regulations, and community mobilization is essential for effective execution of pilot interventions and training activities.

**Distribution Chain Participants:** Their active participation in cold chain management, inventory rotation, and adoption of good practices is fundamental for the success of pilot interventions and source-level FLWR activities.

**Local Communities and Consumers:** Through awareness campaigns, they become agents of change by adopting more responsible consumption habits and participating in food recovery networks. Their commitment is vital for the sustainability of food loss and waste **prevention** efforts.

**Private Sector:** The ToC recognizes the potential role of the private sector in providing technology for food preservation (cooling/logistics), processing of value-added products. Their participation is key to ensure long-term financial sustainability of circular solutions.

GEF funding will provide the critical incremental cost needed to transform the Bolivarian Republic of Venezuela's approach to food waste from linear disposal to a resource efficiency system aligned with circular economy principles. Without GEF support, Venezuela would likely continue conventional food waste management for an extended period, missing the opportunity to systematically reduce GHG emissions from this sector and integrate these reductions into its NDC implementation. The project's benefits are evident in several areas: first, it facilitates the development of a sectoral FLWR policy, which is an upstream public good and requires substantial technical expertise. Second, it enables capacity building at a scale that national budgets rarely cover. Third, it supports demonstration of innovative technologies (e.g., early warning apps and logistics)

that entail initial risks and require accelerated investment. Fourth, it generates global environmental benefits through measurable GHG reductions.

GEF contribution will incentivize innovative approaches and systemic change that national governments, especially in developing countries, are often reluctant to pursue independently due to perceived risks or initial capacity limitations. Venezuela's NDC references methane reduction in the waste sector, but there are significant information gaps for decision-making that the GEF contribution is expected to help bridge. The project represents a paradigm shift in how food loss and waste is perceived and managed in Venezuela, transforming it from a disposal problem into a resource efficiency opportunity. This strategic intervention aligns with the GEF mandate to foster "transformative" change. By providing the initial boost and demonstrating success, the project aims to unlock additional investments from national and private sectors (co-financing) and secure the long-term sustainability and scalability of mitigation efforts.

All key stakeholders will gain significant benefits and make vital contributions to the project's success. The national government, through MINEC, will benefit from enhanced capacity, a clear roadmap for NDC implementation, and strengthened international cooperation, contributing political leadership, staff time, and substantial co-financing. Municipalities will obtain technical knowledge, upgraded infrastructure for resource efficiency, and cleaner urban environments, contributing local personnel, facilities, and operational support. Market administrations will benefit from lower waste disposal costs, while vendors will gain income potential from recovered products and improved market hygiene, and both contributing actively by participating in training and adopting new practices. The private sector will find opportunities for new businesses in circular logistics, food recovery, and nutrient recycling, supporting investments in innovative technologies consistent with the recognized role in management. Beyond GHG reduction, the project will generate important co-benefits, including improved public health and sanitation, greater resource use efficiency, creation of green jobs, and strengthened food security through better food recovery.

The current situation in Venezuela, where Decree 638 of 1995 and Decree 1257 of 1996 regulate atmospheric emissions and environmental licenses but do not explicitly include carbon dioxide and methane emissions, reveals a regulatory gap. Although the existing legislation provides strong general pollution control, it may not specifically address methane from organic waste or provide explicit incentives for its reduction. Therefore, the project's policy component will analyze the existing legal framework to identify where amendments or new specific regulations are needed. This includes a) the explicit inclusion of methane from organic waste in emission controls, b) the provision of a clear legal basis for food recovery and the circular management of organic resources, and c) the establishment of mechanisms for fiscal or economic incentives, such as those mentioned in Article 103 of the Organic Law of the Environment. This detailed legal and policy analysis, along with the proposed amendments, is crucial to long-term sustainability and scalability.

The development of sectoral policy provides a guideline for nationwide implementation through a comprehensive national sectoral plan. Successful pilot demonstrations in municipal markets will serve as models for replication in other urban centers across Venezuela. The focus on capacity building and knowledge exchange will create a pool of local experts and a network for disseminating best practices. Exploring sustainable circular business models will attract private sector investment, enabling broader adoption beyond GEF funding. The alignment of the project with the national NDC objectives ensures that scaling-up remains a top national priority.

### **Coordination and Cooperation with Ongoing Initiatives and Project.**

Does the GEF Agency expect to play an execution role on this project?

No

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

The project is directly integrated into the mandate of MINEC and Venezuela's national mitigation plan. It will closely coordinate with MINEC's ongoing efforts to implement the NDC, ensuring that the food loss and waste reduction plan is fully integrated and measurably contributes to national goals. This integration goes beyond simple coordination; it is a strategic alignment that gives legitimacy to the project and establishes a pathway for its inclusion in broader national and international climate action.

The project will actively seek to coordinate with private companies in circular logistics and organic resource management, as well as potential investors in the resource efficiency sector, exploring partnerships for technology transfer, operational management, and market development. This aligns with the GEF's emphasis on private sector engagement and the need to increase financing. Such strategic coordination enhances the project's sustainability by embedding it within established government structures and global best practices, making it a catalyst for systemic change rather than an isolated intervention. It also creates opportunities for future funding and replication through shared learning and established partnerships.

