



International  
Carbon  
Registry

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

Sector 13: Waste Handling and Disposal

Methodology Validation Report

*Summary*

The proposed methodology outlines how to calculate the amount of greenhouse gas related emission reduced by diverting the **unsold goods/ food wastes** from disposal sites to **novel commercialization, donation initiatives** or animal feed program.

**Earthood**

Earthood Services Private Limited  
info@earthood.in

<b>Methodology Name</b>	Reduction of GHG emissions by diverting unsold goods and food wastes from disposal
<b>Version</b>	1.0
<b>Type</b>	Methodology: Yes Methodology Revision: No
<b>Sector</b>	SS 13: Waste Handling and Disposal
<b>Title and ICR reference number of the generic project activity (PA)</b>	Reduction of GHG emissions by diverting unsold goods and food wastes from disposal
<b>Title of Report</b>	Methodology Validation Report of Reduction of GHG emissions by diverting unsold goods and food wastes from disposal
<b>ID of Report</b>	ICR.VAL.23.13
<b>Client</b>	Core Zero
<b>Date of Validation</b>	21/08/2023
<b>Version Number of the Report</b>	2.0
<b>Prepared by</b>	Earthood Services Private Ltd (E-0066)
<b>Contact</b>	1203-1205,12th Floor, Tower B, Emaar Digital Greens, Sector 61, Gurugram, Haryana, India 122011. +91 1244204599 www.earthood.in
<b>Independent review</b>	Deepika Mahala (TR) Ashok Kumar Gautam TA expert (13.1) to TR
<b>Validation Team</b>	Team Leader: Shifali Guleria TA Expert (13.1): Kaviraj Singh Validator: Divij Varshney
<b>Validation Statement</b>	Earthood Services Private Ltd has performed a validation assessment of the proposed methodology "Reduction of GHG emissions by diverting goods and food wastes from disposal". The assessment was performed in conformance to ICR methodology requirements version 2.0, ICR requirements v4.0. Earthood Services Private Limited certifies that the proposed methodology fulfills the requirements set out in aforementioned ICR documents and therefore, is being proposed to ICR for approval and registration.
<b>Signature of the approver</b>	 Kaviraj Singh, Managing Director

## Contents

1. Summary.....	3
2. General .....	3
2.1 Objective.....	3
2.2 Criteria .....	3
2.3 Scope .....	4
2.4 Validation Team .....	4
2.5 Validation Activities and Techniques.....	4
2.6 Documented Information .....	5
3. Summary Description of the Methodology .....	5
3.1 Description of the Methodology.....	5
4. Validation Activities .....	5
4.1 Validation planning.....	5
4.2 Validation plan .....	6
4.3 Evidence Gathering Plan .....	6
4.4 Activities and Techniques .....	6
4.5 Review of Documented Information .....	7
4.6 Interviews .....	7
4.7 Conformity.....	7
5. Validation Findings .....	8
5.1 Other Methodologies .....	8
5.2 Summary Description of the Methodology .....	11
5.3 Definitions.....	11
5.4 Applicability Conditions .....	12
5.5 Boundary.....	16
5.6 Baseline Scenario .....	16
5.7 Additionality .....	17
5.8 Permanence.....	17
5.9 Quantification of GHG emission mitigations .....	17
5.10 Monitoring.....	23
6. Independent Review.....	27
7. Validation Opinion.....	27
Appendix.....	28
I. Documents reviewed or referenced in the report .....	28
II. Non-Conformities .....	28
III: ABBREVIATIONS .....	37
IV: Competence statements.....	38

## 1. Summary

CoreZero has contracted Earthood Services Private Limited, to conduct the validation assessment for the proposed methodology titled 'Reduction of GHG emissions by diverting unsold goods and food wastes from disposal'. The proposed methodology outlines how to quantify the amount of net greenhouse gas emission avoided by diverting the food waste from disposal sites to animal feed program and by diverting the unsold goods from disposal to novel commercialization/donation initiatives such as e-commerce platforms, off-price retailers, food banks.

The proposed Methodology is being proposed under sectoral scope 13: Waste Handling and Disposal.

The scope of validation is to conduct an independent assessment of the proposed methodology against the ICR requirements and to determine that the application conforms to the ISO 14064-2 requirements at the methodology level.

The validation is performed in accordance with the requirements of ISO 14604-3 using standard audit techniques including but not limited to document review, interviews and independent cross-checks by the assessment team. 03 CAR, 05 CL were raised as findings during the validation process. All findings were addressed satisfactorily and there were no uncertainties identified during the assessment of methodology.

Earthood services private limited confirms that all methodology assessment activities, including objectives, scope and criteria, level of assurance and the methodology adherence to the ICR requirements, as documented in this report, are complete. Earthood concludes that the methodology "Reduction of GHG emissions by diverting unsold goods and food wastes from disposal" meets the requirements of ICR.

## 2. General

### 2.1 Objective

CoreZero has contracted Earthood Services Private Limited, to conduct the validation assessment for the proposed methodology titled "Reduction of GHG emissions by diverting unsold goods and food wastes from disposal". to determine its compliance with the requirements of the ICR and ISO 14064-2. The assessment of the proposed methodology was performed to evaluate the likelihood that the application of the methodology would result in accurate calculations and appropriate eligibility criteria of the GHG emission reduction.

### 2.2 Criteria

The methodology validation is conducted by the assessment team based on the criteria prescribed in the ICR methodology requirement version 2.0/1/, ISO 14064-2/8/ and requirements contained in ISO 14064-3/9/, employing a risk-based approach.

The assessment included a detailed review of applicability criteria, baseline approach, additionality, project boundary, leakage, monitoring data and parameters, quantification of net GHG emission reduction and/or removals, monitoring, data and parameters, and relationships to approved or pending methodologies.

The validation criterion is to carry out the assessment of the adherence of proposed methodology at the principal level to the ICR Programme requirements (relevance, completeness, consistency, accuracy, transparency, and conservativeness), including the following documents.

- ICR methodology requirements version 2.0
- ISO 14064
- ICR methodology approval process
- ICR methodology description form

### 2.3 Scope

The scope of the validation assignment is defined as an independent and objective review of the ICR Methodology Description Document and supporting annexures. Furthermore, publicly available information is considered as far as available and required.

The scope of the assignment is to:

- Conduct a validation assessment in accordance with own QMS that is based on the ISO 14065/10/ and ISO 14066/11/ along with the guidance provided by the ICR Board to determine if the project meets all applicable ICR requirements, including those specified in the ISO 14060 family of standards, relevant approved methodologies, and tools, and processing the same with ICR Process Requirements.
- Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by the methodology developer.
- Determine whether information provided by the methodology developer is reliable and credible.
- Present information in the form of validation report in a factual, neutral, coherent manner and referencing the sources and assumptions, other forms of validation mean employed.
- Report the findings and conclusions in an objective manner and conduct the validation in accordance with ICR Principles, requirements, and guidance.
- Apply consistent validation criteria in providing expert judgments to the requirements of applicable approved methodologies, tools, and also cross check the same.
- Safeguard the confidentiality of all information obtained during validation and verification; and Adhere to the principles of independence, ethical conduct, fair presentation, and due professional care in assessment process.

### 2.4 Validation Team

Full Name	Role or Responsibility	Type of activity performed
Shifali Guleria	Lead Auditor	Conducting Assessment, Identifying Resolution of findings, Site visit, Report Writing, Communication with Project Proponent
Divij Varshney	Auditor (trainee)	Assessment, Resolution of findings, Site visit, Report Writing, Communication with Project Proponent
Dr. Kaviraj Singh	Sectoral Scope expert (13.1) to TL	Conducting technical assessment of Validation report
Deepika Mahala	Independent Technical Reviewer	Conducting Independent technical assessment of Validation report
Ashok Kumar Gautam	Sectoral Scope expert (13.1) to TR	Conducting Independent technical assessment of Validation report

### 2.5 Validation Activities and Techniques

Observation	<input checked="" type="checkbox"/>
Inquiry	<input checked="" type="checkbox"/>
Analytical testing	<input type="checkbox"/>
Confirmation	<input checked="" type="checkbox"/>
Recalculation	<input type="checkbox"/>
Examination	<input checked="" type="checkbox"/>
Retracing	<input checked="" type="checkbox"/>

Tracing	<input checked="" type="checkbox"/>
Control testing	<input type="checkbox"/>
Sampling	<input type="checkbox"/>
Estimate testing	<input type="checkbox"/>
Cross-checking	<input checked="" type="checkbox"/>
Reconciliation	<input type="checkbox"/>

## 2.6 Documented Information

Engagement terms	<input checked="" type="checkbox"/>
Validation plan	<input checked="" type="checkbox"/>
Evidence-gathering plan	<input checked="" type="checkbox"/>
Who performed the evidence-gathering activities and when they were performed	<input checked="" type="checkbox"/>
Collected evidence	<input checked="" type="checkbox"/>
Requests for clarification, material misstatements, and nonconformities arising from the validation and the conclusions reached	<input checked="" type="checkbox"/>
Communication with the responsible party on material misstatements	<input checked="" type="checkbox"/>
The conclusions reached and opinions by the validator	<input checked="" type="checkbox"/>
The name of the independent reviewer, the date of review and comments of the reviewer	<input checked="" type="checkbox"/>

## 3. Summary Description of the Methodology

### 3.1 Description of the Methodology

The proposed methodology is designed to provide guidelines for quantifying the amount of greenhouse gas emissions avoided due to diversion of unsold goods from Solid Waste Disposal Sites and from incineration to be commercialized or donated, thus circulating it back into for utilization by the population. Additionally, the methodology also allows diversion of food waste from final disposal to be used as animal feed.

The proposed methodology is applicable if the activities proposed by the project are not already mandated by law in the host country or if the goods and food items being circulated back to the population are able to demonstrate the required minimum standards of quality as mandated by law.

