



International
Carbon
Registry

Reduction of GHG emissions by
diverting unsold goods and food
wastes from disposal

Sector 13- Waste Handling and Disposal

Summary

This methodology applies to food wastes as well as varied, usable consumer goods that are intended for incineration or disposal in solid waste disposal sites (SWDS). The methodology offers a process to quantify emission reductions realized by diverting food wastes from disposal to animal feed programs, as well as by diverting usable goods intended for disposal to novel commercialization/donation initiatives such as e-commerce platforms, off-price retailers, food banks, among others.



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Basic Information	
Methodology Name	Reduction of GHG emissions by diverting unsold goods and food wastes from disposal
Version	1.0
Type	Methodology
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Sector	Sector 13- Waste Handling and Disposal
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1. Methodologies

1.1 Other Methodologies

Approved and pending methodologies under ICR Program and/or other GHG programs that fall under the same sectoral scope were reviewed to determine whether an existing methodology could be reasonably revised to meet the objective of this proposed new methodology. The methodologies identified are listed in the table below.

Table 1: Methodologies identified with similar sectoral scope

Methodology	Title	GHG Program	Comments
Climate Action Reserve	U.S. Organic Waste Composting Project Protocol v1.1 https://www.climateactionreserve.org/how/protocols/waste/organic-waste-composting/	Climate Action Reserve	Similar. The methodology applies to the composting process. The proposed methodology applies to the commercialization/donation of unsold goods/food wastes.
AM0057	Avoided emissions from biomass wastes through use as feed stock in pulp and paper production or in bio-oil production v3.0.1 https://cdm.unfccc.int/methodologies/DB/9YGTI34RIUKP67M87C4J500Q4KOGPP	CDM	Similar. The methodology applies to the transformation of biomass wastes to feed stock. The proposed methodology applies to the commercialization/donation of unsold goods/food wastes.
AMS-III.AF	Avoidance of methane emissions through excavating and composting of partially decayed municipal solid waste (MSW) v1.0 https://cdm.unfccc.int/methodologies/DB/CM36WBKIHLSRAOKAAYDB3N81CQT683	CDM	Similar. The methodology applies to MSW that is already deposited in a SWDS. The proposed methodology applies to unsold goods/food wastes prevented to be disposed of in SWDS.
AMS-III.AJ.	Recovery and recycling of materials from solid wastes v9.0 https://cdm.unfccc.int/methodologies/DB/LOWIXM9S6DVO7DGXB21DPVLE8N3VB9	CDM	Similar. The methodology applies to the recovery and recycling of inert materials from municipal solid waste. The proposed methodology applies to the commercialization/donation of unsold goods/food wastes.
AMS-III.E.	Avoidance of methane production from decay of biomass through controlled combustion, gasification, or mechanical/ thermal treatment v17.0 https://cdm.unfccc.int/methodologies/DB/AZB89EQ3FIRUIN1Q80MS80RXCLA2TS	CDM	Similar. The methodology applies to the recovery of methane from organic matter that would have been left to decay in solid waste disposal sites. The proposed methodology applies to the commercialization/donation of unsold goods/food wastes.
AMS-III.F	Avoidance of methane emissions through composting v12.0 https://cdm.unfccc.int/methodologies/DB/NZ83KB7YHBIA7HL2U1PCNAOCHPUQYX	CDM	The methodology applies to the composting of the organic fraction of municipal solid waste. The proposed methodology applies to the commercialization/ donation of unsold goods/food wastes.
ACM0022	Alternative waste treatment processes v3.0 https://cdm.unfccc.int/methodologies/DB/AUR5PLW743TS00OCWRS55XXT86WV4J	CDM	Similar. The methodology comprises measures that avoid GHG emissions from the treatment of fresh wastes that would otherwise be disposed of in a solid waste disposal site. The proposed methodology applies to the

			commercialization/donation of unsold goods/food wastes.
VM0018	Energy Efficiency and Solid Waste Diversion Activities within a Sustainable Community v1.0 https://verra.org/methodologies/vm0018-energy-efficiency-and-solid-waste-diversion-activities-within-a-sustainable-community-v1-0/	CDM	Similar. The methodology applies to the recycling, reuse and composting processes of solid wastes. The proposed methodology applies to the commercialization/donation of unsold goods/food wastes.

1.2 Sources

This methodology is based on the following Clean Development Mechanism (CDM) approved methodology and tools to determine both additionality and baseline scenario and project scenario.

ACM0022, Alternative waste treatment processes¹, version 03.0

This methodology further refers to the following tools/modules/regulations/standards:

- CDM Tool 03, Project or leakage CO₂ emissions from fossil fuel combustion², version 03.
- CDM Tool 04, Emissions from solid waste disposal sites³, version 08.1.
- CDM Tool 05, Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation⁴, version 03.
- CDM Tool 12, Project and leakage emissions from transportation of freight⁵, version 01.1.0

¹ <https://cdm.unfccc.int/methodologies/DB/AUR5PLW743TS0OOCWRS55XXT86WV4J>

² <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-03-v3.pdf>

³ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-04-v8.1.pdf>

⁴ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-05-v3.0.pdf>

⁵ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-12-v1.1.0.pdf>

2. Summary Description of the Methodology

The name of the methodology is “Reduction of GHG emissions associated with diverting unsold goods and food wastes from disposal”. The methodology can be used to develop projects that generate emission reductions from rescue initiatives associated with:

- The diversion of unsold goods and food from final disposal to be commercialized or donated on any off-price retailers such as e-commerce stores or similar platforms, or through any initiative that diverts unsold goods from final disposal.
- The diversion of food wastes from final disposal to be (processed or not) used for feeding different kind of animals (hereinafter referred to as “animal feeding”).

This methodology will provide a framework for the quantification of emission reductions of such diversion as a result of the project activity.

The baseline scenario involves unsold goods such as food, personal care products, pharmaceuticals, cosmetics, home care products and/or food wastes from restaurants, homes, hotels, universities, community kitchens, etc. that were either sent to a solid waste disposal site or incinerated. Both incineration and solid waste disposal processes release atmospheric GHG.

The objective of a project using this methodology is to avoid/reduce GHG emissions⁶, which would have otherwise been emitted into the atmosphere. Additionally, a project is envisaged to reduce contributions to solid waste disposal sites (SWDS) by diverting unsold goods from final disposal and returning them to the economic mainstream in the form of:

- a) discounted products to be sold through rescue initiatives or to be donated through specific campaigns.
- b) animal feeding, with or without a potential preparation process.

The emission reductions achieved by a project, as calculated with equations in section 8, are associated with:

- Reduction of GHG emissions from the decomposition of organic matter contained in the unsold goods and food wastes left to decay in a SWDS.
- Reduction of GHG emissions from the combustion/incineration of unsold goods and food wastes.