The project will actively coordinate with the FAO GEF project ID 11662, 'Strengthening the National Capacities of the Bolivarian Republic of Venezuela to Respond to the Commitments of the Paris Agreement,' as these are intrinsically related and highly complementary. Both projects, with FAO as a key agency, work in synergy to support Venezuela in meeting its climate commitments under the Paris Agreement and its Nationally Determined Contributions (NDC).

The GEF project ID 11662 focuses on strengthening institutional and technical capacities for transparency and climate planning at the national level (improving data collection and reporting on greenhouse gas emissions and mitigation and adaptation actions across various sectors, including the waste sector). This project proposal focuses on a specific and concrete mitigation action: the reduction of greenhouse gas emissions through upstream food loss and waste prevention.

The current proposal seeks to develop a detailed sectoral plan and demonstrate its implementation through pilot interventions. Meanwhile, the GEF project ID 11662 builds the infrastructure and technical capacities for Venezuela to comprehensively measure, report, and verify its climate actions. The proposed project will directly benefit from those capacities, providing specific high-quality data that contributes to the national transparency framework. Both projects are essential and complementary parts of Venezuela's climate action strategy under the Paris Agreement, combining systemic capacity building with concrete mitigation interventions.

Furthermore, the project could establish a strategic coordination channel with the UNEP-led global project "Reducing Methane Emissions from Food Waste" (GEF ID 11952). This collaboration will facilitate the exchange of global best practices, technical expertise, and standardized methodologies for methane mitigation. By aligning with this global initiative, the project will leverage international knowledge on food waste reduction strategies and contribute Venezuelan data to the global effort to mitigate short-lived climate pollutants (SLCPs).

The institutional arrangements for project execution will be further defined during the PPG phase, taking into consideration the country specific context and challenges. GEF policies and guidelines will be followed, and experiences taken from other projects under implementation in the country.

## Core Indicators

### Indicator 6 Greenhouse Gas Emissions Mitigated

| Total Target Benefit                                    | (At PIF) | (At CEO Endorsement) | (Achieved at MTR) | (Achieved at TE) |
|---------------------------------------------------------|----------|----------------------|-------------------|------------------|
| <b>Expected metric tons of CO<sub>2</sub>e (direct)</b> | 3375548  | 0                    | 0                 | 0                |

|                                                      |       |   |   |   |
|------------------------------------------------------|-------|---|---|---|
| Expected metric tons of CO <sub>2</sub> e (indirect) | 35215 | 0 | 0 | 0 |
|------------------------------------------------------|-------|---|---|---|

#### Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

| Total Target Benefit                                 | (At PIF) | (At CEO Endorsement) | (Achieved at MTR) | (Achieved at TE) |
|------------------------------------------------------|----------|----------------------|-------------------|------------------|
| Expected metric tons of CO <sub>2</sub> e (direct)   |          |                      |                   |                  |
| Expected metric tons of CO <sub>2</sub> e (indirect) |          |                      |                   |                  |
| Anticipated start year of accounting                 |          |                      |                   |                  |
| Duration of accounting                               |          |                      |                   |                  |

#### Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

| Total Target Benefit                                 | (At PIF)  | (At CEO Endorsement) | (Achieved at MTR) | (Achieved at TE) |
|------------------------------------------------------|-----------|----------------------|-------------------|------------------|
| Expected metric tons of CO <sub>2</sub> e (direct)   | 3,375,548 |                      |                   |                  |
| Expected metric tons of CO <sub>2</sub> e (indirect) | 35,215    |                      |                   |                  |
| Anticipated start year of accounting                 | 2028      |                      |                   |                  |
| Duration of accounting                               | 20        |                      |                   |                  |

#### Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

| Total Target Benefit     | Energy (MJ) (At PIF) | Energy (MJ) (At CEO Endorsement) | Energy (MJ) (Achieved at MTR) | Energy (MJ) (Achieved at TE) |
|--------------------------|----------------------|----------------------------------|-------------------------------|------------------------------|
| Target Energy Saved (MJ) |                      |                                  |                               |                              |

#### Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

| Technology | Capacity (MW) (Expected at PIF) | Capacity (MW) (Expected at CEO Endorsement) | Capacity (MW) (Achieved at MTR) | Capacity (MW) (Achieved at TE) |
|------------|---------------------------------|---------------------------------------------|---------------------------------|--------------------------------|
|------------|---------------------------------|---------------------------------------------|---------------------------------|--------------------------------|

#### Indicator 11 People benefiting from GEF-financed investments

|        | Number (Expected at PIF) | Number (Expected at CEO Endorsement) | Number (Achieved at MTR) | Number (Achieved at TE) |
|--------|--------------------------|--------------------------------------|--------------------------|-------------------------|
| Female | 5,000                    |                                      |                          |                         |
| Male   | 5,000                    |                                      |                          |                         |
| Total  | 10,000                   | 0                                    | 0                        | 0                       |

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

The project's main contribution to Global Environmental Benefits will be through reducing the generation of GHG emissions under Core indicator 6, focusing on food loss prevention and resource-efficient logistics across three strategic wholesale markets which will lead to a more efficient use of the food produced. This upstream prevention ensures direct mitigation by avoiding downstream lifecycle emissions, direct methane generation in disposal sites, and fuel consumption during waste transit. An estimate of the reduction is presented below with available data and will be further refined during the PPG phase with data collected during the baseline. A technical report with the calculation is also included as Annex in the Portal.

