

INITIATIVE FOR CLIMATE ACTION TRANSPARENCY (ICAT) IN TRINIDAD AND TOBAGO

DELIVERABLE 3-

REPORT AND GUIDANCE SUMMARY DOCUMENT

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Introduction

The Paris Agreement was adopted in December 2015 and entered into force on 4th November 2016. Trinidad and Tobago ratified the Paris Agreement in February 2018. As part of the Paris Agreement, Trinidad and Tobago submitted its plans for reducing greenhouse gas (GHG) emissions, known as the Nationally Determined Contribution (NDC), which stipulates the reduction in cumulative emissions from a business as usual (BAU) baseline by 15% in the transport, industry, and power generation sectors, to be achieved by 2030.

The Paris Agreement requires governments to report on the implementation of their NDCs through a robust accountability and transparency system, known as Monitoring, Reporting and Verification (MRV) Systems, that are to produce accurate, transparent, comparable, complete and consistent information regarding the emission and mitigation of GHGs.

The Government of the Republic of Trinidad and Tobago (GoRTT), through the Ministry of Planning and Development (MPD), has developed a National Climate Mitigation MRV System to support Paris Agreement Enhanced Transparency Framework (ETF) reporting of GHG inventories, NDC tracking, mitigation assessment and data management tools.

The development of the National Climate Mitigation MRV System, and Trinidad and Tobago's Knowledge Management System (KMS) are integral to the GHG emission reporting process. Trinidad and Tobago must implement both systems to provide more accurate emissions estimates to the UNFCCC and the Paris Agreement, as well as to inform decision makers on potential climate change policy measures and mitigation activities. The success of a National MRV System is essential to leveraging climate finance in the future, which is available for developing countries to help achieve the goals set out in the NDC.

The Pilot Project under the Initiative for Climate Action Transparency (ICAT) serves to test the aforementioned system and includes the delineation of roles and responsibilities of institutions and stakeholders chosen/invited to participate, capacity building requirements (human, technical, financial and institutional) of these entities, and to identify potential improvements/obstacles before a full national roll-out. This report outlines the following-

- (1) Guidance documents used by participating stakeholders and the EMA during the pilot project.
- (2) Additional guidance documents to overcome obstacles identified by stakeholders, the EMA and the consulting team.
- (3) Summary of improvements to the MRV System before the envisaged full national roll-out (building upon recommendation sections in deliverables 1 and 2).

ICAT Pilot Project: What Guidance Documents/MRV System Templates were used?

Trinidad and Tobago's Pilot Project is an initial small-scale implementation of T&T's National Climate Mitigation MRV System and served to test the ease of use of the recommended MRV System templates before the envisaged full rollout of the T&T MRV System.

Template/Document Title	Summary/Description
Roles and Responsibilities Document (Inclusive of Organisational Structures of MRV System)	Identifies key institutional players including the Coordinating Entity (MPD), Holder of the KMS (EMA), Executing Entities (Ministries and Stakeholders) and the Compliance and Verification Body. The technical and institutional capacities with respect to GHG accounting procedures and the MRV System are assessed, and their respective roles and responsibilities are outlined.
National MRV Coordinator Job Description (inclusive of the cross cutting and detailed checklist for the GHG Inventory)	This document provides the ideal roles and key responsibilities for Trinidad and Tobago's National MRV Coordinator in order to coordinate and manage the development of Trinidad and Tobago's national GHG inventory. Checklists for crosscutting issues of the GHG inventory, as well as a detailed checklist of the national GHG inventory are included.
Trinidad and Tobago's Institutional Arrangements Document	<p>This document allows those responsible in the Coordinating Entity to document and assess the existing institutional arrangements present for ministerial/stakeholder executing entities included in the MRV System. Analysis of these findings will allow Trinidad and Tobago to plan for its future inventory development and ensure the following:</p> <ul style="list-style-type: none"> • To facilitate future improvement prioritisation. • To ensure sustainability and integrity of Trinidad and Tobago's national GHG inventory.