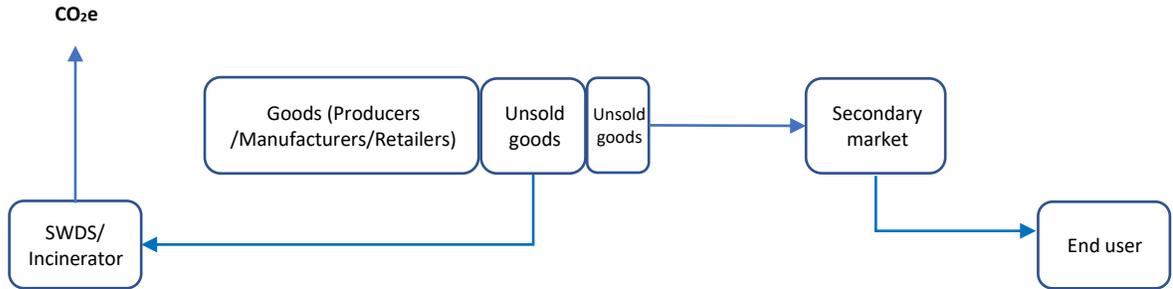
Figure 1 shows both the baseline and project scenarios for unsold goods while Figure 2 shows both the baseline and project scenarios for food wastes.

⁶ Six greenhouse gases covered by the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol.

Figure 1: Baseline and project scenarios for unsold goods

BASELINE SCENARIO

Unsold goods are sent to final disposal (SWDS or incineration).



PROJECT SCENARIO

Unsold goods are commercialized or donated through rescue initiatives

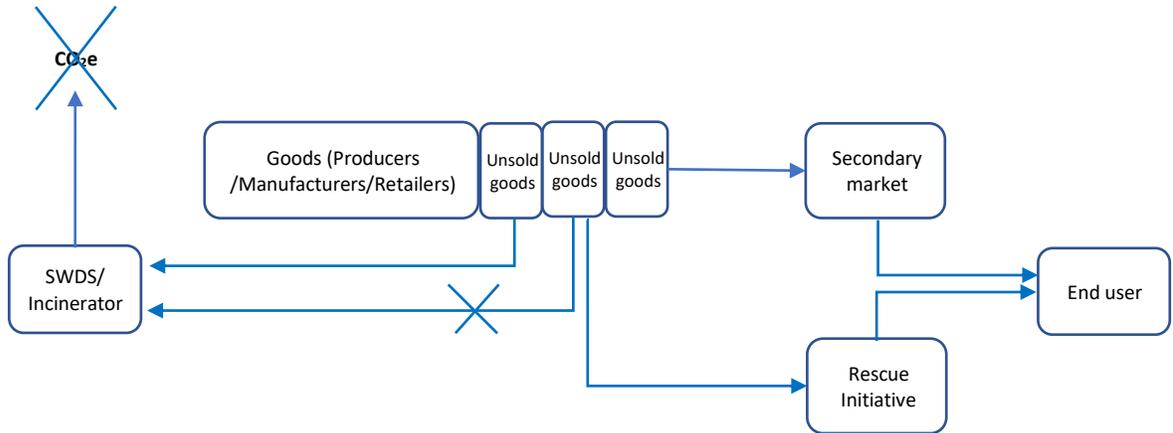
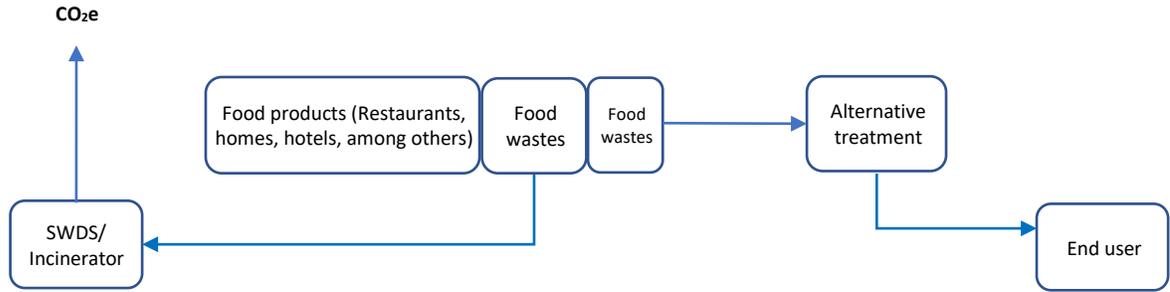


Figure 2: Baseline and project scenarios for food wastes

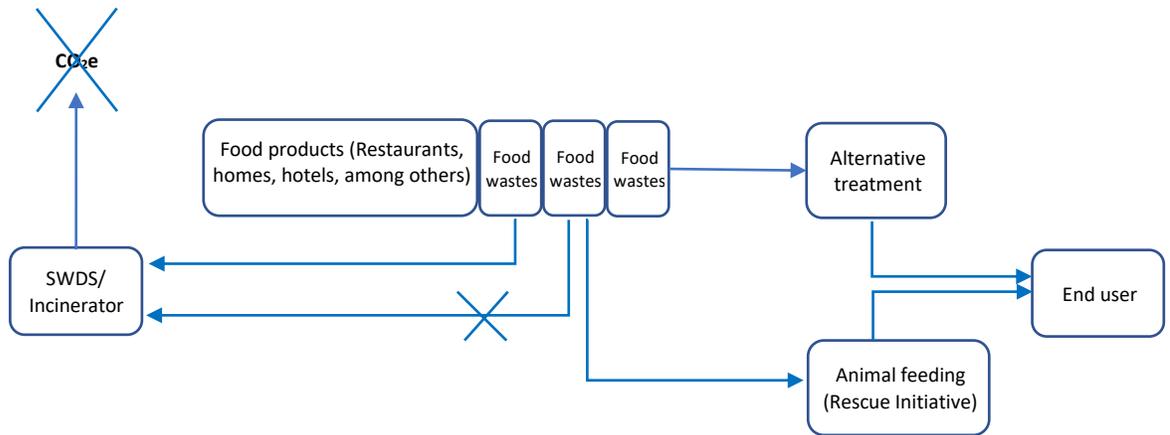
BASELINE SCENARIO

Food wastes are sent to final disposal (SWDS or incineration).



PROJECT SCENARIO

Food wastes are used for animal feeding.



3. Definitions

For the purpose of this methodology, the following definitions apply:

Alternative treatment – For this methodology, “alternative treatment” includes composting, waste to energy and current animal feeding.

Food Products – For this methodology, “food products” are unsold goods conformed by perishable food not industrially processed (raw or cooked). To avoid double counting, food products associated with industrial processing already included in the Miscellaneous category will not be accounted for.

Miscellaneous – For this methodology, “miscellaneous” are unsold goods such as personal care products, pharmaceuticals, cosmetics, home care products and food products (industrially processed).

Food wastes – For this methodology, “food wastes” refers to any food substances, spoiled or unspoiled, that are discarded.

Rescue Initiative – For this methodology, “rescue initiative” is any initiative that diverts:

- i. unsold goods from the final disposal to be commercialized or donated through commercialization stores, off-price retailers, e-commerce stores, food banks or similar platforms;
- ii. and/or that diverts food wastes from the final disposal to be used for animal feeding.