The project's mitigation objective is set at a total net impact of 3,375,548 tCO<sub>2</sub>e over a conservative 20-year investment lifetime (2028–2047). This period does not correspond to the formal implementation period of the GEF project, but to the period during which the implemented investments, protocols, capacities and management systems are expected to continue generating emission reductions and it is technically justified by the operational lifespan of the physical assets, cold storage facilities, and logistics systems implemented during the project.

To ensure transparency and avoid overestimations, the target has been strictly split based on investment type, differentiating between direct investments and indirect/catalytic impact. For the purposes of Core Indicator 6, the direct estimate is based solely on the preventable/recoverable fraction from the three wholesale markets with direct investment: MERCABAR, Táriba, and Coche, selected for their operational interconnection and capacity for immediate intervention. These three markets handle 763,200 tons/year of food and generate 166,800 tons/year of food loss and waste (FLW) of which 78.1% corresponds to a preventable or recoverable fraction for human consumption, equivalent to 130,271 tons/year. The remaining 21.9% corresponds to a non-edible or unavoidable fraction, equivalent to 36,529 tons/year.

This inedible or unavoidable fraction is not counted as food waste prevention and will only be considered in separate calculations if the project activates specific organic valorization mechanisms.

The direct project mitigation (3,375,548 tCO<sub>2</sub>e) includes 1,771,686 tCO<sub>2</sub>e from upstream emissions avoided by food prevention/recovery, 1,596,799 tCO<sub>2</sub>e from CH<sub>4</sub> emissions avoided by reduced disposal of FLW, and 7,063 tCO<sub>2</sub>e from emissions avoided by reduced transport diesel consumption associated with waste not generated or not sent for final disposal.

The total GHG emissions mitigated were calculated by using a hybrid approach: the IPCC 2006 (Vol. 5, Cap. 3), FOD methodology (Tier 2), for landfill methane decay during the 20-year lifetime and the IPCC 2006 Guidelines (Volumes 2 and 4) for upstream avoided emissions. This ensures full consistency with Venezuela's 2024 National GHG Inventory and the Enhanced Transparency Framework (ETF). The FOD profile extended to 2108 is maintained only as a complementary technical analysis for physical permanence, without expanding the main reporting period. Baseline data, logistics capacities, and specific emission factors will be further refined during the PPG phase.

It is expected that the project results will be scalable to other four remaining markets in the country (Tocuyito, Mercamara, Maracay, and Oriente), hence considered as having potential for indirect or catalytic scaling, subject to subsequent adoption by local stakeholders.

Indirect emissions from catalytic scaling were calculated by applying a 10% causality factor to total direct reductions of 458,605 tCO<sub>2</sub>e (including avoided landfill CH<sub>4</sub>, upstream emissions, and avoided transport), resulting in 35,215 tCO<sub>2</sub>e of indirect reductions attributable to the multiplier effect of the intervention across 4 markets; this 10% factor conservatively represents the project's replicability and its influence on the adoption of mitigation practices by similar actors, avoiding double counting while recognizing the positive externalities of the demonstration effect, consolidating a total of 493,820 tCO<sub>2</sub>e in GHG reductions, where indirect emissions account for 7.1% of the total mitigation impact.

The country applied flexibility provisions in its first Biennial Transparency Report (2024) due to limitations in data on waste classification. As part of its Nationally Determined Contributions (NDCs), Venezuela committed to reducing total emissions by 20% by 2030 across all sectors. This initiative will support local mitigation measures that could contribute up to 0.48% reduction from the waste sector by 2030. Beyond reducing greenhouse gas (GHG) emissions, preventing and recovering food waste transforms an environmental liability into a productive asset. This circular economy model reduces pressure on saturated landfills while promoting resource efficiency and sustainable management, directly aligning with Venezuela's NDC goals and soil degradation-neutral objectives. FAO will provide technical assistance to promote methodologies for managing food waste, including reuse and

circular economy approach. The methodology includes awareness campaigns and gender-sensitive data disaggregation to ensure the inclusion of gender perspectives and roles.

The project will have a direct impact on 10,000 key actors in the food value chain only in the markets of Lara (Mercabar), Táchira (Táriba) and Capital District (Coche). Of this total, 3,000 beneficiaries (including operational staff, plant technicians, and waste managers) will be formally employed and trained in chemical handling protocols, food safety and organic waste management, and waste recovery technology operation, ensuring safe working conditions that minimize exposure to contaminants. At the same time, the project will also directly benefit another 7,000 people, including consumers, wholesalers, transporters, and logistics service providers, that will benefit from the optimization of loading areas, the reduction of epidemiological vectors, and efficiency in final disposal. With a cross-cutting approach to gender equality, the initiative will prioritize the inclusion of women in technical supervision and environmental governance roles, transforming waste management into an engine of economic resilience and public health for the communities surrounding these strategic commercial hubs. It is expected that the project will also contribute in the long term to a more efficient use of agricultural lands due to a more efficient use of the food produced, while also contributing to food security.