Template/Document Title	Summary/Description
	<ul style="list-style-type: none"> To promote the institutionalisation of the GHG inventory process.
Trinidad and Tobago's Memorandum of Understanding Template	The purpose of this document is to promote and carry out cooperative activities between the coordinating entity and relevant stakeholders related to climate change issues including, inter alia, GHG emission/reduction estimates, mitigation actions and support received for climate change policies/actions according to their respective competencies and based on principles of information exchange, reciprocity, equality and mutual benefit.
Trinidad and Tobago's Confidentiality Agreement Template	This document allows for an agreement between the coordinating entity, holder of the KMS and the relevant ministerial executing entity/stakeholder for the supply of confidential information for the development of Trinidad and Tobago's national GHG inventory emission estimates.
Trinidad and Tobago's National GHG Inventory Improvement Plan	This document, when completed, will allow Trinidad and Tobago to identify and prioritise improvements to the National Climate Mitigation MRV System. As the MRV System evolves, these highlighted improvements will allow for more transparency, accuracy, completeness, comparability and consistency for Trinidad and Tobago's future GHG inventories.
Unit Tables	This document provides relevant/applicable conversion tables for all ministerial and stakeholder executing entities involved within Trinidad and Tobago's National Climate Mitigation MRV System. Use of these conversion tables will further improve TACCC principles within the system for units of data and GHG emission calculations.
Trinidad and Tobago's Key Category Analysis Document	This document provides the template for Trinidad and Tobago to identify the sources and sinks present that have the largest contribution to Trinidad and Tobago's GHG net emission totals. A key category analysis tool has been provided to work in conjunction with the IPCC reporting software used in the KMS.

Template/Document Title	Summary/Description
National QA/QC Coordinator Job Description	This document provides the ideal roles and responsibilities of Trinidad and Tobago's National QA/QC Coordinator in order to coordinate and manage QA/QC checks for Trinidad and Tobago's national GHG inventory. A QA/QC checklist for the National Coordinator is also provided.
Trinidad and Tobago's QA/QC Document	This guidance document provides a template for the establishment of a National QA/QC Programme that improves TACCC principles for Trinidad and Tobago's GHG inventory. Checklists have been included for the following: inventory and QA/QC coordinators, sector leads and specific management roles for QA/QC procedures.
Trinidad and Tobago's Data Archiving System Document	This document aims to facilitate the following: <ul style="list-style-type: none"> ● Provide Trinidad and Tobago with safeguard measures to avoid loss of data and information. ● Allow for Trinidad and Tobago to reproduce and update GHG estimates entered into the KMS. ● Allow/facilitate future inventory staff to develop Trinidad and Tobago's subsequent GHG inventories.
Trinidad and Tobago's KMS Functionalities	This table provides a template for the functionalities of the KMS at inception. Use of the National GHG Inventory Improvement Plan will inform if changes or additions need to be made to these functionalities for future GHG inventories.
Trinidad and Tobago's Methodologies/Data Documentation Document	This document assists Trinidad and Tobago's stakeholders involved in GHG estimates/removals to document and report relevant activity datasets, relevant emission factors and the origin/reasoning of chosen methodologies. The information provided will also allow for future GHG inventory teams to access the following:

Template/Document Title	Summary/Description
	<ul style="list-style-type: none"> • What chosen methods were used. • How relevant activity data/emission factors were obtained. • How information relevant to the inventory was obtained.
Trinidad and Tobago's Quality Assurance Document	<p>This document provides checklists for expert reviewers/chosen personnel not involved in the operational running of the MRV system to run quality assurance checks on Trinidad and Tobago's national GHG inventory estimates. Checklists provided for the reviewer include the following:</p> <ul style="list-style-type: none"> • Cross-cutting checks for Trinidad and Tobago's national GHG inventory. • Checklists for the energy, IPPU, AFOLU and waste sectors.