The methodology identifies the GHG sources, sinks, and reservoirs (SSR) included or excluded from the project boundary. Carbon dioxide is considered as the only major emission in the project scenario due to the supply chain of the diverted goods- transportation and distribution centers which would result in fuel and electricity consumption. In the baseline scenario the methodology includes the quantification of the likely GHG emissions in the form of CH<sub>4</sub> from SWDS and CO<sub>2</sub> from incineration of waste and fuel in incineration plant.

## 4. Validation Activities

### 4.1 Validation planning

Task	Performed (Y/N)
Strategic analysis	<input checked="" type="checkbox"/>
Materiality thresholds	<input type="checkbox"/>
Test estimates	<input type="checkbox"/>
Assessment of GHG-related activity characteristics	<input checked="" type="checkbox"/>

Validation plan	☒
Evidence-gathering plan	☒

#### 4.2 Validation plan

The VVB established the validation assessment plan following a risk-based approach in compliance with ISO 14064-3. The steps undertaken to establish the validation assessment plan included:

1. Scope definition by Methodology developer and agreement with VVB on the assessment criteria.
2. Conflict of interest review and selection of audit team.
3. Kickoff interaction with the methodology and project developers.
4. Developing a documented Validation/Verification plan in compliance with ISO 14065:2020 and ISO 14064-3:2019 which includes:
  - a. Identification of verification requirements e.g., project documentation, and supporting documents
  - b. Desk review of the methodology description documents and the supporting evidence.
  - c. Incorporation of any revisions as necessary to the validation plan and communication of the same to the Methodology developer at conclusion.
  - d. Reporting and resolution of audit findings.
  - e. Preparing a draft validation report.
  - f. Technical review of the draft validation report prepared by the assessment team along with other documents as appropriate by an independent competent technical review team for finalization of the validation opinion (this report).
  - g. Final report is accepted by the Technical Reviewer is then approved by Earthood Services Private Limited which is processed further according to the ICR process requirements.

#### 4.3 Evidence Gathering Plan

For the VVB to ascertain compliance and provide a reasonable level of assurance, the evidence gathering plan must be sufficient and appropriate. Having signed a non-disclosure contract with Methodology developer that there were no impediments to the evidence gathering process. Earthood therefore developed evidence gathering or audit plan based on the results of the risk assessment and in compliance with ISO 14065 and ISO 14064-3. The audit plan included a plan for checking the sources of errors to assess the degree to which they are free of material errors, mistakes, and misstatements.

The following are the evidence gathering activities applied by VVB:

1. Inspection of records and documents: The VVB examined documents and data provided by PP and other external sources relevant to the project activity. The Methodology developer was requested to provide both electronic and paper form data where applicable. The documentary evidence provided alongside the ICR methodology description document is listed under Appendix I of this document.
2. Inquiry: Throughout the assessment process VVB sought information and clarifications from the representatives of Methodology developer through formal written requests. Please refer Appendix II for the finding overview.
3. Analytical procedures: VVB analyzed the sufficiency of the data monitoring procedures established by the proposed methodology.

#### 4.4 Activities and Techniques

The process of validation and verification as undertaken by Earthood involves the following step:

- a) Contract with the Methodology developer and appointment of validation team and technical review team
- b) Desk review of the methodology description document.
- c) Interviews with the methodology developer.
- d) Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft validation report.
- e) Independent technical review of the draft validation report and final/revised documentation.

- f) Reporting and closure of TR comments/findings (CARs/CLs/FARs) and final approval for the decision made.
- g) Issuance of final validation report to contracted Methodology developer (or authorized representatives) and submission of request for issuance, as appropriate.

#### 4.5 Review of Documented Information

The validation assessment of the project entails a desk review of the ICR methodology description document and supporting documents submitted at various stages of the process, and reference documents as stated in detail in appendix II of this document. The assessment is performed by a validation team using protocol. The assessment team cross-checks all information provided in the ICR Methodology description document and other relevant external sources. Additionally, and, if necessary, independent background investigation is conducted.

Inconsistencies between the Methodology description document and the stated criteria as per methodology requirements were considered findings and identified for corrective action. Appropriate justification for any noncompliance with the requirement criteria was also sought. All the Non-conformities (findings) have been raised and resolved under Appendix II of this report.

#### 4.6 Interviews

Through the Process of validation assessment of the methodology along with that of the corresponding project activity, Earthood has interviewed different personnel involved in the development of the methodology “ Reduction of GHG emissions by diverting unsold goods and food wastes from disposal”. The validation team has conducted interviews with the representatives of the methodology developer for additional clarification sought by the assessment team.

ID	Last name	First name	Role	Date	Subject	Team member
1.	Dobler	Nicolas	Executive Director, CoreZero	09/05/2023	Baseline establishment, additionality,	Shifali Guleria, Kaviraj Singh, Divij Varshney
2.	Barazarte	Juan Manuel	I&D CoreZero Lead, CoreZero	09/05/2023	Emission reduction calculation, methodology applicability	Shifali Guleria, Kaviraj Singh, Divij Varshney

#### 4.7 Conformity

Criteria	Assessed	No. non-conformities	Resolved
<b>1. Other Methodologies</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	CAR 01	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>2. Summary Description of the Methodology</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	CL 01 and CAR 02	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>3. Definitions</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	CAR 04	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>4. Applicability Conditions</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	CL 02 and CL 07	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>5. Boundary</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	CL 03	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>6. Baseline Scenario</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	-	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> N/A
<b>7. Additionality</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	-	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> N/A
<b>8. Permanence</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	-	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> N/A
<b>9. Quantification of GHG emission mitigations</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	CL 04	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>10. Monitoring</b>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	CL 05, CL 06 and CAR 03	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A

## 5. Validation Findings

As an outcome of the validation process, the assessment team raised different types of findings.

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable ICR requirements and ISO 14064-2 requirements have been met.

Where a non-conformance arises, the validation team raises a Corrective Action Request (CAR). A CAR is issued, where:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- The ICR/ISO 14064-2 requirements have not been met.
- There is a risk that emission reductions cannot be monitored or calculated.

Irrespective of the nature of findings, all of these were given to the Methodology developer in a separate finding document. In this document, the project proponent(s) were given the opportunity to respond to the findings. Based on the responses received from the Methodology developer along with relevant supporting documents/evidence, the validation team determined whether the findings are resolved or not. The findings were also raised at a later stage e.g., during internal technical review process and these are also communicated/dealt in the same manner as described above. The validation assessment report reflects the status of the findings, if any, as appropriate under Appendix II.

In summary, the type and total number of findings that were raised are indicated below.

Type of Finding	CAR	CL
Total Findings	03	05

### 5.1 Other Methodologies

#### Means of Project Validation

The proposed methodology Reduction of GHG emissions by diverting unsold goods and food wastes from disposal provides quantification guidelines for GHG emission avoided by diverting the unsold goods and food waste from SDWS disposal to be commercialized or donated on any off-price retailers such as e-commerce stores or similar platforms or through rescue initiative and animal feeding.

In principle the measure undertaken by the project activity is GHG emission avoidance therefore the methodology developer has provided a detailed comparison with existing methodologies under the applicable sectoral scope in the Section 1.1 of the ICR methodology description document/5/.

The assessment of comparison with other methodologies is as follows:

Methodology	VVB assessment
U.S. Organic Waste Composting Protocol v1.1 Project	The Reserve Organic Waste Composting Project Protocol provides guidance to account for, report, and verify GHG emission reductions associated with the diversion of eligible organic wastes away from anaerobic landfill disposal systems and to composting operations where the material degrades in a controlled aerobic process. However, this methodology diverts only organic matter to the

	composting facility, whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.
AM0057 Avoided emissions from biomass wastes through use as feedstock in pulp and paper production or in bio-oil production v3.0.1	The methodology mainly applies to the construction of a new pulp and paper, cardboard, fiber board or bio-oil production facility that uses agricultural wastes as feedstocks. Whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.
AMS-III.AF Avoidance of methane emissions through excavating and composting of partially decayed municipal solid waste (MSW) v1.0	This methodology comprises measures to avoid emissions of methane to the atmosphere from MSW that is already deposited in a closed solid waste disposal site (SWDS) without methane recovery. Whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.
AMS-III.AJ. Recovery and recycling of materials from solid wastes v9.0	This methodology comprises activities for the recovery and recycling of materials in municipal solid waste (MSW) to process them into intermediate or finished products, displacing the production of virgin materials in dedicated facilities, thereby resulting in avoidance of energy use. Whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.
AMS-III.E Avoidance of methane production from decay of biomass through controlled combustion, gasification, or mechanical/ thermal treatment v17.0	This project category comprises measures that avoid the production of methane from biomass or other organic matter that would have otherwise been left to decay under clearly anaerobic conditions throughout the crediting period in a solid waste disposal site without methane recovery. Whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.