The core indicators focus on direct mitigation at wholesale markets and landfills, but beyond direct emission reductions, the project is expected to generate a significant multiplier effect on household food waste. By implementing upstream improvements in sorting, cold chain management, and logistical efficiency, the project ensures that products reach the end consumer with an extended residual shelf-life. This systemic improvement reduces the probability of premature food spoilage at the domestic level, thereby avoiding additional methane emissions in municipal waste streams. While these indirect reductions are not captured in the conservative direct-impact calculations, they represent a high-value climate co-benefit that enhances the project's overall cost-effectiveness and resource efficiency.

## Key Risks

|                          | Rating | Explanation of risk and mitigation measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CONTEXT                  |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Climate                  | Low    | While climate impacts could affect food supply chains, the focus on upstream prevention and logistics is less vulnerable to climate variability. Risks associated with extreme weather events that could damage infrastructure will be considered when selecting the pilot sites to minimize vulnerability and ensure project resilience.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Environmental and Social | Low    | The screening of safeguards has indicated a low risk. Some of the potential risks are: 1. The installation and daily operation of new cold chain infrastructure and logistical equipment in MWM present inherent physical risks to workers. To mitigate this, the project will implement strict safety protocols, provide mandatory training on equipment handling, and ensure the use of Personal Protective Equipment (PPE), following FAO's Social and Environmental Standards. 2. The optimization of the cold chain involves the use of refrigerants that, if improperly managed, could contribute to GHG emissions. The project commits to selecting technologies with low Global Warming Potential (GWP) and zero Ozone Depletion Potential (ODP). Mitigation includes a lifecycle management plan for refrigerants and technical certification for maintenance staff to prevent leakages. 3. Expanded |

|                          |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |             | <p>cold storage capacity could increase energy demand. The project will mitigate this by integrating energy-efficient designs and exploring the use of renewable energy sources (such as solar PV) for the pilot interventions, ensuring that the net environmental benefit remains positive. Mitigation measures will involve strict compliance with national environmental regulations and FAO's social and environmental safeguards; during the Project Preparation Grant (PPG) an Environmental and Social Management Plan (PGAS) to respond to the possible risks identified will be developed along with a Stakeholder Engagement Plan.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Political and Governance | Moderate    | <p>While the project aligns with the '7 Transformations Plan (2025)', Gran Misión Madre Tierra and national NDCs, the complexity of multisectoral coordination between national ministries and municipal market administrations presents a moderate governance risk. Mitigation: Strengthening the project's steering committee with high-level representation from MINEC and local authorities; establishing formal inter-institutional agreements during the PPG; and ensuring the project is embedded within permanent state climate directives to transcend political cycles. To manage political economy risks beyond the PPG phase, the project will implement an Institutional Sustainability Strategy designed to transcend administrative cycles: 1. By explicitly linking the project's indicators to the reporting of the 7 Transformations Plan (2025-2031) and the National NDC goals, the project becomes a vehicle for national compliance. 2. By empowering local market committees, community organizations and private sector stakeholders, the project creates a social demand for its continuity. These stakeholders, who will directly benefit from reduced losses and higher efficiency, act as a hedge against political shifts by demanding the maintenance of the new logistical standards. 3. Establishing formal inter-institutional agreements during the PPG and formalizing 'Technical Management Units' within municipal organizational structures. This embeds the project into permanent state climate directives, ensuring continuity beyond leadership changes.</p> |
| INNOVATION               |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Institutional and Policy | Substantial | <p>Gap between existing policies and their implementation; goals too ambitious compared to actual capacity; challenges in data coherence. Mitigation: Strengthening policy-implementation articulation, integrating upstream data needs (FLW Index) into policy design, and leveraging Nationally Appropriate Mitigation Actions as a mechanism to attract international financial and technical support, specifically to implement key policy objectives and overcome identified barriers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Technological            | Moderate    | <p>The project can leverage and complement the ongoing national diagnostic study of RDS by MINEC, specifically in data for key categories (5.B, 5.C, 5.D.2). Mitigation: Contracting international experts to certify that the data collected (or to be collected) meets the methodological requirements of a Level 2 (Tier 2) and to advise on adapting calculation formulas, providing the immediate technical foundation required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                              |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Financial and Business Model | High        | Severe impact of Unilateral Coercive Measures (UCM) on investment and purchasing power. Mitigation: Promote new funding sources, prioritize low-cost and high-impact prevention interventions, and improve resource efficiency across the distribution chain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| EXECUTION                    |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Capacity                     | Substantial | As the governing body on Ecosocialism, the ministry has a high-level convening capacity, able to form a multidisciplinary and inter-institutional body with decision-making power to resolve conflicts and ensure participation and compliance with responsibilities and agreements, overcome challenges, and strengthen local-national data flow. However, the prolonged economic deterioration in the country, as consequence of Unilateral coercive measures (UCM), has resulted in constrained public budgets, loss of specialized technical personnel, and limited access to modern administrative tools. These factors may affect the Ministry's ability to ensure and maintain operational continuity throughout the project's lifecycle. To address these constraints, the project will implement a robust Technical Assistance and Staffing Plan: The Project Management Unit (PMU) will be reinforced with dedicated national and international consultants recruited to provide full-time technical, fiduciary, and administrative support, complementing MINEC's staff. Specialized Technical Assistance: will be provided to bridge gaps in waste-to-energy and circular economy policy design. Contingency Plans for Institutional Disruption: To safeguard against personnel turnover or restructuring, the project will establish digitized knowledge-management systems and decentralized operational protocols. This ensures that technical memory is preserved and that local market administrations are empowered to maintain operations regardless of shifts at the central level. |
| Fiduciary                    | Moderate    | The current Unilateral coercive measures (UCM) imposed on Venezuela present challenges for the country to access and operate external funds, that can be severely affected by the strong fluctuations of the local currency value. To mitigate these risks, the national authorities have established a proven operational mechanism which is in place in other GEF projects with successful results to ensure adequate fiduciary standards while also ensuring the leadership of the country. MINEC has requested support in the execution of the GEF grants from the corresponding implementation agency, which operates the project budget, processes payments, hires personnel, etc. The MINEC maintains its leading role by nominating a representative as national director, in charge of overseeing execution and the project team. The budget is executed following workplans and budget distributions approved by the project steering committee (PSC). This arrangement has enabled the management of fund flows and procurement through international channels, avoiding fluctuations derived from local banking which could seriously impact availability of funds, while maintaining MINEC's strategic leadership via the PSC. During PPG phase, alternatives will be explored to identify the more adequate fiduciary mechanism. The alternative will strictly comply with current GEF policies and procedures.                                                                                                                                                                           |