Secondary Market – For this methodology, “secondary market” describes the retail sector that offers discounted products from various sources. Off-price retailers typically purchase excess of unsold inventory from primary retailers, manufacturers, or wholesalers and sell it at a lower price than the original retail value.

Animal feeding – For this methodology, “animal feeding” is the rescue initiative of feeding domestic animals, especially livestock, in the course of animal husbandry, with edible material that contributes energy, nutrients, or both, to the animal's diet.

4. Applicability Conditions

This methodology applies to project activities that:

- a) divert unsold goods destined for final disposal (SWDS or incineration) that can be sold or donated in various initiatives, provided they meet the required quality, food safety standards, and any relevant local requirements.
- b) divert unsold goods and/or food wastes destined for final disposal (SWDS or incineration) that can be used for animal feeding (processing or unprocessed), subject to meeting the necessary conditions.
- c) avoids unsold goods/food wastes from final disposal only after the start of the first crediting period.

The methodology is further applicable under the following conditions:

- Diverted unsold goods/food wastes destined for disposal can be quantified and tracked.
- Potential disposal sites (SWDS or incineration) can be identified for each region.
- For unsold goods/food wastes discarded in the baseline, destruction shall be demonstrated.
- For unsold goods that shall be fully utilized or consumed. It is applicable to items such as soap (personal care), detergent (home care), moisture cream (cosmetic), and yogurt (food), among others, where the entire content is utilized or consumed.
- The project activity does not reduce the amount of unsold goods/food wastes that would be recycled (composted, secondary markets, animal feeding or other alternative treatments in baseline scenario) in the absence of the project activity. This shall be justified and documented in the project design document (PDD).

The methodology is not applicable under the following condition:

- Where the project condition is mandated by any federal, national, state, or local regulations, or other legally binding mandates.
- If the unsold goods/food wastes fail to meet the required standards for quality, food safety, or the legal requirements or best practices, of the rescue initiatives.
- For unsold goods that lack any usable content and are destined to be disposed of in SWDS or incinerators once it reaches its end of life, such as a toothbrush, among others.
- If the unsold goods/food wastes are managed through any waste treatment methods other than baseline methods SDWS and incineration.

5. Boundary

The spatial extent of the project boundary includes:

- the geographic location of the Project (host country or region) where:
 - unsold goods and food wastes are generated.
 - unsold goods and food wastes are managed, stored, processed and distributed.
 - unsold goods and food wastes are used or consumed.
- the baseline disposal locations (SWDS and incinerators).

Aggregated GHG emission reductions in tonnes of CO₂e

The emission reductions of carbon in this methodology are directly related to:

- the number and weight of diverted goods that are sold/donated.
- the number and weight of food wastes that are used for animal feeding.

The quantification of those emission reductions is based on a set of calculations including the weight, number of commercialized/donated goods, weight of food wastes used for animal feeding and their corresponding emission factor, the latter calculated using the methodological tool of the CDM methodology ACM0022 version 03 (or latest) Alternative waste treatment processes, and the latest IPCC Guidelines for National Greenhouse Gas Inventories. The total weight of unsold goods and the total weight of food wastes are then broken down in two fractions; one proportional to the weight of wastes incinerated and the other proportional to the weight of waste sent to a SWDS. Where site specific data are not available in the country host project, secondary information is used provided it was sufficiently conservative. Finally, each fraction of the total weight is multiplied by its corresponding emission factor. At monitoring item units and item unit weights will be provided.

Unsold goods and food wastes within the scope of the project activity to be diverted from disposal have been sorted in the categories below, Table 2 shows the composition of such categories:

Table 2: *Unsold goods/Food wastes categories*

Category	Description	Container composition
Food Products (raw or cooked)	Fruits, vegetables, meat, fishes, among others	Organic/compostable matter, plastic, glass, cardboard
Miscellaneous	Personal care products, pharmaceuticals, cosmetics, home care products, food products (industrially processed)	Organic/compostable matter, plastic, glass, liquids cardboard, paper, wood, plastic, rubber, metal, inorganic matter
Food wastes	Wastes of fruits, vegetables, meat, fishes, among others	Organic/compostable matter, plastic, glass, cardboard

Source: Own.

The GHG included or excluded from the project boundary (baseline and project activities) are listed in the tables below.

Table 3: GHG included in and excluded from the baseline boundary

Baseline			
Source	GHGs	Include?	Justification/Explanation
Transport to SWDS/Incineration location (fuel consumption)	CO ₂	No	Excluded for simplification. It is expected emissions associated with transportation during both project and baseline scenarios are similar.
	CH ₄	No	Excluded for simplification. This emission source is de minimus.
	N ₂ O	No	Excluded for simplification. This emission source is de minimus.
Physical destruction of unsold goods/food wastes (fuel consumption of heavy equipment)	CO ₂	No	Emissions regarding fuel consumption from physical destruction are excluded for conservativeness.
	CH ₄	No	Excluded for simplification. This emission source is de minimus.
	N ₂ O	No	Excluded for simplification. This emission source is de minimus.
SWDS	CO ₂	No	CO ₂ emissions from the decomposition of fresh waste are not accounted for
	CH ₄	Yes	Main source of emissions.
	N ₂ O	No	Excluded for simplification. This emission source is de minimus.
Leachate treatment (solidification)	CO ₂	No	Emissions regarding fuel consumption from leachate treatment are excluded for conservativeness
	CH ₄	No	Excluded for simplification. This emission source is de minimus.
	N ₂ O	No	Excluded for simplification. This emission source is de minimus.
Combustion of material at incineration plant	CO ₂	Yes	Main source of emissions.
	CH ₄	No	Excluded for simplification. This emission source is de minimus.
	N ₂ O	No	Excluded for simplification. This emission source is de minimus.
Combustion of fuel incineration plant	CO ₂	Yes	Main source of emissions.
	CH ₄	No	Excluded for simplification. This emission source is de minimus.
	N ₂ O	No	Excluded for simplification. This emission source is de minimus.

Table 4: GHG included in and excluded from the project activity

Project			
Source	GHGs	Include?	Justification/Explanation
Transportation to Distribution Center/Processing Plant (fuel consumption)	CO ₂	Yes	Main source of emissions.
	CH ₄	No	Excluded for simplification. This emission source is de minimus
	N ₂ O	No	Excluded for simplification. This emission source is de minimus
Distribution Center/Processing Plant	CO ₂	Yes	Main source of emissions.
	CH ₄	No	Excluded for simplification. This emission source is de minimus.

(electricity use/ fuel consumption of mobile equipment)	N ₂ O	No	Excluded for simplification. This emission source is de minimus.
Transportation from Distribution Center/Processing Plant to End-users/animal feeding	CO ₂	Yes	Main source of emissions. However, those emissions would be excluded since the transportation emissions exist irrespective of the project activity (operated by a third party contracted by the rescue initiative or rented by the rescue initiative), therefore, whether it is the project goods or someone else's goods, the transportation activity will still consume the same amount of energy.
	CH ₄	No	Excluded for simplification. This emission source is de minimus.
	N ₂ O	No	Excluded for simplification. This emission source is de minimus.