<p>AMS-III.F Avoidance of methane emissions through composting v12.0</p>	<p>This methodology comprises measures to avoid the emissions of methane to the atmosphere from biomass or other organic matter that would have otherwise been left to decay anaerobically in a solid waste disposal site (SWDS), or in an animal waste management system (AWMS), or in a wastewater treatment system (WWTS). In the project activity, controlled aerobic treatment by composting of biomass is introduced. Whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.</p>
<p>ACM0022 Alternative waste treatment processes v3.0</p>	<p>This methodology covers project activities implementing and operating new plants for the treatment of fresh waste through processes like Composting, Anaerobic digestion with biogas recovery and flaring, Co-composting of wastewater, Gasification process to produce syngas, Incineration of fresh waste for the generation of thermal/electric energy, that would otherwise be disposed in a solid waste disposal site (SWDS). Whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.</p>
<p>VM0018 Energy Efficiency and Solid Waste Diversion Activities within a Sustainable Community v1.0</p>	<p>This methodology provides a procedure to determine the net CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> emissions reductions associated with grouped projects that focus on energy efficiency and solid waste diversion activities for an assortment of facilities within a set territory. Whereas the proposed methodology diverts the unsold good/ food wastes to rescue initiatives. The methodology could not be sufficiently modified to suit the requirements therefore the proposal of the new methodology is found to be appropriate.</p>

In absence of any suitable methodology for the applicable sectoral scope, the proposed methodology has been compared with existing methodologies that share a similar principle. However, they were not found to be modifiable to meet the quantification requirements. Methodology developer has provided a detailed comparison along with justification of non-applicability as per the methodology requirements under section 1.1 of the methodology description/5/. According to VVB's assessment, no additional similar methodologies have been identified. The list of all comparable methodologies based on the newly provided approach is considered comprehensive, and it is deemed

Findings	that no other similar methodology could have been reasonably revised to fulfill the objective of the proposed Methodology, and hence justified.
	CAR 01 was raised and resolved.
Conclusion	<p>1. The methodology developer has listed all methodologies reviewed during the development of the proposed methodology under section under section 1.1 of the ICR methodology description document in line with para 4.1 of the ICR methodology requirements v2.0/1/.</p> <p>2. All the sources(tools/modules/regulation/standards) referred are mentioned under section 1.2 of the ICR methodology description document/5/ in line with para 4.2 of the ICR methodology requirements v2.0/1/.</p> <p>Thus, no similar existing methodology was identified under ICR or any other GHG Programme, therefore a new methodology is being proposed for approval.</p>

### 5.2 Summary Description of the Methodology

Means of Project Validation	<p>The proposed methodology provides guidelines for quantification of the greenhouse gas emission avoided by the project activity resulting in diversion of unsold goods and food wastes from ending up in Solid Waste Disposal Sites (SWDS) and/or being incinerated. The project activity involves diversion of these unsold goods and food waste to be commercializes/donated and used as animal feedings, respectively. The supply chains can vary depending on the nature of the project- the products can be recirculated into the economy through commercialization stores, off-price retailers or foodbanks, etc. The emission reductions achieved from this project are associated with reduction in GHG emissions from decomposition of these goods in SWDS and from incineration of waste.</p> <p>This methodology is not applicable if the activities proposed by the project are already mandated by law in the host country or if the goods and food items being circulated back to the population are unable to demonstrate the required minimum standards of quality as mandated by law.</p> <p>The methodology description document consists of the applicability conditions, steps to establish the plausible baseline scenario, additionality assessment and appropriate equations for quantification of carbon emission reductions.</p> <p>The methodology description document contains all information necessary to assist the project developer in comprehension for effective implementation of the methodology.</p>
Findings	CL 01 and CAR 02 was raised and resolved
Conclusion	A detailed summary of the proposed methodology is provided under section 2 of the ICR methodology description document/5/ which is found to be in line with para 4.2 of the ICR methodology requirements v2.0/1/.

### 5.3 Definitions

Means of Project Validation	<p>The ICR methodology description document provides a comprehensive list of definitions of terms/acronyms applicable to the proposed methodology under section 3, for ease of use by the project proponents. The definitions were found to be provided in addition to those in the ICR definitions version 1.0/3/.</p> <p>Some of the definitions used in the proposed methodology are mentioned below:</p> <p><b>Alternative treatment:</b> The methodology defines ‘Alternative treatment’ that includes composting, waste to energy and current animal feeding.</p>
-----------------------------	---

	<p><b>Food Products:</b> The methodology defined ‘Food Products’ that can be used in context of this methodology. As per the methodology, ‘Food Products’ are unsold good 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.</p> <p><b>Miscellaneous:</b> As per the methodology, ‘Miscellaneous’ are unsold goods such as personal care products, pharmaceuticals, cosmetics, home care products and food products (industrially processed).</p> <p><b>Food wastes:</b> As per the methodology, ‘Food wastes’ referred to any food substances, spoiled or unspoiled, that are discarded.</p> <p><b>Rescue Initiative:</b> The methodology defined ‘Rescue initiative’ that can be used in context of this methodology. As per the methodology, ‘Rescue Initiative’ are any initiatives that diverts:</p> <ul style="list-style-type: none"> <li>a. 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;</li> <li>b. food wastes from the final disposal to be used for animal feeding;</li> </ul> <p><b>Secondary Market:</b> The methodology defined ‘Secondary Market’ that can be used in context of this methodology. As per the 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.</p> <p><b>Animal Feeding:</b> The methodology defined ‘Animal Feeding’ that can be used in context of this methodology. As per the methodology, ‘Animal Feeding’ is the action 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.</p> <p>The terminology used in the methodology is consistent with the ICR programme requirements and GHG accounting, and the language chosen is precise. Specific key terms were used appropriately; must, should, and may to indicate a firm requirement and permissible or allowable options, respectively.</p>
Findings	CAR 04 was raised and resolved.
Conclusion	The definitions were found to be consistently included in the methodology text, along with the reference. The definitions are concise and would aid in providing context of the methodology and enhance the readability.

#### 5.4 Applicability Conditions

Means of Project Validation	The proposed methodology is applicable to the project activity which involves diversion of unsold goods and/or food waste, which are going to SWDS or incineration sites for final disposal and can be sold or donated in various rescue initiatives or used as animal feeding and thereby reintroduce them back into the mainstream supply.
-----------------------------	--

During the methodology assessment, the assessment team ensured the applicability conditions were appropriate for the activities targeted by the methodology. Quantification procedures required by the methodology adequately target the relevant applicability conditions. The applicability conditions appropriately specify relevant requirements to individual projects. Section 4 of the ICR methodology description document defines the applicability conditions in line with para 4.4 of the ICR methodology requirements/1/.

The validation assessment determined that the applicability conditions contained within the methodology is appropriate, adequate and in compliance with the ICR methodology requirements.

The following summarizes applicability conditions as written, and the final evaluation of those changes during the assessment:

Condition	VVB assessment
The methodology is applicable under the following conditions:	
This methodology applies to project activities that diverts 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	This condition is found to be necessary to ensure the type of project activities that can be included under the proposed methodology. The applicability condition is written in clear and concise manner to ensure the project activity must reduce the amount of unsold goods/ food wastes that are discarded in the SDWS disposal/ incineration, which meets the requirements of the nationally required quality, food safety standards and any relevant safety standards. Thus, the applicability condition is found to be appropriate and within the scope of methodology.
This methodology applies to project activities that diverts 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.	This condition is found to be necessary to ensure the type of project activities that can be included under the proposed methodology. The applicability condition is written in clear and concise manner to ensure the project activity must reduce the amount of food wastes that are discarded in the SDWS disposal/ incineration, also ensuring that all the relevant food health and safety legislature as per the region/ state/ country should be followed. Thus, the applicability condition is found to be appropriate and within the scope of methodology.
This methodology applies to project activities that avoids unsold goods/food wastes from final disposal only after the start of the first crediting period	This condition is found to be necessary to ensure that the only food diverted from the final disposal after the start of the project activity shall be in the calculation of emission reduction. The applicability condition is written in a clear and concise manner. Thus,

	the applicability condition is found to be appropriate and within the scope of methodology.
Diverted unsold goods/food wastes destined for disposal can be quantified and tracked	The applicability condition is established to ensure that project activity must sufficiently establish monitoring mechanism to quantify the baseline and project emissions appropriately and conservatively. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.
Potential disposal sites (SWDS or incineration) can be identified for each region	The applicability condition is established to ensure the final destination under the baseline scenario to be the potential disposal sites (SDWS or incineration) of the host country. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.
For unsold goods/food wastes discarded in the baseline, destruction shall be demonstrated	This applicability condition is established to ensure the final destination of the unsold goods/ food waste in the baseline. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.
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	This applicability condition is used to establish the type of unsold goods that can be considered under the project activity. The project activity covers the unsold goods that can be fully utilized/ consumed by the rescue initiative like as soap (personal care), detergent (home care), moisture cream (cosmetic), and yogurt (food) etc. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.
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)	This applicability condition is established to ensure that the project activity does not include the reduce the amount of unsold goods/food wastes that would be recycled in the absence of the project activity. The applicability condition is written in a clear and concise manner. Thus, the applicability

<p>in the absence of the project activity. This shall be justified and documented in the project design document (PDD)</p>	<p>condition is found to be appropriate and within the scope of methodology.</p>
<p>The methodology is not applicable under the following conditions</p>	
<p>Where the project condition is mandated by any federal, national, state, or local regulations, or other legally binding mandates.</p>	<p>The condition is established to ensure that the project activity established in the region/ state/ country is a voluntary action, and is not mandated by any federal, national, state, or local regulations, or other legally binding mandates. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.</p>
<p>If the unsold goods or food wastes fail to meet the required standards for quality, food safety, or the legal requirements or best practices, of the rescue initiatives.</p>	<p>The condition is established to ensure that the diverted unsold goods/ food wastes meets the quality requirement, relevant food health and safety legislature and any other relevant safety standards of the host country and can be diverted to the rescue initiative or animal feeding. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.</p>
<p>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</p>	<p>The condition is established to ensure the type of unsold goods that goods that cannot be considered under the project activity. The project activity does not include the unsold goods that lack any usable content and will be disposed of in the SDWS or incineration after their end of life. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.</p>
<p>If the unsold goods/food wastes are managed through any waste treatment methods other than baseline methods SDWS and incineration</p>	<p>The condition is established to ensure that only SDWS and incineration are eligible baseline scenario for the application of the proposed methodology. The applicability condition is written in a clear and concise manner. Thus, the applicability condition is found to be appropriate and within the scope of methodology.</p>
<p>Findings</p>	<p>CL 02 and CL 07 was raised and resolved.</p>