|                     |          |                                                                                                                                                                                                                                                                                              |
|---------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stakeholder         | Moderate | Need to ensure equitable representation and tangible benefits; sustainability of community commitment; limitations in private sector participation. Mitigation: Develop a comprehensive participation plan, demonstrate socioeconomic benefits, and strengthen partnerships with the sector. |
| Other               | Moderate | Risks include impacts of climate change on infrastructure; sociopolitical volatility, and unforeseen events (pandemics). Mitigation involves contingency planning, diversifying data sources, and promoting broad support.                                                                   |
| Overall Risk Rating | Moderate | The overall risk is considered moderate with the implementation of the mitigation measures mentioned.                                                                                                                                                                                        |

### C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The project is directly aligned with the Climate Change Focal Area (CCM 1.1) of GEF-8, accelerating the efficient use of materials and reducing greenhouse gas (GHG) emissions from the sector caused by food loss and waste. GEF-8 emphasizes systemic approaches to addressing environmental degradation, and this project's focus on preventing food waste within urban food systems is a prime example of such an approach. It also contributes to GEF-8 principles by promoting circular economy principles, recovering valuable nutrients (e.g., compost), from unavoidable organic loss reducing the need for raw materials, and minimizing pollution. The project supports GEF-8 emphasis on innovation and scaling by demonstrating new approaches to food waste prevention and creating a plan for national replication.

The project's main objective is climate change mitigation through resource efficiency and circularity. The project seeks a programmatic approach through the development of a national sectoral plan, maximizing impact through direct GHG reductions and improving access to climate solutions for Venezuela.

The project is directly aligned with the national environmental policy outlined in the 'Plan of the Fatherland of the 7 Transformations' (Ley Orgánica del Plan Nacional de Desarrollo de las 7 Transformaciones - 2025). It is specifically within the sixth Transformation, which proposes ecosocialism, the right to the city, addressing the climate emergency, and defending the Venezuelan Amazon. It also aligns with the "Gran Misión Madre Tierra Venezuela," developed transversally within the national policy, supporting environmental preservation and restoration across 7 key areas, with the sixth pillar focusing on "Saneamiento para la vida" (sanitation for life). This initiative is conceived as a historic socio-environmental model based on respect for the rights of Mother Earth and incorporating technologies and methods of organizing production, distribution, and consumption aimed at the rational, optimal, and sustainable use of natural resources while respecting natural processes and cycles.

The project aligns with Venezuela's Nationally Determined Contribution (NDC) submitted to the UNFCCC in 2018, which includes a national mitigation plan aiming to reduce emissions by at least 20% by 2030. The NDC explicitly lists "capture and use of methane emissions from the waste sector" as a key mitigation action. This project provides a sectoral policy to support the national mitigation plan by addressing organic loss at the source. It also supports the mandate of MINEC as the national environmental governing body and aligns with existing environmental legislation (e.g., the Organic Law of Environment) by promoting resource efficiency and pollution reduction. Regionally, the project contributes to efforts addressing food loss and waste, a significant issue across Latin America.