6. Baseline Scenario

Criteria and procedures for identifying and assessing potential baseline scenarios.

The project proponent must examine the variables in its assessment to determine potential baseline scenarios:

Current reasons for goods not to be sold might include:

- Overproduction – Overproduction is understood as producing unnecessary products that are independent of the demands (Jasti & Kodali [7]). Overproduction includes unsold goods with early expiration dates (expiration dates earlier than preferred by regular retailers but not expired),
- Imperfect goods – Items that are not of perfect quality; however, not necessarily inoperative, therefore they can be sold as a single batch at a discounted price (Salameh & Jaber [8]). Imperfections might include among others incorrect labelling, damaged outer cartons, changes to the design, a minimal filling quantity not being reached and seasonable products. Furthermore, a portion of imperfect goods produced are not successfully screened out internally during the production process and are passed on to customers, thereby causing defect sales returns and reverse logistics from customers back to the retailers and ultimately to the manufacturer, which generates shortages and backorders (Krishnamoorthi & Panayappan [9]). If not repaired or reworked, manufacturers will discard these products after they have been returned to them (Chiu [10], Ritha & Martin [11]).

Current reasons for food wastes to be discarded might include:

- Lack of alternative processes – difficulty to connect food wastes with valorization processes (municipal/industrial waste management send wastes to SWDS).
- Lack of knowledge - general ignorance about the methods and procedures used to valorize food waste.
- Cultural - Food wastes are influenced by cultural customs and attitudes. Different cultures consider various foods and food portions to be edible, while discarding others (Thyberg & Tonjes [12]).
- Policies/Regulations – Rules that mandate food disposal under specific circumstances or forbid its redistribution elsewhere in order to achieve food safety or improved nutrition may also result in greater food waste (Thyberg & Tonjes [12], Broeze, J. [13]).
- Higher costs - The expenses of processing and/or logistics can outweigh the benefits of converting “trash” into animal food or feed (Broeze, J. [13]).

Examples of levels at which unsold goods originate:

- Manufacturer – Unsold goods because of overproduction and imperfections end up mostly being discarded (Senaratne & Wijesiri [1] Ohno [2]. SEPA [4], Al-Salamah [5]). In this regard, diverted unsold goods associated with overproduction and handed to the project to be commercialized or donated instead of discarded will generate emission reductions from the avoidance of SWDS disposal or incineration processes.
- Retailer – Similar to the manufacturer’s level, diverted unsold goods associated with overproduction (overstock) and imperfections and handed to the project to be commercialized or donated instead of discarded will generate emission reductions from the avoidance of SWDS disposal or incineration processes.

Examples of levels at which food wastes originate:

- Primary production.
- Processing.
- Wholesale and retail.
- Foodstuff processing.

The baseline scenario is the one where emissions are quantified based on the quantity of unsold goods/food wastes that would have been incinerated or disposed of in SWDS in the absence of the Project.

Existing and alternative project types (business as usual) for unsold goods

Current examples of alternative projects/initiatives, through which unsold goods are being commercialized are outlined below:

- **Regular retailers** – Regular retailers are the manufacturer’s main distributors, which sometimes integrate off-price retailers to deal with unsold goods into their business model; however, to date, none of them integrate carbon offset schemes into their business models.
- **Off-price retailers’ initiatives** - These propose a business model based on the financial savings for the end user rather than on the environmental benefit for both the manufacturer/regular retailer.
- **Non-governmental organization** - These receive donations of unsold goods/food from manufacturers/producers /retailers to support people/institutions in need.
- **Digital apps/platforms** - These propose a business model based on the rescue of unsold goods/food from a variety of sources such as retailers, supermarkets, grocery stores, restaurants, households, among others, to be off-priced sold.

Existing and alternative project types (business as usual) for food wastes

Current examples of alternative projects/initiatives, through which food wastes are being valorized are outlined below:

- **Anaerobic digestion** - Environmentally acceptable technology for the efficient treatment of food waste and production of biogas from anaerobic decomposition of organic material (Suan H., Er P. et al [14]).
- **Composting** - One of the current approaches for food waste management (Bilal. M. & Iqbal, H. [15]).
- **Animal feeding** - Typically regarded as the most affordable method of valorizing food supply chain waste (Bilal. M. & Iqbal, H. [15]).

Despite the existence of those current and alternative project types, there remains a strong motivation to destroy/discard unsold goods and food wastes.

Criteria and procedures used for identifying the GHG SSR relevant to the project.

The project is an emissions reduction project, focused on diverting unsold goods/food wastes from final disposal through rescue initiatives. Therefore, the project needs to evaluate all the SSRs in the absence of the project:

- **Transport:** This SSR is included as it is necessary for the unsold goods/food wastes to be transferred to the location where they will be destroyed and discarded.
- **SWDS:** This SSR is included as one of the two options within the scope of this project where unsold goods/food wastes are discarded.
- **Incineration:** This SSR is included as the second of two options within the scope of this project where unsold goods/food wastes are discarded.

Additional Criteria for Identifying Relevant Baseline GHG SSRs

It is deemed unnecessary to apply additional criteria for identifying relevant baseline GHG SSRs. All pertinent SSRs are identified in the Section above within the Project Boundaries.

7. Additionality

Project proponent using this methodology shall demonstrate the project's additionality at a minimum conform to levels 1, 2 and 3 as established by ICR Requirement Document (latest version).

8. Quantification of GHG Emission Mitigations

8.1 Baseline Emissions

The calculation of the baseline emissions uses the following steps:

- Stratify the project unsold goods/food wastes weight into a fraction incinerated or SWDS disposal.
- Determine the emission factor for SWDS disposal.
- Determine the emission factor for incineration.
- Allocate the corresponding emission factors and multiply them by unsold goods/food wastes weight fraction incinerated and sent to SWDS to obtain the baseline emissions.

Baseline emissions of diverted unsold goods (commercialized or donated) and/or food wastes (animal feeding) for a specific space of time must be calculated follows Equation 1:

$$BE_{Total} = BE_{I,y} + BE_{LF,y} \quad (1)$$

Where,

BE_{Total}	=	Total baseline emissions of diverted unsold goods/food wastes (tCO ₂ e)
$BE_{I,y}$	=	Baseline emissions of diverted unsold goods/food wastes associated with Incineration I during year y (tCO ₂ e)
$BE_{LF,y}$	=	Baseline emissions of diverted unsold goods/food wastes associated with SWDS disposal LF during year y (tCO ₂ e)
y	=	Year of the crediting period (y is a consecutive period of 12 months)

8.1.1 Calculation of baseline emissions associated with incineration.

Baseline emissions associated with incineration are calculated by multiplying the weight of unsold goods/food wastes diverted from final disposal by the fraction incinerated and multiplying the result by the emission factor associated with incineration. Calculation of $BE_{I,y}$ can use the following Equation 2:

$$BE_{I,y} = \sum_J BE_{J,I} \quad (2)$$

Determination of $BE_{J,I}$

$$BE_{J,I} = \partial_J \times f_I \times EF_{J,I} \quad (3)$$

Where,

$BE_{J,I}$	=	Baseline emissions of diverted unsold goods/food wastes associated with Incineration I by category J (tCO ₂ e)
∂_J	=	Net weight ⁷ of diverted unsold goods/food wastes by category (t)

⁷ The net weight refers to the weight of the unsold goods/food wastes content excluding the packaging. It specifically measures the weight of the actual substance or material present, excluding any additional materials used for packaging purposes

f_I	=	Fraction of weight incinerated (%)
$EF_{J,I}$	=	Emission factor of unsold goods/food wastes by category J associated with incineration I (tCO ₂ e/t)
J	=	Category

Determination of $EF_{J,I}$

Carbon dioxide emissions associated with waste combustion are calculated based on the fossil carbon content of the waste combusted. The biogenic carbon content is not considered.