Conclusion	The methodology includes the appropriate applicability conditions to ensure adherence to ICR rules and requirements, and to address specific issues that can arise during the methodology application by the project developer.
------------	---

### 5.5 Boundary

Means of Project Validation	<p>The methodology defines the project boundary under section 5 of the ICR methodology description/5/ as the spatial extent of the project boundary that includes:</p> <ul style="list-style-type: none"> <li>• the geographical location of the project (host country or region) where: <ul style="list-style-type: none"> <li>○ unsold goods and food wastes are generated.</li> <li>○ Unsold goods and food wastes are managed, stored, processed and distributed.</li> <li>○ Unsold goods and food wastes are used or consumed.</li> </ul> </li> <li>• the baseline disposal locations, to include SDWS and incinerators.</li> </ul> <p>The impacted GHG sources, sinks and reservoir included and excluded from the project boundary along with the justifications are listed under section 5 in line with the section 4.5 of the ICR methodology requirements. The amount of CH<sub>4</sub> emission avoided due to measures under project activity is the primary impact which is quantified as the Emission reductions achieved by the project activity. Other impacts are negligible in the project boundary and are therefore excluded. The project boundary has been assessed as adequate in the context of the considered typical project activities. All relevant GHG emission sources have been identified, assessed and corresponding justification for inclusion or exclusion has been provided. The provided figure is a clear and correct as well as appropriate delineation of typical project activities under the methodology.</p>
Findings	CL 03 was raised and resolved.
Conclusion	The methodology addresses the establishment of spatial, temporal, and gaseous boundaries to meet the requirements as per para 4.3 of the ICR requirements and methodology requirements/1/.

### 5.6 Baseline Scenario

Means of Project Validation	<p>The baseline scenario under the proposed methodology is the disposal or incineration of unsold good/ food waste, thereby leading to release of GHGs in the atmosphere, including carbon dioxide and methane, among others.</p> <p>The ICR methodology requirements document v.1.0/1/ allows determination of baseline scenario through various approaches, as described in section 5.6 of the document. The plausible baseline scenarios identified and assessed and found to be appropriately identified for unsold goods and food waste. For unsold goods, identified baseline scenarios are overproduction and Imperfect goods, and for food waste identified baseline scenarios are Lack of alternative processes, Lack of knowledge, Cultural, Policies/Regulations and Higher costs. The scenarios have been identified through the literature reviews and is found to be OK. MDD has also set some examples where the unsold goods and food waste can generate, which is found to be appropriate. Accordingly, the methodology developer has applied the approach based on actual emissions which considers the business as usual. The methodology will allow determination of emission factors and baseline emissions based on approaches already established in CDM Large-scale Consolidated Methodology ACM0022- Alternative waste treatment processes/12/. The approach is found appropriate and meets the ICR methodology requirements.</p>
-----------------------------	--

Findings	Thus, the methodology developer has considered the appropriate options for baseline scenario selection and quantification.
	No findings were raised.
	Conclusion

### 5.7 Additionality

Means of Project Validation	The proposed methodology complies with ICR requirements of establishing a procedure to demonstrate additionality by using a project, performance, and/or activity method. Demonstration of project additionality allows for transparent identification of baseline scenario and encouraging conservative baseline net greenhouse gas removals by project activity measure. The proposed methodology refers to ICR requirements document v.4.0/2/ for establishing the additionality criteria.
	The ICR requirements document has defined an additionality approach through five levels listed under section 4.4.1 of that document. As stated and required by the requirements document, the methodology ascertains additionality of the project by demonstration of conformance with at minimum level 1, 2 and 3.
	Thus, the procedures for demonstrating additionality are appropriate, adequate and conform to ICR requirements. The project developers may apply the latest version of: <i>CDM Tool for demonstration and assessment of additionality; Combined tool to identify the baseline scenario and demonstrate additionality; Positive lists of technologies; or other tools from a recognized origin.</i> For policy additionality, the project proponent will rely on and refer to the host country's current NDC.
Findings	No findings were raised.
	Conclusion

### 5.8 Permanence

Means of Project Validation	The ICR methodology requirements demands that the methodology shall establish criteria and procedures to quantify associated risk for the determination of buffer, where there's a risk of reversals, the proposed methodology provides detailed guidelines on the measures that shall be taken by the project proponent to mitigate the risk of reversal.
	The methodology provides the generation of verifiable credits thus no risk of reversal was identified by the assessment team, therefore no further justification was sought.
	Findings
Conclusion	

### 5.9 Quantification of GHG emission mitigations

Means of Project Validation	The procedures for quantifying the baseline, project and leakage emissions are described in the methodology section 8. The methodology provides step by step guidelines on how a project activity developer can calculate the emission reduction from diverting the unsold goods as in the pre-project scenario /18/.
-----------------------------	---

**Baseline emissions:**

The methodology identified that continuation of pre-project activities where unsold goods/ food wastes ends up in the SDWS/ incineration sites as the baseline scenario. To quantify the baseline, the methodology has defined some of the steps to help the project activity developer. The steps defined for calculating baseline emissions and removals have been assessed and found to be appropriate. The formulas, algorithms and equations used in the methodology are found to be appropriately identified. The baseline emissions are calculated on the basis of the weighted fraction for the product that are sent to the incineration or SDWS disposal sites, which is later multiplied by the emission factor for the SDWS disposal and incineration. The calculation of the emission factor has been properly described in the proposed methodology.

As per the methodology, baseline emissions of diverted unsold goods (commercialized or donated) and/or food wastes (animal feeding) for a specific space of time is calculated as:

$$BE_{Total} = BE_{I,y} + BE_{LF,y}$$

Where,

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

**Calculation of baseline emissions associated with incineration:**

The calculation of  $BE_{I,y}$  can be done by using the following equations,

$$BE_{I,y} = \sum_J BE_{J,I}$$

Determination of  $BE_{J,I}$

$$BE_{J,I} = \partial_J \times f_I \times EF_{J,I}$$

Where,

$BE_{J,I}$	=	Baseline emissions of diverted unsold goods/food wastes associated with Incineration I by category J (tCO <sub>2</sub> e)
$\partial_J$	=	Net weight <sup>1</sup> of diverted unsold goods/ food wastes by category (t)
$f_I$	=	Fraction of weight incinerated (%)

<sup>1</sup> 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

$EF_{J,I}$  = Emission factor of unsold goods/food wastes by category J associated with incineration I (tCO<sub>2e</sub>/t)  
 J = Category

Determination of  $EF_{J,I}$

$$EF_{J,I} = EF_{J,W} + EF_{J,F}$$

Where,

$EF_{J,W}$  = Emission factor associated with waste incineration (tCO<sub>2e</sub>/t)

$EF_{J,F}$  = Emission factor associated with incinerator fuel combustion (tCO<sub>2e</sub>/t)

Determination of  $EF_{J,W}$

$$EF_{J,W} = EFF_{COM,i,y} \times \frac{44}{12} \times \sum [\omega_{j,i,y} \times FCC_{j,y} \times FFC_{j,y}]$$

Where,

$EF_{J,W}$  = Emission factor associated with waste incineration (tCO<sub>2e</sub>/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  $y$  (%)

$44/12$  = Conversion factor (tCO<sub>2</sub>/t C)

$j$  = Waste type

$J$  = Category

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

The composition of waste type in the project boundaries can be determined by the Project proponent, if the data is available. If not, unsold goods/food wastes composition are compared to the composition of the country's municipal solid wastes since, the waste goes back to the municipal solid waste at the end of their lifetime. The methodology uses the waste types of the waste composition in MSW provided by the latest chapter 2, volume 5, Table 2.3 of IPCC guidelines/18/.

Determination of  $EF_{J,F}$

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

Where,

$EF_{J,F}$  = Emission factor associated with incinerator fuel combustion (tCO<sub>2e</sub>/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)

$COEF_{g,p,j}$  = CO<sub>2</sub> emission coefficient of fuel type  $g$  in year  $y$  (tCO<sub>2</sub>/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  $COEF_{g,y}$

$$COEF_{g,p,y} = NCV_{C,l,y} \times EF_{CO2,l,y}$$

Where,

$COEF_{g,y}$  = CO<sub>2</sub> emission coefficient of fuel type g (tCO<sub>2</sub>/weight or volume unit)

$NCV_{C,l,y}$  = weighted average net calorific value of the fuel type g in year y (GJ/ weight or volume unit)

$EF_{CO2,l,y}$  = weighted average CO<sub>2</sub> emission factor of fuel type g in year y (tCO<sub>2</sub>/GJ)

g = Fuel type combusted in process p during the year y

p = Process of incineration

**Calculation of baseline emissions associated with SWDS Disposal:**

The calculations of baseline emissions can be by using the following equations,

$$BE_{LF,y} = \sum_J BE_{J,LF}$$

Determination of  $BE_{J,LF}$

$$BE_{J,LF} = EF_{J,LF} \times \partial_J \times f_{LF}$$

Where,

$BE_{J,LF}$  = Baseline emissions of diverted unsold goods/food wastes associated with SWDS disposal LF by category J (tCO<sub>2</sub>e)

$EF_{J,LF}$  = Emission factor of unsold goods/food wastes by category J associated with SWDS disposal LF (tCO<sub>2</sub>e/t)

$\partial_J$  = Net weight<sup>2</sup> of diverted unsold goods/food wastes by category (t)

$f_{LF}$  = Fraction of weight sent to SWDS (%)

J = Category

Determination of  $EF_{J,LF}$

The emission factor of unsold goods/ food wastes associated with SDWS disposal is determined through the latest version of the CDM Tool 04: Emissions from solid waste disposal sites/15/. While applying the tool, PP shall adhere with the following requirements:

- $BE_{CH4,SWDS,y}$  in the tool corresponds to the parameter  $EF_{J,LF}$  in this methodology.