Although not a biodiversity project, there is a clear contribution to Target 16 of the KMGBF, on Enabling Sustainable Consumption Choices to Reduce Waste and Overconsumption. Specifically, it will contribute to halving global food waste, reduce overconsumption and substantially reduce waste generation. There is a direct contribution to the Component indicator 'Food waste index'. The contributions will be achieved through:

- Developing a national sectoral plan and local policies focused on preventing food waste before it happens.
- Promoting circular economy practices and behavioral changes needed in consumption and distribution patterns to reduce generation of organic waste.

Additionally, by reducing loss of organic material at the sources, the project indirectly diminishes the pressure of agricultural production systems and supply chains, indirectly supporting target 10 on sustainable agriculture, reducing the expansion of agricultural frontier, and also indirectly contributing to target 7 by reducing fertilizer use and hence reducing pollution.

No explicit national policies contradicting the expected outcomes have been identified at this PIF stage. However, the current regulatory framework may lack specific provisions or incentives for preventing and recovering food waste, particularly for methane emissions from organic waste. The project will address this by (i) conducting a comprehensive review of existing policies to identify gaps and opportunities; (ii) proposing specific policy recommendations or amendments to align national regulations with food waste prevention, recovery, and methane mitigation goals; and (iii) closely collaborating with MINEC to ensure policy coherence and effective implementation.

#### D. POLICY REQUIREMENTS

##### **Gender Equality and Women's Empowerment:**

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

##### **Stakeholder Engagement**

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

##### **Were the following stakeholders consulted during project identification phase:**

Indigenous Peoples and Local Communities:

Civil Society Organizations: Yes

Private Sector: Yes

#### Provide a brief summary and list of names and dates of consultations

Consultations and multi-stakeholder mapping were carried out in cooperation with local CSOs, academia, and community-based organizations active around the strategic commercial hubs (Coche, Mercabar, and Táriba). These initial dialogues focused on identifying socio-economic baselines, gender gaps, and current localized food recovery initiatives.

- The first stakeholder meeting was held on June 3, 2025, with participants from MINEC representing the National Executive, the Libertador Municipality Mayor's Office, Caracas City Municipal Executive - Capital District, and municipal bodies including the Secretariat of Ecosocialism, Integral Market and Warehouse Company (INMERCA), and SUPRA Caracas (urban cleaning service provider for solid waste collection, sweeping, and cleaning in the Capital District). The meeting aimed to identify relevant data for the study, such as: Waste classification, volumes generated, percentage of organic waste from FW, and the nature of operations at the Coche Wholesale Market, among other relevant aspects.
  - On June 18, 2025, meetings continued between representatives from MINEC, Libertador Municipality officials, and Recycling and Cleaning Community Tables (METRAS, CSOs) to learn about community experiences in solid waste reduction (SWR) valorization.
  - The Coche Wholesale Market is the largest food distribution center in Venezuela, located in the southeast of Libertador Municipality, Caracas. It covers about 16 hectares, including logistics and infrastructure for food supply to the capital and much of the country. The market is undergoing transformation led by the Caracas Mayor's Office to improve organization, safety, and infrastructure, playing a critical role in food distribution in Caracas and nationwide

During PPG, a detailed mapping will be conducted to identify other stakeholders. To structure the project interventions, consultations will be made with several stakeholders, including CSOs, CBOs, private sector, and vulnerable groups (including informal waste collectors, market workers or others), through workshops and focus groups at strategic commercial hubs to assess baseline socio-economic conditions and operational challenges. The findings will be used to tailor activities to make them active actors whenever possible, fostering the ownership and sustainability of project outcomes. A detail of the consultations, finding and ways to engage and involve different actors will be presented in the Stakeholder Engagement Plan to be presented at CEO endorsement.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

#### Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

#### Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

#### Overall Project/Program Risk Classification

| PIF | CEO<br>Endorsement/Approval | MTR | TE |
|-----|-----------------------------|-----|----|
| Low |                             |     |    |

## E. OTHER REQUIREMENTS

### Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

## ANNEX A: FINANCING TABLES

### GEF Financing Table

#### Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

| GEF Agency               | Trust Fund | Country/<br>Regional/<br>Global | Focal Area     | Programming of Funds        | Grant / Non-Grant | GEF Project Grant(\$) | Agency Fee(\$) | Total GEF Financing (\$) |
|--------------------------|------------|---------------------------------|----------------|-----------------------------|-------------------|-----------------------|----------------|--------------------------|
| FAO                      | GET        | Venezuela                       | Climate Change | CC STAR Allocation: CCM-1-1 | Grant             | 1,549,596.00          | 147,211.00     | 1,696,807.00             |
| Total GEF Resources (\$) |            |                                 |                |                             |                   | 1,549,596.00          | 147,211.00     | 1,696,807.00             |

### Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

50000

PPG Agency Fee (\$)

4750

| GEF Agency                   | Trust Fund | Country/<br>Regional/<br>Global | Focal Area        | Programming<br>of Funds        | Grant /<br>Non-Grant | PPG(\$)          | Agency<br>Fee(\$) | Total PPG<br>Funding(\$) |
|------------------------------|------------|---------------------------------|-------------------|--------------------------------|----------------------|------------------|-------------------|--------------------------|
| FAO                          | GET        | Venezuela                       | Climate<br>Change | CC STAR Allocation:<br>CCM-1-1 | Grant                | 50,000.00        | 4,750.00          | 54,750.00                |
| <b>Total PPG Amount (\$)</b> |            |                                 |                   |                                |                      | <b>50,000.00</b> | <b>4,750.00</b>   | <b>54,750.00</b>         |