Carbon dioxide emissions associated with fossil fuel combustion in the process of waste combustion are calculated based on the quantity of fuels combusted and the CO₂ emission coefficient of those fuels combusted.

$$EF_{J,I} = EF_{J,w} + EF_{J,F} \quad (4)$$

Where,

$EF_{J,w}$	=	Emission factor associated with waste incineration (tCO ₂ e/t)
$EF_{J,F}$	=	Emission factor associated with incinerator fuel combustion (tCO ₂ e/t)

Determination of $EF_{J,w}$

$$EF_{J,w} = EFF_{COM,i,y} \times \frac{44}{12} \times \sum [\omega_{j,i,y} \times FCC_{j,y} \times FFC_{j,y}] \quad (5)$$

Where,

$EF_{J,w}$	=	Emission factor associated with waste incineration (tCO ₂ e/t)
$EFF_{COM,i,y}$	=	Combustion efficiency of incinerator i in year y (%)
$\omega_{j,i,y}$	=	Waste types j fed into the incinerator i in year y (%)
$FCC_{j,y}$	=	Fraction of total carbon content in waste type j in year y (%)
$FFC_{j,y}$	=	Fraction of fossil carbon in total carbon content of waste type j in year y (%)
$\frac{44}{12}$	=	Conversion factor (tCO ₂ /t C)
j	=	Waste type
J	=	Category

Determination of $\omega_{j,i,y}$

Project proponent must determine the composition of unsold goods/food wastes fed into the incinerator in the project boundaries, using project specific data, if available. Where project specific data are not available, unsold goods/food wastes composition are compared to the composition of the country's municipal solid wastes, because unsold goods/food wastes become municipal solid waste at the end of their lifecycle. This methodology uses the waste types of the waste composition in municipal solid waste

provided in the latest chapter 2, volume 5, Table 2.3 of IPCC guidelines⁸ as the waste types of unsold goods/food wastes. The content of paper/cardboard, wood, textiles, rubber/leather, plastics, metal, glass and other into the composition is equated to the container composition of unsold goods of Miscellaneous Category.

Determination of $Org_{PJ,y}$

Project proponent must determine the value of the Organic content into unsold goods Miscellaneous Category ($Org_{PJ,y}$). For ex-ante estimates, the value of $Org_{PJ,y}$ could be the same value of the waste type “food waste” from municipal solid waste composition. However, ex-post calculations must replace the composition value of the waste type “food waste” for measured values from project monitoring data ($Org_{PJ,y}$).

As an example, the municipal solid waste composition for some regions is shown in Table 5 below:

Table 5: Waste types of municipal solid waste composition (percentage) – Regional defaults

Region	Food waste	Paper/ Cardboard	Wood	Textiles	Rubber/ leather	Plastics	Metal	Glass	Other
Eastern Asia	40.3	20.4	2.1	1.0	0.0	6.5	2.7	4.3	22.9
Eastern Africa	44.4	10.4	0.5	3.0	0.5	8.0	2.6	2.1	21.7
North America	20.2	23.3	4.1	3.9	1.6	15.8	6.4	4.2	14.0
South America	54.1	12.4	0.0	1.7	0.6	13.7	2.0	3.0	7.2

Source: Table 2.3 chapter 2, volume 5 of IPCC 2019 Refinement to 2006 guidelines.

The composition of unsold goods of Food Products Category and Food Wastes Category uses 100% as the composition value of the waste type “food waste”. The composition of unsold goods of Food Category and composition of food wastes of Food Products/Food Wastes Category is shown in Table 6 below:

Table 6: Waste type of Food Category and Food Wastes Category (percentage)

Waste type	Food waste	Paper/ Cardboard	Wood	Textiles	Rubber/ leather	Plastics	Metal	Glass	Other
$\omega_{j,i,y}$	100	-	-	-	-	-	-	-	-

Source: Own.

⁸ https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/5_Volume5/19R_V5_2_Ch02_Waste_Data.pdf

Determination of $EF_{J,F}$

$$EF_{J,F} = \sum FC_{g,p,j} \times COEF_{g,p,j} \quad (6)$$

Where,

$EF_{J,F}$	=	Emission factor associated with incinerator fuel combustion (tCO ₂ e/t)
$FC_{g,p,j}$	=	Quantity of fuel type g combusted in process p for one tonne of waste j (weight or volume unit/t)
$COEF_{g,p,y}$	=	CO ₂ emission coefficient of fuel type g in year y (tCO ₂ /weight or volume)
g	=	Fuel type combusted in process p during the year y
p	=	Process of incineration
j	=	Waste type
J	=	Category

Determination of $COEF_{g,y}$

$$COEF_{g,p,y} = NCV_{C,i,y} \times EF_{CO_2,i,y} \quad (7)$$

Where,

$COEF_{g,p,y}$	=	CO ₂ emission coefficient of fuel type g (tCO ₂ /weight or volume unit)
$NCV_{g,y}$	=	weighted average net calorific value of the fuel type g in year y (GJ/weight or volume unit)
$EF_{CO_2,i,y}$	=	Weighted average CO ₂ emission factor of fuel type g in year y (tCO ₂ /GJ)
g	=	Fuel types combusted in process p during the year y
p	=	Process of incineration

8.1.2 Calculation of baseline emissions associated with SWDS disposal:

Baseline emissions associated with SWDS disposal are determined by multiplying the total weight of the fraction sent to SWDS by the emission factor associated with SWDS disposal. Calculation of $BE_{LF,y}$ can use Equation 8:

$$BE_{LF,y} = \sum_J BE_{J,LF} \quad (8)$$

Determination of $BE_{J,LF}$

$$BE_{J,LF} = \theta_J \times f_{LF} \times EF_{J,LF} \quad (9)$$

Where,

$BE_{J,LF}$	=	Baseline emissions of diverted unsold goods/food wastes associated with SWDS disposal LF by category J (tCO ₂ e)
∂_J	=	Net weight ⁹ of diverted unsold goods/food wastes by category (t)
f_{LF}	=	Fraction of weight sent to SWDS (%)
$EF_{J,LF}$	=	Emission factor of unsold goods/food wastes by category J associated with SWDS disposal LF (tCO ₂ e/t)
J	=	Category