<sup>2</sup> 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

- To calculate the CO<sub>2</sub> emissions of unsold goods/food wastes prevented from disposal in the baseline SWDS due to its diversion through rescue initiatives,  $W_{j,x}$  in the tool is substituted with  $p_{n,j,x}$
- Application B is used for emission calculation.
- 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/18/ as the composition of unsold goods/food wastes.
- 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.

#### Project emissions:

The project emissions are related to the new project activity taken place to divert unsold goods/ food waste from the SWDS disposal or incineration. The project emissions will be generated in case of storage, sorting, processing, and distribution activities of unsold goods/food wastes. However, the methodology developer has disregarded these emissions as these will also be taken place in the absence of the project activity. To quantify the project emissions, the project proponent can use the following equations of the methodology, which has been assessed and found to be appropriately identified.

$$PE_{Total} = PE_{EC,y} + PE_{FC,y} + PE_{TR,y}$$

Where,

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

#### Determination of $PE_{EC,y}$ and $PE_{FC,y}$

The project emissions from electricity consumption and fossil fuel consumption should be derived by using the latest version of the CDM methodological tool, Tool 05: Baseline, project and/or leakage emissions from electricity consumption/16/ and Tool 03: Tool to calculate project or leakage CO<sub>2</sub> emissions from fossil fuel combustion/14/.

*Determination of  $PE_{TR,y}$*

The project emissions from transportation activities should be derived by using the latest version of the CDM methodological tool, Tool 12: Project and leakage emissions from transportation of freight/17/. Parameter  $FR_{f,m}$  in the tool corresponds to the parameter  $\partial_j$  in this methodology. The Tools provides two options for calculating the project emissions from road transportation of freight. Option A, for transportation activities under control of the project activity (own vehicles), project emissions should be calculated by considering the fuel consumption. Option B, 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 should be calculated by considering quantity of freight transported, distance and vehicle class used. While choosing option B, emission factor should be sourced from the DEFRA Conversion Factors<sup>3</sup>/19/, EPA GHG Emission Factors Hub<sup>4</sup>/20/ and/or Country/Project specific data as per the methodology.

**Leakage Emissions:**

Additional GHG emission reduction occurring outside the project boundary due to the implementation and operation of a related GHG reduction project activity under the methodology is considered leakage and has to be considered. The methodology has considered the leakage emissions associated with:

- Diverted unsold goods from the final disposal that eventually disposed in the SWDS.
- If the item is not suitable for consumption, Project proponent can apply one of the three management option. First, categorize them as food waste and diverts them for animal feeding. Second, commercialize/valorize them as secondary raw materials. Third, to dispose of them in a SWDS.

The leakage emission in case of anaerobic storage or disposal should be calculated using the latest version of the CDM methodological Tool 04: Emissions from solid waste disposal sites.

Calculation of Net GHG Emission Mitigation:

The net GHG emission mitigation has been calculated as:

$$ER_y = BE_{Total} - PE_{Total} - LE_{CH4,SWDS}$$

Where,

- $ER_y$  = Total project emissions of diverted unsold goods/food wastes (tCO<sub>2</sub>e)
- $BE_{Total}$  = Project emissions from electricity consumption during year y (tCO<sub>2</sub>e)
- $PE_{Total}$  = Project emissions from fossil fuel consumption at distribution centers during year y (tCO<sub>2</sub>e)
- $LE_{CH4,SWDS}$  = Leakage emissions for anaerobic storage/disposal in a SWDS of unsold goods/food wastes (tCO<sub>2</sub>e)

<sup>3</sup> <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

<sup>4</sup> <https://www.epa.gov/climateleadership/ghg-emission-factors-hub>

Findings	$y$ = Year of the crediting period ( $y$ is a consecutive period of 12 months)
	<p>The formulas, algorithms and equations used in the methodology are found to be appropriately identified. The reference to the emission factors has been appropriately identified in the methodology. The procedures for estimating the parameters related to the quantification of Baseline, project and leakage emissions and removals are found to be appropriate.</p>
Conclusion	<p>CL 04 was raised and resolved.</p> <ol style="list-style-type: none"> <li>The baseline emissions model approach encompasses all GHG sources, sinks, and carbon pools as specified by the delineated project boundary. In conclusion, methods for calculation of baseline emissions are appropriate, adequate and in compliance with para 4.7 ICR requirements v4.0/2/.</li> <li>The project emissions for any monitoring period will be calculated either from actual measurements or from data based on scientifically validated sources, based upon the quantification approach applied. Parameters and equations to calculate project emissions were checked and found to be appropriate and without apparent errors. The assessment team found that the procedures for calculating project emissions cover all GHG sources, sinks and reservoirs and are adequate and in compliance with para 4.8 ICR requirements v4.0/2/.</li> <li>The leakage emissions element of the proposed methodology quantifies the GHGs from SSRs displaced as a result of the project activity, the approach is found acceptable by the assessment team.</li> </ol> <p>The methodology element provides guidelines for quantifying the net GHG emissions and removals by subtracting project emissions and leakage emissions from baseline emissions.</p> <p>The methods for calculation of emission reductions and removals from methodology element section 8.4 is appropriate, adequate and in compliance with the ICR methodology requirement section 4.8/1/.</p>

### 5.10 Monitoring

Means of Project Validation	<p>The methodology element establishes criteria for monitoring by requiring project proponents to develop a monitoring plan to guide monitoring efforts. The methodology has described data and parameters available at validation that are fixed for the duration of the project crediting period and data and parameters monitored that must be monitored during the project crediting period for each verification.</p> <p>All parameters which have been defined in the corresponding baseline, project and leakage emission calculation sections have been considered either as a parameter available at validation or as a monitoring parameter or is given as a default value.</p> <p><b>Data and Parameter available at validation:</b></p> <table border="1"> <thead> <tr> <th>Data parameter</th> <th>Assessment team findings</th> </tr> </thead> <tbody> <tr> <td> <math>EFF_{COM,i,y}</math> % Combustion efficiency of incinerator <math>i</math> in year <math>y</math> </td> <td>           The source of data is the following, in order of preference,           <ol style="list-style-type: none"> <li>Country specific data</li> <li>Incineration plants specific data</li> </ol> </td> </tr> </tbody> </table>	Data parameter	Assessment team findings	$EFF_{COM,i,y}$ % Combustion efficiency of incinerator $i$ in year $y$	The source of data is the following, in order of preference, <ol style="list-style-type: none"> <li>Country specific data</li> <li>Incineration plants specific data</li> </ol>
Data parameter	Assessment team findings				
$EFF_{COM,i,y}$ % Combustion efficiency of incinerator $i$ in year $y$	The source of data is the following, in order of preference, <ol style="list-style-type: none"> <li>Country specific data</li> <li>Incineration plants specific data</li> </ol>				

	<p>3. IPCC default values (table 5.2, chapter 5, volume 5 of the latest IPCC guidelines)/18/</p> <p>The default applied value has been stated in the methodology and found to be appropriate. The value chosen is also found to be in line with the reference methodology ACM0022/12/. The datum will be used for calculation of incineration emission factor in line with ICR rules.</p>
$\omega_{j,i,y}$ % Waste type j fed into the incinerator I in year y	<p>The source of data is the following, in order of preference,</p> <ol style="list-style-type: none"> <li>1. Sample measurements (minimum of three samples every three months)</li> <li>2. Project specific data</li> <li>3. Country specific data</li> <li>4. IPCC default values (table 2.3, chapter 2, volume 5 of the latest IPCC guidelines)/18/</li> </ol> <p>The default applied value has been stated in the methodology and found to be appropriate. The value chosen is also found to be in line with the reference methodology ACM0022/12/. The datum will be used for calculation of incineration emission factor in line with ICR rules.</p>
$FCC_{j,y}$ % Fraction of total carbon content in waste type j in year y	<p>The source is the IPCC default values (Table 2.4, chapter 2, volume 5 of the latest IPCC guidelines)/18/. The applied values have been stated in the methodology and found to be appropriate. The datum will be used for calculation of baseline and project emissions in line with ICR rules.</p>
$FFC_{j,y}$ % Fraction of fossil carbon in total carbon content of waste type j in year y	<p>The source is the IPCC default values (Table 2.4, chapter 2, volume 5 of the latest IPCC guidelines)/18/. The applied values have been stated in the methodology and found to be appropriate. The datum will be used for calculation of baseline and project emissions in line with ICR rules.</p>
$FC_{g,p,y}$ Weight or volume unit/ t Quantity of fuel type g combusted in process by tonne of waste	<p>The source of data is the following, in order of preference,</p> <ol style="list-style-type: none"> <li>1. Regional incineration waste plants</li> <li>2. National incineration waste plants</li> <li>3. International incineration waste plants</li> </ol> <p>The default applied value has been stated in the methodology and found to be appropriate. The value chosen is also found to be in line with the reference methodology ACM0022/12/. The datum will be used for calculation of incineration emission factor in line with ICR rules.</p>
$NCV_{g,y}$ GJ/ weight or volume unit	<p>The source of data is the following, in order of preference,</p> <ol style="list-style-type: none"> <li>1. Country specific data</li> </ol>