Please provide justification

### Sources of Funds for Country Star Allocation

| GEF Agency                 | Trust Fund | Country/<br>Regional/ Global | Focal Area       | Sources of Funds   | Total(\$)           |
|----------------------------|------------|------------------------------|------------------|--------------------|---------------------|
| FAO                        | GET        | Venezuela                    | Climate Change   | CC STAR Allocation | 1,751,297.60        |
| FAO                        | GET        | Venezuela                    | Land Degradation | LD STAR Allocation | 259.40              |
| <b>Total GEF Resources</b> |            |                              |                  |                    | <b>1,751,557.00</b> |

### Indicative Focal Area Elements

| Programming Directions    | Trust Fund | GEF Project Financing(\$) | Co-financing(\$)    |
|---------------------------|------------|---------------------------|---------------------|
| CCM-1-1                   | GET        | 1,549,596.00              | 7980000             |
| <b>Total Project Cost</b> |            | <b>1,549,596.00</b>       | <b>7,980,000.00</b> |

### Indicative Co-financing

| Sources of Co-financing      | Name of Co-financier                                | Type of Co-financing | Investment Mobilized   | Amount(\$) |
|------------------------------|-----------------------------------------------------|----------------------|------------------------|------------|
| Recipient Country Government | Ministry of People's Power for Ecosocialism - MINEC | In-kind              | Recurrent expenditures | 500000     |
| Recipient Country Government | MINEC                                               | Public Investment    | Investment mobilized   | 500000     |
| Recipient Country Government | Environment Service for Ecosocialism (SAEC)         | In-kind              | Recurrent expenditures | 1000000    |
| Recipient Country Government | SAEC                                                | Public Investment    | Investment mobilized   | 1000000    |

|                              |                                                                                                                    |         |                        |                     |
|------------------------------|--------------------------------------------------------------------------------------------------------------------|---------|------------------------|---------------------|
| Recipient Country Government | Municipality Waste Management Company - Sistema Urbano de Procesamiento, Recolección y Aseo de Caracas – SUPRA CCs | In-kind | Recurrent expenditures | 500000              |
| Recipient Country Government | Municipalities – Municipal Market -Integral Mercados y Almacenes - INMERCA                                         | In-kind | Recurrent expenditures | 500000              |
| Recipient Country Government | Municipalities – Municipal Market - Mercado Mayorista de Barquisimeto, CA. - MERCABAR                              | In-kind | Recurrent expenditures | 500000              |
| Recipient Country Government | Municipalities – Municipal Market - Mercado Mayorista de Táriba - TARIBA WHOLESALE MARKET                          | In-kind | Recurrent expenditures | 500000              |
| Private Sector               | Waste Management Company - FOSPUCA                                                                                 | In-kind | Recurrent expenditures | 1980000             |
| Private Sector               | Private Sector Chamber - Cámara Venezolana de la Industria de Alimentos – CAVIDEA                                  | In-kind | Recurrent expenditures | 1000000             |
| <b>Total Co-financing</b>    |                                                                                                                    |         |                        | <b>7,980,000.00</b> |

Describe how any "Investment Mobilized" was identified

1. Government Contribution: The national government would provide co-financing through investments aimed at improving waste collection infrastructure in wholesale and retail food markets. This would strengthen operational capacity for organic waste management and ensure compliance with environmental standards.
2. Wholesale Market Contribution: Wholesale markets would contribute by making their existing infrastructure available for project implementation. This would include storage areas, logistics facilities, and operational support to enable the segregation and processing of organic waste within market premises.
3. Private Sector Contribution: Private companies would participate through Corporate Social Responsibility (CSR) initiatives, supporting awareness campaigns on waste management and food loss reduction. Additionally, they would collaborate in installing circular economy models that utilize food waste for value-added products such as compost, biofertilizers, and other sustainable solutions.