Determination of $EF_{J,LF}$

To determine the SWDS disposal emission factor, only CH_4 generation at a solid waste disposal site is included. $EF_{J,LF}$ totalizes the methane that will be potentially generated throughout the years based on the amounts and composition of the unsold goods/food wastes prevented from disposal in the SWDS. $EF_{J,LF}$ is determined using the latest version of the CDM methodological Tool 04: Emissions from solid waste disposal sites. The following requirements shall be complied with when applying the tool:

- (a) $BE_{CH_4,SWDS,y}$ in the tool corresponds to the parameter $EF_{J,LF}$ in this methodology.
- (b) $W_{j,x}$ in the tool is substituted by $p_{n,j,x}$ to calculate the CO₂ emissions of unsold goods/food wastes prevented from disposal in the baseline SWDS due to its diversion through rescue initiatives;
- (c) Emission amounts are calculated using Application B in the tool;
- (d) Project proponent must determine the composition $p_{n,j,x}$ of unsold goods/food wastes, using project specific data, if available. Where project specific data is not available, unsold goods/food wastes composition is compared to the composition of the country's municipal solid wastes, because unsold goods/food wastes become municipal solid waste at the end of their lifecycle. This methodology uses the waste types of the waste composition in municipal solid waste provided in the latest chapter 2, volume 5, Table 2.3 of IPCC guidelines as the composition of unsold goods/food wastes.
- (e) The tool instructs that $p_{n,j,x}$ shall be determined based on sample measurements (minimum of three samples every three months) by project proponents. The following information sources of data are allowed:
 - (i) Project specific data
 - (ii) Country specific data
 - (iii) IPCC default values (table 2.3, chapter 2, volume 5 of the latest IPCC guidelines)
- (f) The tool instructs that f_y shall be determined based on historic data or contract or regulation requirements specifying the amount of methane that must be destroyed/used (if available). The following additional instruction applies:
 - (i) If the regulation requirements specify a percentage of the landfill gas (LFG) that is required to be flared, the amount shall equal f_y ;
 - (ii) If the regulation requirements do not specify the amount or percentage of LFG that should be destroyed but require the installation of a capture system, without requiring the captured LFG to be flared then $f_y=0$;

⁹ The net weight refers to the weight of the unsold goods/food wastes content excluding the packaging. It specifically measures the weight of the actual substance or material present, excluding any additional materials used for packaging purposes

- (iii) If the requirement does not specify any amount or percentage of LFG that should be destroyed but require the installation of a system to capture and flare the LFG, then it is assumed $f_y = 0.2^{10}$; and
- (iv) Additional sources of f_y data are:
- Country specific data
 - CDM Country's credit generation projects

8.2 Project Emissions

Project activities applying this methodology will only generate GHG emissions that are associated with storage, sorting, processing, and distribution activities of unsold goods/food wastes. However, those emissions could be disregarded if in the absence of the project those services will still be provided to others. Therefore, the project emissions would be zero. In case the distribution center and processing plant activities are under control by the project activity, project emissions for a specific space of time must be calculated as follows:

$$PE_{Total} = PE_{EC,y} + PE_{FC,y} + PE_{TR,y} \quad (12)$$

Where,

PE_{Total}	=	Total project emissions of diverted unsold goods/food wastes (tCO ₂ e)
$PE_{EC,y}$	=	Project emissions from electricity consumption during year y (tCO ₂ e)
$PE_{FC,y}$	=	Project emissions from fossil fuel consumption at distribution centers during year y (tCO ₂ e)
$PE_{TR,y}$	=	Project emissions from transportation activities during year y (tCO ₂ e)
y	=	Year of the crediting period (y is a consecutive period of 12 months)

Determination of $PE_{EC,y}$

Project emissions resulting from electricity consumption during to activities that are under control of the project activity ($PE_{EC,y}$) shall be determined using the latest version of the CDM methodological Tool 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation.

Determination of $PE_{FC,y}$

Project emissions resulting from fossil fuel combustion at distributions centers during to activities under control of the project activity ($PE_{FC,y}$) shall be determined using the latest version of the CDM methodological Tool 03: Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion.

¹⁰ Project participants may propose and justify an alternative default value as a request for revision to this methodology.

Determination of $PE_{TR,y}$

Project emissions resulting from transportation activities ($PE_{Transp,y}$) shall be determined using the latest version of the CDM methodological Tool 12: Project and leakage emissions from transportation of freight. Parameter $FR_{f,m}$ in the tool corresponds to the parameter θ_j in this methodology.

The Tool 12 has two options to determine project CO₂ emissions from road transportation of freight:

- For transportation activities under control of the project activity (own vehicles), Project emissions resulting from transportation activities ($PE_{TR,y}$) shall be determined using the Option A of the Tool (considering fuel consumption).
- For transportation activities not under control of the project activity (operated by a third party contracted by the rescue initiative or rented by the rescue initiative), Project emissions resulting from transportation activities ($PE_{TR,y}$) shall be determined using the Option B of the Tool (considering quantity of freight transported, distance and vehicle class used).

The emission factors for freight transportation activity when applying the Tool 12 ($PE_{TR,y}$) Option B should be sourced from DEFRA Conversion Factors¹¹, EPA GHG Emission Factors Hub¹² and/or Country/Project specific data.

8.3 Leakage

Regarding unsold goods (Food Products and Miscellaneous category), leakage emissions are associated with:

- The potential for unsold goods that are diverted from final disposal to eventually be disposed of in SWDS;
- The return of items from final users. If the items are not suitable for human consumption, there are three management options. The first option is to categorize them as food wastes and diverts them for animal feeding; the second option is commercialize/valorize them as secondary raw materials. The last option is to dispose of them in a SWDS

Regarding food wastes, leakage emissions are associated with the food wastes that undergo anaerobic storage or are disposed of in a SWDS within the project boundaries.

For unsold goods, the extent of leakage and the associated risks depend on factors such as the type of unsold goods being diverted (Food or Miscellaneous category), the specific activities employed (e.g., rescue apps or food banks), and the behavior of the end users or beneficiaries (consumers or people in need). For instance, in a project that rescues unsold goods through food banks serving vulnerable communities, the risk of leakage is expected to be very low since it is anticipated that the distributed goods will be utilized and consumed by the beneficiaries. In the case of unsold goods rescued by secondhand stores, leakage emissions can occur if the purchased items are later returned by users and cannot be further utilized, donated, commercialized, or sent for recycling. These goods are then disposed of in SWDS. The project proponents are required to demonstrate that the unsold goods recovered through the project activity are unlikely to be disposed of later in a SWDS or are required to estimate the amount of diverted unsold goods is potentially disposed of in SWDS.

¹¹ <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

¹² <https://www.epa.gov/climateleadership/ghg-emission-factors-hub>

For those estimations, the project proponents can use the FAO technical platform on the measurement and reduction of food loss waste¹³, the UNEP food waste index report 2021¹⁴, the Food Loss + Waste Protocol¹⁵ or another sources/methods as long as it was sufficiently conservative.