<p>Weighted average net calorific value of the fuel type g in year y</p>	<p>2. IPCC default values (table 1.2, chapter 1, volume 2 of the latest IPCC guidelines)/18/ The default applied value has been stated in the methodology and found to be appropriate. The value chosen is also found to be in line with the reference methodology ACM0022/12/. The datum will be used for calculation of incineration emission factor in line with ICR rules.</p>
<p><math>EF_{CO_2,g,y}</math> tCO<sub>2</sub>/GJ Weighted average CO<sub>2</sub> emission factor of fuel type g in year y</p>	<p>The source of data is the following, in order of preference, 1. Country specific data 2. IPCC default values (table 1.4, chapter 1, volume 2 of the latest IPCC guidelines)/18/ The default applied value has been stated in the methodology and found to be appropriate. The value chosen is also found to be in line with the reference methodology ACM0022/12/. The datum will be used for calculation of incineration emission factor in line with ICR rules.</p>
<p><math>f_I</math> % Fraction of unsold goods/ food wastes incinerated</p>	<p>The source of data is the following, in order of preference, 1. Project specific data 2. Country specific data 3. IPCC default values (table 2.1, chapter 2, volume 5 of the latest IPCC guidelines )/18/ The default applied value has been stated in the methodology and found to be appropriate. The datum will be used for calculation of baseline emissions in line with ICR rules.</p>
<p><math>f_{LF}</math> % Fraction of unsold goods/ food wastes sent to SDWS</p>	<p>The source of data is the following, in order of preference, 1. Project specific data 2. Country specific data 3. IPCC default values (table 2.1, chapter 2, volume 5 of the latest IPCC guidelines)/18/ The default applied value has been stated in the methodology and found to be appropriate. The datum will be used for calculation of baseline emissions in line with ICR rules.</p>

**Data and parameters monitored**

Data parameter	Assessment team findings
<p><math>\partial_j</math> Metric ton (tonne)/ y Net weight of diverted unsold goods/ food wastes by project category</p>	<p>The parameter pertains to the determination of net weight of diverted unsold goods/ food wastes, which will be established for each waste category. The net weight refers to the weight of the unsold goods/ food wastes content excluding the packaging. The frequency of monitoring is chosen appropriately as this parameter will be monitored continuously and</p>

		<p>aggregated at least annually. The monitoring mechanism is established by the proposed methodology using four different methods, depending on the type of project activity and technology available to the project developer. Since the measurement of weight will be done for the goods and products delivered to final users and returned goods will be deducted from the overall emission reduction estimations, the accuracy of the GHG accounting will be maintained.</p> <p>The parameter description and methods also ensure that the equipment used are calibrated regularly as per industry standards.</p> <p>Thus, the parameter was found relevant and with appropriate measurement methods listed for quantitative records of net weight of unsold good and food wastes.</p>
	<p><i>Org<sub>PJ,y</sub></i> % Organic content into miscellaneous category</p>	<p>This parameter pertains to determination of organic content in the diverted goods and food waste. The source of data is the following, in order of preference,</p> <ol style="list-style-type: none"> <li>1. Direct measurements</li> <li>2. Direct sampling analysis</li> <li>3. Calculated from inventory records of previous year (if applicable)</li> <li>4. Country specific data</li> <li>5. IPCC default values (table 2.3, chapter 2, volume 5 of the latest IPCC guidelines)/18/</li> </ol> <p>Since the order of preference is defined with highest preference to direct measurements, the project developer will be able to apply other options only if inability to utilize the more preferred options is demonstrated. Thus, accuracy of data will be maintained.</p> <p>The parameter description and methods also ensure that the equipment used are calibrated regularly as per industry standards.</p> <p>Thus, the parameter was found relevant for quantitative records of organic content in the diverted unsold goods and food waste.</p>
<p>Findings Conclusion</p>	<p>CL 05, CL 06 and CAR 03 was raised and resolved.</p> <p>The assessment team concludes that monitoring procedures are appropriate, adequate and in compliance with the ICR rules.</p>	

## 6. Independent Review

The project documentation is reviewed by internal technical reviewer in order to independently confirm whether the applicable GHG program requirements were objectively met or not, in addition to whether internal procedures were followed while arriving at the validation opinion. The technical reviewer may accept or reject the validation opinion prepared by the assessment team and gives the reasons. The resolved findings may be opened at this stage or new findings may be identified that are required to be addressed by assessment team and/or project proponents, as appropriate. The technical reviewer is the decision maker on behalf of the Earthood Services Private Limited. A positive opinion is issued if all the findings have been satisfactorily resolved and in all other cases a negative opinion is issued unless the contract is terminated by either party before reaching the final opinion.

Earthood keeps all documents and records in a secure and retrievable manner for at least two years after the end of the project crediting period.

## 7. Validation Opinion

Earthood Services Private Ltd has performed a validation assessment of the proposed methodology “Reduction of GHG emissions by diverting unsold goods and food waste from disposal”. The assessment was performed in conformance to ICR methodology requirements version 2.0, ICR requirements v4.0 and tools referenced therein. The review of the methodology description document, supporting evidence, and ultimately, the resolution of findings is a sufficient measure, in Earthood’s opinion, to determine the compliance of the proposed methodology to the stated criteria.

In summary, it is Earthood’s opinion that the proposed methodology fulfills the aforementioned criteria no existing/proposed methodology in any other GHG programmed was found to fulfill the required quantification approach therefore the new methodology is being proposed to ICR for approval and registration as recommended by the methodology approval process v2.0.

## Appendix

### I. Documents reviewed or referenced in the report

No.	Title	Reference
1.	ICR Methodology requirements	V.2.0
2.	ICR requirements documents	V.4.0
3.	ICR definitions	V.1.0
4.	ICR methodology approval process	V.2.0
5.	ICR methodology description	V.2.0
6.	ICR concept note	V.1.0
7.	ISO 14064-1	2018
8.	ISO 14064-2	2019
9.	ISO 14064-3	2019
10.	ISO 14065	2020
11.	ISO 14066	2011
12.	CDM Large-scale Consolidated methodology- ACM0022	V.03.0
13	Approved VCS Methodology VM0018	V.1.0
14	CDM Tool 03, Project or leakage CO2 emissions from fossil fuel combustion	V.03
15	CDM Tool 04, Emissions from solid waste disposal sites	V.08.1
16	CDM Tool 05, Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation	V.03
17	CDM Tool 12, Project and leakage emissions from transportation of freight	V.01.1.0
18	IPCC defaults	-
19	DEFRA Conversion Factors	-
20	EPA GHG Emission Factors Hub	-

### II. Non-Conformities

**Table 1. CL from this validation**

Non-conformity ID:	CL 01	Reference to criteria:	Ref. to ICR requirement/ ISO 14064-2	Date:	10/05/2023
<b>Requirement:</b>	Methodologies shall demonstrate how they meet the requirements in the 'ICR Methodology Requirements' document and ISO 14064-2.				
<b>Observation:</b>	<p>Section 2, 'Summary description of the methodology' states that the</p> <p>The objective of a project using this methodology is to avoid/reduce GHG emissions, 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:</p> <ol style="list-style-type: none"> <li>1) Discounted products to be sold through rescue initiatives or to be donated through specific campaigns.</li> </ol>				

	<p>2) Animal feeding, with or without a potential preparation process.</p> <p>The methodology (table 2) further categorizes the following as products eligible under the unsold good category: Cosmetics, personal care, pharma, disinfectants, liquor, toys, stationary, books, food products (industrial processed), clothing and accessories, furniture, household goods, among others.</p> <p>In the project scenario, although the rescued good will be circulated back into the economy, it is noted by the assessment team that many of the above mentioned goods have a product lifetime after which those will be discarded by the users and end up in an SWDS/ incineration.</p>
<b>Non-conformity:</b>	<p>Although the life of many of the above-mentioned goods is expected to be prolonged in the project scenario, the goods will eventually reach their end of life. The methodology developer is requested to elaborate and provide further clarification on how the end of life of such products and their processing as waste at that time will be factored in the proposed methodology to ensure that the future emissions are not underestimated.</p>
<b>Response from project proponent:</b>	<p>Description of Products (Miscellaneous) category has been modified, including only unsold goods that can be totally consumed by end-users.</p>
<b>Referenced documentation:</b>	<p>See Section 3, definition of Miscellaneous. See Table 2 Section 5 of the proposed methodology.</p>
<b>Validators assessment of corrective actions:</b>	<p>The revised methodology states that <i>“For this methodology “miscellaneous” are unsold goods such as personal care products, pharmaceuticals, cosmetics, home care products and food products (industrially processed)”</i>, which can be completely utilized under reliable supply chains and will thus result in complete and permanent diversion of waste from the landfills. Therefore, the findings is closed.</p>
<b>Status:</b>	<p>Closed</p>

<b>Non-conformity ID:</b>	CL 02	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	<p>Applicability conditions should clearly define conditions where the project activities can be applied, e.g., geographic location, technology, and any other conditions where the methodology may or may not be applicable, as required in section 5.4 of “ICR Methodology Requirements v1.0.</p>				
<b>Observation:</b>	<p>Section 4, ‘Applicability conditions’ This methodology applies to project activities that:</p> <ul style="list-style-type: none"> <li>a) Divert unsold goods destined for final disposal (SWDS or incineration) that can be sold or donated in various initiatives.</li> <li>b) Divert food wastes destined for final disposal (SWDS or incineration) that can be used for animal feeding (processing or not).</li> </ul> <p>The methodology is further applicable under the following conditions:</p> <ul style="list-style-type: none"> <li>• Diverted unsold goods destined for disposal can be quantified and tracked.</li> <li>• Potential disposal sites (SWDS or incineration) can be identified for each region.</li> </ul>				