## ANNEX B: ENDORSEMENTS

### GEF Agency(ies) Certification

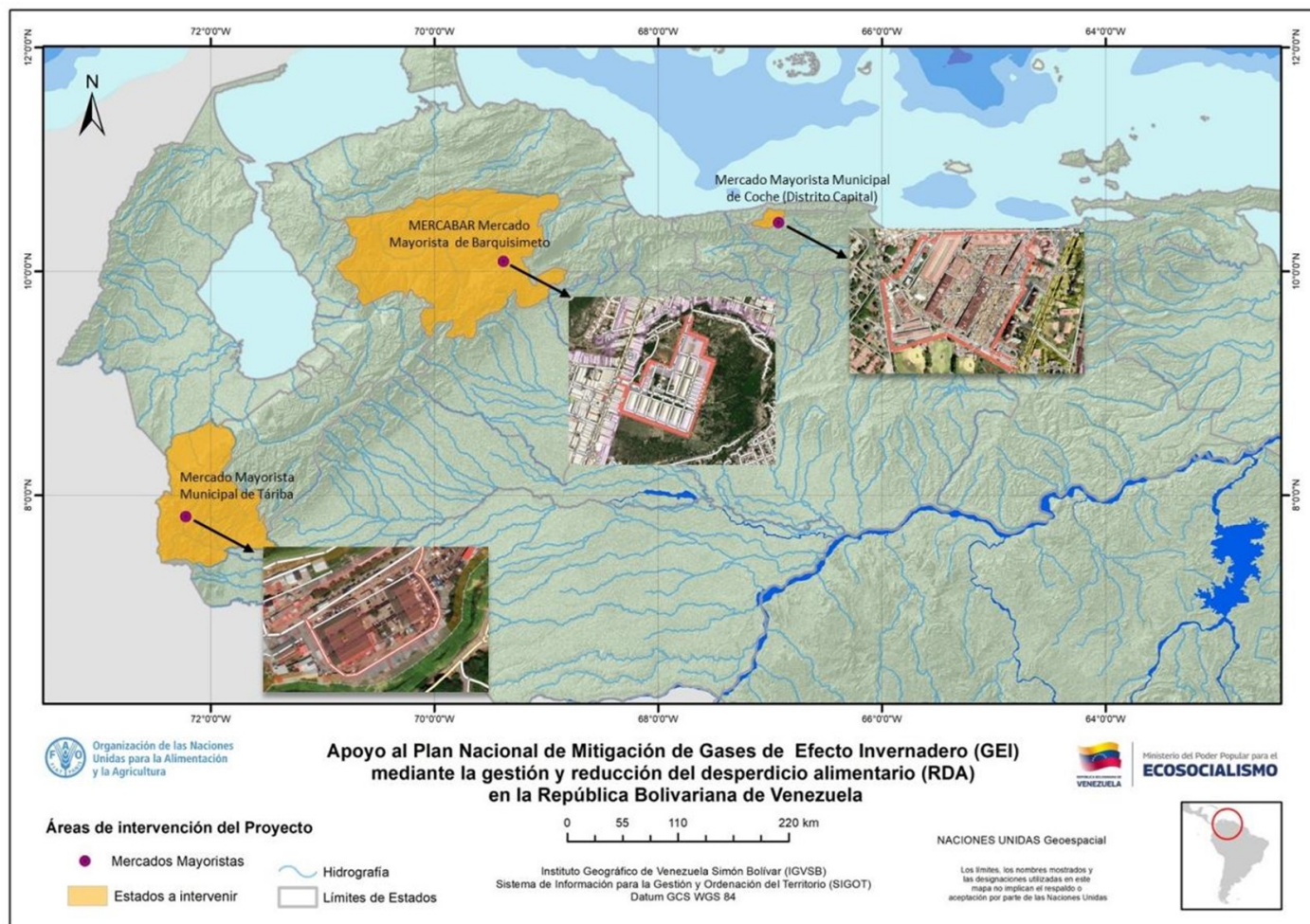
| GEF Agency Type     | Name           | Date       | Project Contact Person | Phone | Email                         |
|---------------------|----------------|------------|------------------------|-------|-------------------------------|
| Project Coordinator | Lorenzo Campos | 12/26/2025 | Lorenzo Campos         |       | lorenzo.camposaguirre@fao.org |

### Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

| Name                          | Position                                                  | Ministry                                   | Date (MM/DD/YYYY) |
|-------------------------------|-----------------------------------------------------------|--------------------------------------------|-------------------|
| Alinexis Raquel Barrios Reyes | Director, Office of Integration and International Affairs | Ministry of Popular Power for Ecosocialism | 12/15/2025        |

## ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place



| Wholesale markets | Coordinates UTM (north) | Coordinates UTM (west) |
|-------------------|-------------------------|------------------------|
| Coche             | 1154768.619             | 726679.365             |
| Mercabar          | 1113140.148             | 457326.773             |
| Tariba            | 864794.209              | 805565.185             |

## ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

Full ES Risk Screening checklist for project 761082

## ANNEX E: RIO MARKERS

| Climate Change Mitigation | Climate Change Adaptation | Biodiversity      | Land Degradation  |
|---------------------------|---------------------------|-------------------|-------------------|
| Principal Objective 2     | No Contribution 0         | No Contribution 0 | No Contribution 0 |

## ANNEX F: TAXONOMY WORKSHEET

Already completed in the portal: Peer-to-Peer, Knowledge Exchange, Capacity, Knowledge and Research, Knowledge Generation, Training, Course, Workshop, Learning, Indicators to measure change, Innovation, Capacity Development, Participation and leadership, Gender results areas, Gender Equality, Knowledge Generation and Exchange, Awareness Raising, Access to benefits and services, Beneficiaries, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Local Communities, Stakeholders, Behavior change, Communications, Public Campaigns, Individuals/Entrepreneurs, Private Sector, Financial intermediaries and market facilitators, Civil Society, Academia, Community Based Organization, Demonstrate innovative approaches, Influencing models, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Climate Change, Focal Areas, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, Energy Efficiency, Nationally Determined Contribution, United Nations Framework Convention on Climate Change