The leakage emissions for anaerobic storage or disposal in a SWDS of unsold goods/food wastes ($LE_{CH_4,SWDS}$) shall be determined using the latest version of the CDM methodological Tool 04: Emissions from solid waste disposal sites.

8.4 Net GHG Emissions Mitigations

Net reductions must be calculated as follows:

$$ER_y = BE_{Total} - PE_{Total} - LE_{CH_4,SWDS} \quad (13)$$

Where,

ER_y	=	Net emission reductions of diverted unsold goods/food wastes during year y (tCO ₂ e)
BE_{Total}	=	Baseline emissions of diverted unsold goods/food wastes during year y (tCO ₂ e)
PE_{Total}	=	Total project emissions of diverted unsold goods/food wastes (tCO ₂ e)
$LE_{CH_4,SWDS}$	=	Leakage emissions for anaerobic storage/disposal in a SWDS of unsold goods/food wastes (tCO ₂ e)
y	=	Year of the crediting period (y is a consecutive period of 12 months)

¹³ <https://www.fao.org/platform-food-loss-waste/food-waste/food-waste-measurement/en>

¹⁴ <https://www.unep.org/resources/report/unep-food-waste-index-report-2021>

¹⁵ <https://flwprotocol.org/>

9. Monitoring

9.1 Monitoring Plan

The project proponent will establish, maintain, and apply a monitoring plan and GHG information system that includes criteria and procedures for obtaining, recording, compiling and analyzing data, parameters and other information important for quantifying and reporting GHG emissions. Key data for calculating the baseline and project emissions must be centrally managed and stored by the project proponent.

The project proponent has the responsibility of effectively tracking, quantifying, and monitoring the utilization or consumption of rescued unsold goods and diverted food wastes to prevent their return to SWDS. To ensure that these items are being utilized as intended, the project developer should demonstrate the implementation of controls, studies, or sampling techniques. In the case of rescuing and commercializing unsold goods, it is assumed that their purchase implies their intended use. However, when it comes to donated items, the initiative must provide socioeconomic studies or audits of the social organizations or beneficiaries who receive the donated products. These studies ensure that the recipients genuinely require the items and guarantees the proper utilization of the rescued goods.

SSRs to be monitored are divided in two groups; parameters available at project validation and those to be monitored during the operation of the project. Data should be saved electronically and kept at least for two years after the last retirement or seven years after the last crediting period.

9.2 Parameters remaining constant

In addition to the data and parameters listed below, the guidance on all referenced tools will apply as well.

Data / Parameter	$EFF_{COM,i,y}$					
Unit	%					
Description	Combustion efficiency of incinerator i in year y					
Equations	Equation (5)					
Source of data	The source of data shall be the following, in order of preference: <ol style="list-style-type: none"> 1. Country specific data 2. Incineration plants specific data 3. IPCC default values (table 5.2, chapter 5, volume 5 of the latest IPCC guidelines) 					
Value applied	For unsold goods/food wastes the following default value may be applied: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Parameter</th> <th>Incineration of MSW</th> </tr> </thead> <tbody> <tr> <td>Oxidation factor in % of carbon input</td> <td>100</td> </tr> </tbody> </table>		Parameter	Incineration of MSW	Oxidation factor in % of carbon input	100
Parameter	Incineration of MSW					
Oxidation factor in % of carbon input	100					
Justification of choice of data or description of measurement methods and procedures applied	As required by ACM0002					

Purpose of Data	Calculation of incineration emission factor
Comments	No comments

Data / Parameter	$\omega_{j,i,y}$
Unit	%
Description	Waste type j fed into the incinerator i in year y
Equations	Equation (5)
Source of data	<p>The source of data shall be the following, in order of preference:</p> <ol style="list-style-type: none"> 1. Sample measurements (minimum of three samples every three months) 2. Project specific data 3. Country specific data 4. IPCC default values (table 2.3, chapter 2, volume 5 of the latest IPCC guidelines)
Value applied	TBD
Justification of choice of data or description of measurement methods and procedures applied	As required by ACM0002
Purpose of Data	Calculation of incineration emission factor
Comments	<p>Prior to the verification process for a selected monitoring period, the Project Proponent will perform an assessment of the data for emission factor calculation.</p> <p>In case sample the waste composition, use the types j as provided in the table for $FCC_{j,y}$ and weigh each waste fraction (measure on wet basis).</p>

Data / Parameter	$FCC_{j,y}$				
Unit	%				
Description	Fraction of total carbon content in waste type j in year y				
Equations	Equation (5)				
Source of data	Table 2.4, chapter 2, volume 5 of the latest IPCC guidelines				
Value applied	<p>For unsold goods/food wastes the following values for the different types j may be applied:</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Type j</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Paper/cardboard</td> <td>50</td> </tr> </tbody> </table>	Type j	%	Paper/cardboard	50
Type j	%				
Paper/cardboard	50				

	Textiles	50
	Food waste	50
	Wood	54
	Garden and Park waste	55
	Nappies	90
	Rubber and Leather	67
	Plastics	85
	Metal*	NA
	Glass*	NA
	Other, inert waste	5
	<p>*Metal and glass contain some carbon of fossil origin. Combustion of significant amounts of glass or metal is not common.</p> <p>The project proponent also has the option to apply the balance method as indicated by CDM Methodology ACM0022 (See Appendix 2 of ACM0022) to measure $FCC_{j,y}$.</p>	
Justification of choice of data or description of measurement methods and procedures applied	As required by ACM0002	
Purpose of Data	Calculation of incineration emission factor	

Data / Parameter	$FFC_{j,y}$																								
Unit	%																								
Description	Fraction of fossil carbon in total carbon content of waste type j in year y																								
Equations	Equation (5)																								
Source of data	Table 2.4, chapter 2, volume 5 of the latest IPCC guidelines																								
Value applied	<p>For unsold goods/food wastes the following values for the different types j may be applied:</p> <table border="1"> <thead> <tr> <th>Type j</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Paper/cardboard</td> <td>5</td> </tr> <tr> <td>Textiles</td> <td>50</td> </tr> <tr> <td>Food waste</td> <td>-</td> </tr> <tr> <td>Wood</td> <td>-</td> </tr> <tr> <td>Garden and Park waste</td> <td>0</td> </tr> <tr> <td>Nappies</td> <td>10</td> </tr> <tr> <td>Rubber and Leather</td> <td>20</td> </tr> <tr> <td>Plastics</td> <td>100</td> </tr> <tr> <td>Metal*</td> <td>NA</td> </tr> <tr> <td>Glass*</td> <td>NA</td> </tr> <tr> <td>Other, inert waste</td> <td>100</td> </tr> </tbody> </table> <p>*Metal and glass contain some carbon of fossil origin. Combustion of significant amounts of glass or metal is not common.</p> <p>If a Type j is not comparable to a type listed above, or cannot clearly be described as a combination of types in this table above, or if the project participants wish to measure</p>	Type j	%	Paper/cardboard	5	Textiles	50	Food waste	-	Wood	-	Garden and Park waste	0	Nappies	10	Rubber and Leather	20	Plastics	100	Metal*	NA	Glass*	NA	Other, inert waste	100
Type j	%																								
Paper/cardboard	5																								
Textiles	50																								
Food waste	-																								
Wood	-																								
Garden and Park waste	0																								
Nappies	10																								
Rubber and Leather	20																								
Plastics	100																								
Metal*	NA																								
Glass*	NA																								
Other, inert waste	100																								