<p><b>Non conformity</b></p>	<ul style="list-style-type: none"> <li>For unsold goods discarded in the baseline, destruction can be documented.</li> </ul>
<p><b>Response from project proponent:</b></p>	<ol style="list-style-type: none"> <li>Methodology developer is requested to clarify what types of goods and commodities would be brought back into the mainstream.</li> <li>Methodology developer is requested to clarify how they are going to differentiate between the food items that are to be fed to the animals. If there will be any criteria for what is suitable as animal feed or expiry dates to be considered, the requirement should be further defined, while also clarifying how project developers will be expected to demonstrate whether those items are acceptable and appropriate for feeding purposes.</li> <li>Methodology developer is requested to clarify if and how the project developers are expected to track, quantify and monitor the utilization of unsold goods rescued from being disposed-of. It's not clear if the methodology also expects project developers to track and ensure that the rescued goods are actually utilized and are not ending up back in an SDWS due to poor distribution mechanisms, lacking QA/QC of the project or any other relevant factor.</li> </ol>
<p><b>Referenced documentation:</b></p>	<ol style="list-style-type: none"> <li>Applicability conditions have been modified to indicate unsold goods/food wastes that meet such requirement conditions would be brought back into the mainstream. Description of Miscellaneous category has been modified, including only unsold goods that can be totally consumed by end-users.</li> <li>Applicability conditions have been modified to indicate the requirements that food items need to meet to be suitable for animal feeding.</li> <li>Monitoring Plan has been updated to clarify if and how the project developers are expected to track, quantify and monitor the utilization of unsold goods rescued from being disposed-of.</li> </ol>
<p><b>Validators assessment of corrective actions:</b></p>	<ol style="list-style-type: none"> <li>See Section 4 Applicability conditions. See Table 2 Section 5 of the proposed methodology.</li> <li>See Section 4 Applicability conditions of the proposed methodology.</li> <li>See Section 9.1 Monitoring plan of the proposed methodology.</li> </ol> <ol style="list-style-type: none"> <li>The applicability condition is found modified and the miscellaneous items have been further defined to clarify the goods and commodities are restricted to items which can entirely consumed by the consumers without ending up in the landfill in future.</li> <li>The waste to be directed for animal feeding shall meet necessary conditions to demonstrate the suitability for animal consumption, which is updated in section 4 of the applied methodology.</li> <li>Section 9.1 of the methodology is found updated, ensuring that the emission reductions are only claimed for unsold goods which are consumed by the population and not sent back to the landfill.</li> </ol>
<p><b>Status:</b></p>	<p>Closed</p>

<p><b>Non-conformity ID:</b></p>	<p>CL03</p>	<p><b>Reference to criteria:</b></p>	<p>Ref. to ICR requirement/ ISO 14064-2</p>	<p><b>Date:</b></p>	<p>10/05/2023</p>
----------------------------------	-------------	--------------------------------------	---	---------------------	-------------------

<b>Requirement:</b>	The GHG included or excluded from the project boundary (baseline and project activities) should be listed in the provided table of the ICR Methodology Description Template, which is the requirement of applied methodology template.
<b>Observation:</b>	Section 5, 'Boundary' – Table 3 : GHG included in and excluded from the project activity: In the provided table for the Inclusion of GHGs, methodology developer has excluded the emissions occurring from the transportation.
<b>Non-conformity:</b>	Methodology developer is requested to clarify why the emissions due to transportation are excluded. The methodology states that <i>“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”</i> . However, it is to be noted that the project activities would involve additional good transportation which was not occurring in the baseline scenario i.e., additional trips due to diversion of those specific goods from SDWS and recirculation to the mainstream to the new beneficiaries which will be identified as part of the project activities.
<b>Response from project proponent:</b>	Project emissions for transportation are included. The option for exclusion was removed. a) When transportation activities are under control of project activity, transportation emissions are calculated taking into account the fossil fuel consumption. b) When transportation activities are operated by a third-party (rented or donated), transportation emissions are calculated taking into account the weight transported and distances travelled (Scope 3).
<b>Referenced documentation:</b>	See Table 3 Section 5 of the proposed methodology. See Equation 12 modified at Section 8.2 of the proposed methodology.
<b>Validators assessment of corrective actions:</b>	The revised methodology document now includes emissions due to transportation as part of project emissions. The transportation activities for diversion of waste now include both types of transportation- fully controlled by the project developer and third-party operated. The approach is found appropriate for accounting of project emissions.
<b>Status:</b>	Closed

<b>Non-conformity ID:</b>	CL 04	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Methodologies shall establish procedures to quantify leakage, where the potential for leakage is identified. When quantifying GHG emissions and/or removals achieved by the project the sum of emissions resulting from project activities and leakage shall be withdrawn: section 5.8 of “ICR Methodology Requirements v1.0”.				
<b>Observation:</b>	Section 8.3 of proposed methodology, ‘Leakage’  In this section methodology developer states that, “No leakage emissions have been identified for project activities associated with the management of unsold goods/food wastes through the rescue initiatives.”				

<b>Non-conformity:</b>	Methodology developer is requested to provide clarification for no leakage emissions being considered in the project boundary supported by relevant data or any similar methodologies to demonstrate why such leakages are not applicable to this methodology.
<b>Response from project proponent:</b>	Leakage emissions have been updated to consider anaerobic storage or disposal of unsold goods/food wastes in a SWDS.
<b>Referenced documentation:</b>	See Section 8.3 of the proposed methodology.
<b>Validators assessment of corrective actions:</b>	The methodology has been updated to account for leakages now, as is confirmed from the revised methodology document. The methodology developer has accounted for leakages from anaerobic storage or disposal of unsold goods/food wastes in a SWDS. The approach is found appropriate and sufficient to account for potential leakages from the project activities.
<b>Status:</b>	Closed

<b>Non-conformity ID:</b>	CL 05	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Methodology developer is required to follow the guidelines provided in the ICR Methodology Description Template, v.2.0 and ICR Methodology Requirements while developing the methodology. According to the template “The methodology language shall be normalized and according to ISO standards where the following verbal forms shall be used: “shall” indicates a requirement, “should” indicates a recommendation, “may” indicates a permission, “can” indicates a possibility or a capability.”				
<b>Observation:</b>	Section 9.3, ‘Monitored Data and Parameters’ For all parameters requiring calibration of the equipment used for measuring that parameter, comment provided in proposed methodology is “ <i>meters and instruments should be calibrated regularly as per industry practices</i> ”, thus indicating that calibration is only a recommendation and not a requirement.				
<b>Non-conformity:</b>	Methodology developer is requested to clarify why calibration of all equipment is not considered mandatory, considering that Accuracy is one of the main principles considered by ICR in the ICR requirement document version 4.0.				
<b>Response from project proponent:</b>	We have replaced “should” by “shall” in the Monitored Data and Parameters.				
<b>Referenced documentation:</b>	See Section 9.3 of the proposed methodology.				
<b>Validators assessment of corrective actions:</b>	The terminologies have been updated in section 9.3 of proposed methodology, now indicating that the calibration of equipment is mandatory for the project developers. The update is found appropriate and in line with ICR requirements.				
<b>Status:</b>	Closed				

<b>Non-conformity ID:</b>	<b>CL 06</b>	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Methodologies shall describe the criteria and procedures for obtaining, recording, compiling, and analyzing monitored data and parameters.				
<b>Observation:</b>	Section 9.2, 'Parameters remaining constant', For Parameter 'FFC <sub>j,y</sub> ', Fraction of fossil carbon has been defined for various waste types as per the IPCC default values defined in ACM0022. However, There is no provision for case when waste type is not comparable to a type listed in Table 4, or can not clearly be described as a combination of types in this table above.				
<b>Non-conformity:</b>	Methodology developer is requested to clearly define the provisions that should be under taken while applying the proposed methodology, where the waste type defined are not found to be comparable to the type listed or cannot be clearly described as a combination of types listed in proposed methodology.				
<b>Response from project proponent:</b>	We have included the measurement options of FFC <sub>j,y</sub> and FCC <sub>j,y</sub> as indicated into the CDM methodology ACM0022, Data / Parameter table 2.				
<b>Referenced documentation:</b>	See Section 9.2 Data Parameter FFC <sub>j,y</sub> and Data Parameter FCC <sub>j,y</sub> of the proposed methodology.				
<b>Validators assessment of corrective actions:</b>	The provisions for the parameter FFC <sub>j,y</sub> and FCC <sub>j,y</sub> where the waste type defined are not found to be comparable to the type listed or cannot be clearly described as a combination of types listed has now been defined in the relevant parameters in line with ACM0022, hence found to be appropriate.				
<b>Status:</b>	CLOSED				

<b>Non-conformity ID:</b>	<b>CL 07</b>	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Applicability conditions define conditions where the project activities can be applied, e.g., geographic location, technology, and any other conditions where the methodology may or may not be applicable.				
<b>Observation:</b>	<ol style="list-style-type: none"> <li>As per ACM0022, para 3 (I) 'The project activity does not reduce the amount of waste that would be recycled in the absence of the project activity. This shall be justified and documented in the clean development mechanism project design document (CDM-PDD);' However, the proposed methodology does not state any criteria related to the recycled product in the baseline scenario.</li> <li>It is not clear whether any other in the applicability conditions whether the unsold goods/ food wastes treated by any other methods other than SDWS and incineration will be applicable to apply the methodology or not.</li> </ol>				
<b>Non-conformity:</b>	<ol style="list-style-type: none"> <li>Methodology developer is requested to clarify whether the products that are already being recycled in the baseline scenario can be diverted to the rescue initiative or not.</li> <li>Methodology developer is requested to clarify whether the proposed methodology is applicable for any other waste treatment methods besides SDWS or incineration.</li> </ol>				
<b>Response from project proponent:</b>	<ol style="list-style-type: none"> <li>We have specified that the proposed methodology applies to project activity that does not reduce the amount of waste that would be recycled in the absence of the project activity.</li> </ol>				

<b>Referenced documentation:</b>	2. We have specified that the proposed methodology is not applicable for Baseline waste treatment methods other than SDWS or incineration.
	1. See Section 4 “Applicability Conditions” of the proposed methodology. 2. See Section 4 “Applicability Conditions” of the proposed methodology.
<b>Validators assessment of corrective actions:</b>	1. The applicability condition has now been included in section 4 of the MDD for the recycled products, which has been assessed and is found to be appropriate. 2. The applicability condition has now been included in section 4 of the MDD for the baseline disposal methods, which has been assessed and is found to be appropriate.
<b>Status:</b>	CLOSED

**Table 2. CAR from this validation**

<b>Non-conformity ID:</b>	CAR 01	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Methodology developer is required to follow the guidelines provided in the ICR Methodology Description Template, v.2.0 and ICR Methodology Requirements while developing the methodology. The template for ICR Methodology Description Version 2.0 states that “Discuss and argue the difference from the proposed new methodology and -, amend as needed. Provide a link to the referenced methodology”.				
<b>Observation:</b>	Section 1.1, ‘Other Methodologies’ – Table 1: ‘Methodologies identified with similar sectoral scope’, Methodology developer has mentioned all the referred methodology in the provided table but the version no and referral link of all the mentioned methodologies are not provided. Additionally, although the similar methodologies have been mentioned in the section, discussion and argument about the difference from the proposed new methodology are missing in section 1.1 of the proposed methodology,				
<b>Non-conformity:</b>	Methodology developer is requested to comply with the guidance and requirements of ICR Methodology Description Version 2.0 section 1.1.				
<b>Response from project proponent:</b>	Version number of referred methodologies are included. Referral link of referred methodologies are included.				
<b>Referenced documentation:</b>	See Table 1 Section 1.1 of the proposed methodology.				
<b>Validators assessment of corrective actions:</b>	The revised methodology indicates and discusses the similar methodologies to the proposed one and provides argument for how those existing methodologies are different. The justification provided was reviewed by the assessment team and it could be concluded that none of the existing methodologies entirely cover the scopes proposed in this methodology. The updated methodology now has also indicated the version numbers and links for the existing methodologies in line with the template guidance.				

<b>Status:</b>	Closed.
----------------	---------

<b>Non-conformity ID:</b>	CAR 02	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Methodology developer is required to follow the guidelines provided in the ICR Methodology Description Template, v.2.0 and ICR Methodology Requirements while developing the methodology.				
<b>Observation:</b>	<p>Section 1.2, 'Sources' lists all the sources and references employed by the methodology, however the reference links of the given sources have not been provided. The versions the following mentioned sources are not updated –</p> <ul style="list-style-type: none"> <li>CDM Tool 03, Project or leakage CO2 emissions from fossil fuel combustion, version 03.</li> <li>CDM Tool 04, Emissions from solid waste disposal sites, version 08.</li> <li>CDM Tool 05, Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation, version 03.</li> </ul> <p>Moreover, methodology developer has referred CDM TOOL 04 which is an older version for this TOOL.</p>				
<b>Non-conformity:</b>	Methodology developer is kindly requested to update this section using the latest version of the referred tools and sources and providing links for all the mentioned sources according to the ICR Methodology Description Template v.2.0.				
<b>Response from project proponent:</b>	Reference links were included. Version of Tool 04 was updated.				
<b>Referenced documentation:</b>	See Section 1.2 of the proposed methodology.				
<b>Validators assessment of corrective actions:</b>	The updates are found consistent and in line with the ICR requirements.				
<b>Status:</b>	Closed				

<b>Non-conformity ID:</b>	CAR 03	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Methodology developer is required to follow the guidelines provided in the ICR Methodology Description Template, v.2.0 and ICR Methodology Requirements while developing the methodology.				

<b>Observation:</b>	Section 9.2, 'Parameters remaining constant' In this section there are few parameters such as $EFF_{COM,i,y}$ , $\omega_{(j,i,y)}$ and few more for which all the components as per template are not addressed.
<b>Non-conformity:</b>	Methodology developer is requested to mention all the equations for all the data/parameters in the equation column and is further requested to address all the aspect of the parameter as given in the template.
<b>Response from project proponent:</b>	All equation numbers were included. All the aspects of the parameter given in the template has been considered.
<b>Referenced documentation:</b>	See Section 9.2 of the proposed methodology.
<b>Validators assessment of corrective actions:</b>	The revisions were found in line with the template guidance and ICR requirements.
<b>Status:</b>	Closed

<b>Non-conformity ID:</b>	CAR 04	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	10/05/2023
<b>Requirement:</b>	Methodology developer shall set out defined terms in addition to those already included in the ICR program to help users understand the context of the methodology and improve its readability.				
<b>Observation:</b>	Figure 1 and 2 has defined the terms 'Alternative treatment' and 'secondary market'. However, the definition of these terms in context of the proposed methodology are not been defined in section 3 'Definitions'.				
<b>Non-conformity:</b>	Methodology developer is requested to define all the terms that are being used in the context of the proposed methodology.				
<b>Response from project proponent:</b>	Definitions of "alternative treatment" and "secondary market" have been included.				
<b>Referenced documentation:</b>	See Section 3 "Definitions" of the proposed methodology.				
<b>Validators assessment of corrective actions:</b>	The definitions for 'Alternative treatment' and 'secondary market' has now been included in section 3 of the MDD.				
<b>Status:</b>	CLOSED				

**Table 3. FAR from this validation**

<b>Non-conformity ID:</b>	Ref.no	<b>Reference to criteria:</b>	Ref. to ICR requirement/ ISO 14064-2	<b>Date:</b>	DD/MM/YYYY
---------------------------	--------	-------------------------------	---	--------------	------------

Requirement:	NA
Observation:	NA
Non-conformity:	NA
Response from project proponent:	NA
Referenced documentation:	NA
Validators assessment of corrective actions:	NA
Status:	NA

### III: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emission
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
MP	Monitoring Period
CO2	Carbon di oxide
CP	Crediting Period
DR	Desk Review
EB	Executive Board
ER	Emission Reductions
EIA	Environmental Impact Assessment
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Green House Gas
ICCs	International Carbon Credits
ICR	International Carbon Registration
MR	Monitoring Report

MDD	Methodology Developer
PDD	Project Design Description
PP	Project Proponent
SWDS	Solid Waste Disposal Site
tCO <sub>2</sub> e	Tonnes of Carbon di oxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VVB	Validation and Verification Body

## IV: Competence statements

Competence Statement			
<b>Name</b>	Shifali Guleria		
<b>Education</b>	M.Sc. (Environmental Studies and Resource Management), TERI University		
<b>Experience</b>	3+ year		
<b>Field</b>	Climate Change		
Approved Roles			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Methodology Expert</b>	YES (AMS-I.A., AMS-II.G., AMS-II.E., AMS-III.A.V., AMS-I.D, ACM0002)		
<b>Local expert</b>	YES		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	YES		
<b>TA Expert</b>	YES (1.2, 3.1)		
<b>Reviewed by</b>	Deepika Mahala	<b>Date</b>	18/02/2022
<b>Approved by</b>	Ashok Gautam	<b>Date</b>	18/02/2022

Competence Statement	
<b>Name</b>	Divij Varshney
<b>Education</b>	M.Tech. Renewable energy systems B.Tech. Electrical Engineering
<b>Experience</b>	1.5 years
<b>Field</b>	Climate Change & Environment / Industry
Approved Roles	
<b>Team Leader</b>	NO
<b>Validator</b>	YES
<b>Verifier</b>	YES
<b>Methodology Expert</b>	NO
<b>Local expert</b>	NO
<b>Financial Expert</b>	NO

Technical Reviewer	NO		
TA Expert (X.X)	NO		
Reviewed by	Shifali Guleria, Quality Manager	Date	01/04/2023
Approved by	Deepika Mahala, Technical Manager	Date	01/04/2023

Competence Statement			
Name	Kaviraj Singh		
Education	Ph.D. (Environmental Engineering), IIT Delhi Masters (Energy & Environmental), DAVV Indore		
Experience	15 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-II.D., ACM0006, AMS-I.A., AMS-I.C., AMS-II.B., AMS-III.H, ACM0002, ACM0001, AM0080, ACM0018, AM0056, AM0073 VM0042, AMS-III.G, AMS-III.AF., VM0032, VM0018, ACM0010, ACM0022, AMS- III.D, AMS-III.F and AMS-III.A.Q		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert (X.X)	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
Reviewed by	Shifali Guleria (Quality Manager)	Date	02/02/2023
Approved by	Deepika Mahala (Technical Manager)	Date	02/02/2023

Competence Statement			
Name	Deepika Mahala		
Country	India		
Education	M. Sc. (Environment Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G, AMS-II.C		
Local expert	YES (India, Bangladesh)		
Financial Expert	NO		
Technical Reviewer	YES		

<b>TA Expert</b>	YES (TA 1.2 & TA 3.1)		
<b>Reviewed by</b>	Shifali Guleria (QM)	<b>Date</b>	28/04/2022
<b>Approved by</b>	Kaviraj Singh (MD)	<b>Date</b>	28/04/2022

<b>Competence Statement</b>			
<b>Name</b>	Ashok Gautam		
<b>Country</b>	India		
<b>Education</b>	M. Sc. (Environmental Sciences) M. Tech. (Energy & Environmental Management)		
<b>Experience</b>	16 Years +		
<b>Field</b>	Energy, Climate Change & Environment		
<b>Approved Roles</b>			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Methodology Expert</b>	AMS-I.D., AMS-I.A., AMS-I.C., AMS-I.E, AMS-II.D., AMS-II.G., AMS-III.E., AMS-III.H., AMS-III.Q, AMS-III.Z., AMS-III.AV., AMS III.AR, AM0029, AM0025, AM0056, ACM0001, ACM0002, ACM0004, ACM0012, ACM0006, AM0018, ACM0017, ACM0009, AM0034, AMS.I.B, ACM0016, AMS-III.BL, AMS-II.L, AMS-I.I., AMS-III.A.O., ACM0010, ACM0025		
<b>Local expert</b>	YES (India)		
<b>Financial Expert</b>	YES		
<b>Technical Reviewer</b>	YES		
<b>TA Expert</b>	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1)		
<b>Reviewed by</b>	Shifali Guleria	<b>Date</b>	06/03/2023
<b>Approved by</b>	Deepika Mahala	<b>Date</b>	06/03/2023