	<p>FFC_j, then project participants shall measure $FFC_{j,y}$ using the following standards, or similar national or international standards:</p> <p>ASTM D6866: “Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis”;</p> <p>ASTM D7459: “Standard Practice for Collection of Integrated Samples for the Speciation of Biomass (Biogenic) and Fossil Carbon Dioxide Emitted from Stationary Emissions Sources”.</p> <p>The frequency of measurement shall be as a minimum four times in year y with the mean value valid for year y.</p> <p>The project proponent also has the option to apply the balance method as indicated by CDM Methodology ACM0022 (See Appendix 2 of ACM0022) to measure $FFC_{j,y}$.</p>
Justification of choice of data or description of measurement methods and procedures applied	As required by ACM0002
Purpose of Data	Calculation of incineration emission factor

Data / Parameter	$FC_{g,p,y}$
Unit	Weight or volume unit/t
Description	Quantity of fuel type g combusted in process p by tonne of waste
Equations	Equation (6)
Source of data	<p>The source of data shall be the following, in order of preference:</p> <ol style="list-style-type: none"> 1. Regional incineration waste plants 2. National incineration waste plants 3. International incineration waste plants
Value applied	TBD
Justification of choice of data or description of measurement methods and procedures applied	As required by ACM0002
Purpose of Data	Calculation of incineration emission factor

Data / Parameter	$NCV_{g,y}$
Unit	GJ/weight or volume unit
Description	Weighted average net calorific value of the fuel type g in year y

Equations	Equation (7)
Source of data	The source of data shall be the following, in order of preference: <ol style="list-style-type: none"> 1. Country specific data 2. IPCC default values (table 1.2, chapter 1, volume 2 of the latest IPCC guidelines)
Value applied	TBD
Justification of choice of data or description of measurement methods and procedures applied	As required by ACM0002
Purpose of Data	Calculation of incineration emission factor

Data / Parameter	$EF_{CO_2,g,y}$
Unit	tCO ₂ /GJ
Description	Weighted average CO ₂ emission factor of fuel type g in year y
Equations	Equation (7)
Source of data	The source of data shall be the following, in order of preference: <ol style="list-style-type: none"> 1. Country specific data 2. IPCC default values (table 1.4, chapter 1, volume 2 of the latest IPCC guidelines)
Value applied	TBD
Justification of choice of data or description of measurement methods and procedures applied	As required by ACM0002
Purpose of Data	Calculation of incineration emission factor

Data / Parameter	f_i
Unit	%
Description	Fraction of unsold goods/food wastes incinerated
Equations	Equation (3)
Source of data	The source of data shall be the following, in order of preference:

	<ol style="list-style-type: none"> 1. Project specific data 2. Country specific data 3. IPCC default values (table 2.1, chapter 2, volume 5 of the latest IPCC guidelines)
Value applied	TBD
Justification of choice of data or description of measurement methods and procedures applied	Stratifying the project unsold goods/food wastes weight into a fraction incinerated or landfilled, according to the MSW management rates.
Purpose of Data	Calculation of baseline emissions
Comments	Shall be updated to the latest IPCC reports

Data / Parameter	f_{LF}
Unit	%
Description	Fraction of unsold goods/food wastes sent to SWDS
Equations	Equation (9)
Source of data	<p>The source of data shall be the following, in order of preference:</p> <ol style="list-style-type: none"> 1. Project specific data 2. Country specific data 3. IPCC default values (table 2.1, chapter 2, volume 5 of the latest IPCC guidelines)
Value applied	TBD
Justification of choice of data or description of measurement methods and procedures applied	Stratifying the project unsold goods/food wastes weight into a fraction incinerated or landfilled, according to the MSW management rates.
Purpose of Data	Calculation of baseline emissions
Comments	Shall be updated to the latest IPCC reports

9.3 Monitored Data and Parameters

In addition to the data and parameters listed below, the guidance on all referenced tools will apply as well.

Data / Parameter	∂_j
Unit	Metric ton (tonne)/y
Description	Net weight of diverted unsold goods/food wastes by project category
Equations	Equations (3), (9)
Source of data	<p>The net weight refers to the weight of the unsold goods/food wastes content excluding the packaging. It specifically measures the weight of the actual substance or material present, excluding any additional materials used for packaging purposes.</p> <p>Information associated with the weight of each unsold good will be obtained through one of the following methods:</p> <ol style="list-style-type: none"> 1. Information of the lots is directly provided by manufacturers to be entered manually in the project planning software. 2. Information of weight provided in the product packaging will be registered using bar code readers. 3. Information provided by weighing unsold goods/food wastes with the project calibrated scales. 4. Direct measurements, internal records, random surveys.
Description of measurement methods and procedures to be applied	<p>The net weight of each item within an entire lot will be used for the calculations of emission reductions of the project. However, a thorough inspection of the weight will be conducted randomly to confirm the data are accurate.</p> <p>Information about ∂_j (tonnes) reported will only correspond to goods/food wastes recorded and delivered to final users/animal feeding. Please review section 8.3 for leakage considerations. To ensure that only goods delivered and not returned are accounted for during monitoring period, there will be two ending dates:</p> <ul style="list-style-type: none"> • Crediting period ending date – Date after which no other emission reduction is accounted for within the crediting period. • Confirmation ending date – Date after which goods sold within the crediting period date cannot longer be returned. Therefore, only after this date verification can begin.
Frequency of monitoring	Continuous, aggregated at least annually for year x
Purpose of Data	Calculation of baseline emissions
Calculation Methods	Not applicable.
QA/QC	<p>Random cross-checking of reported quantity versus purchasing manifests to confirm quality measurement.</p> <p>Every year, backlogs containing monitored reductions will be stored in a cloud backup. This information will be kept for 10 years following last reporting period.</p>

Comments	All meters and instruments shall be calibrated regularly as per industry practices.
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Data / Parameter	$Org_{PJ,y}$
Unit	%
Description	Organic content into Miscellaneous Category
Equations	Equation (5)
Source of data	<p>The source of data shall be the following, in order of preference:</p> <ol style="list-style-type: none"> 1. Direct measurements 2. Direct sampling analysis 3. Calculated from inventory records of previous year (if applicable) 4. Country specific data 5. IPCC default values (table 2.3, chapter 2, volume 5 of the latest IPCC guidelines)
Frequency of monitoring	Annually.
Purpose of Data	Calculation of SWDS disposal emission factor and incineration emission factor for crediting period
Calculation Methods	Not applicable.
QA/QC	Instrumentation calibration according to the protocol
Comments	All meters and instruments shall be calibrated regularly as per industry practices.

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