Obstacles and Recommended Improvements of Relevant Documents

N.B.- Please see Table on page 9

Template/Document Title	Obstacles Encountered by the EMA/Stakeholders and Consultant Team during testing phase	Recommended Improvements
Roles and Responsibilities Document (Inclusive of Organisational Structures of MRV System)	None	N/A
National MRV Coordinator Job Description (inclusive of the cross cutting and detailed checklist for the GHG Inventory)	N.B- This document was tested by the consultant team with no issues being encountered.	N/A
Trinidad and Tobago's National GHG Inventory Improvement Plan	N.B- This document was tested by the consultant team with no issues being encountered.	N/A

Template/Document Title	Obstacles Encountered by the EMA/Stakeholders and Consultant Team during testing phase	Recommended Improvements
Unit Tables	Unit tables provided were adequate for the Pilot Project.	During analysis of the results of the pilot project, the consultant team found a more expansive list of unit tables in the UNFCCC SIDS workbook. These additional units and conversions have been included in the unit table document embedded in the KMS.
Trinidad and Tobago's Key Category Analysis Document	This document was tested by the consultant team with no issues being encountered.	N/A
Trinidad and Tobago's QA/QC Document	<p>As highlighted in deliverables 1 and 2, only one stakeholder tested the QA/QC document and associated checklist. The consultant team also carried out detail testing of the document. During follow up calls and emails with participants, the main highlighted issues identified were-</p> <ul style="list-style-type: none"> • Lack of knowledge of the IPCC guidelines and the relevant volumes for their specific identified reporting categories. 	The consultant team has created new guidance documents for each sector to be used in tandem with the MRV system templates embedded in the MRV system. Sections include prioritised excerpts of the IPCC guidelines and data collection sheets specific to the relevant stakeholder reporting categories.

Template/Document Title	Obstacles Encountered by the EMA/Stakeholders and Consultant Team during testing phase	Recommended Improvements
	<ul style="list-style-type: none"> • Lack of knowledge of specific activity data to be collected for their relevant sectors. 	
Trinidad and Tobago's Methodologies/Data Documentation Document	<p>As highlighted in deliverables 1 and 2, approximately 40% of stakeholders completed at least one section of the template with 60% not submitting the aforementioned. During follow- up calls and emails with participants, the main highlighted issues identified were-</p> <ul style="list-style-type: none"> • Lack of knowledge of the IPCC guidelines and the relevant volumes for their specific identified reporting categories. • Needed more guidance on default emission factors • Lack of knowledge of specific activity data to be collected for their relevant sectors. 	<p>The consultant team has created new guidance documents for each sector to be used in tandem with the MRV system templates embedded in the MRV system. Sections include prioritised excerpts of the IPCC guidelines (inclusive of emission factor defaults) and data collection sheets specific to the relevant stakeholder reporting categories.</p>

Template/Document Title	Obstacles Encountered by the EMA/Stakeholders and Consultant Team during testing phase	Recommended Improvements
Trinidad and Tobago's Quality Assurance Document	The consultant team is currently testing this document during the QA of T&T's 3 rd NC/1 st BUR.	During analysis of previous submitted data but the 3 rd NC/1 st BUR consultant, the expert team noticed a lack of clarity on BUR reporting guidelines. An additional internal document has been prepared and adapted from the UNFCCC reporting guidelines and expert reviewer checklists. An improved Quality Assurance document will be submitted for inclusion in the T&T MRV/KMS at the end of November 2020.

Additional Guidance Documents to be included in the KMS/MRV System

After critical analysis of the results of the pilot project and correspondence with participants (emails/phone), the following additional guidance documents (See Annexes 1-6 for excerpts) have been provided to address the prioritised issues described above. N.B. – ***Excerpts containing data collection sheets and country specific guidance documents in the annexes have been removed from the official submission for confidentiality purposes. A separate document inclusive of all confidential information has been submitted separately to the MPD for internal use.***

- For all reporting sectors (Energy, IPPU, Waste and AFOLU)- initial mapping of IPCC categories and the corresponding Common Reporting Format and Tables, activity data collection sheets for all relevant reporting categories, IPCC calculation methodology annexes, IPCC decision trees and emission factor/activity data tables. N.B.- Activity data collection sheets have been provided for use by Trinidad and Tobago from the Greenhouse Management Institute (GHGMI) and the Caribbean Cooperative MRV Hub (CCMRVH). At present, these documents are currently being improved and will be available at the end of 2020. As these newer versions become available- they will be embedded into the KMS.
- Reporting Guidelines Internal Document- Provides a summary checklist of the National Communication and BUR Reporting Guidelines for the EMA and Coordinating entity to prepare for submission of UNFCCC reports. N.B.- Though this pilot project tested the GHG Inventory portion of the KMS/MRV System, the checklist includes sections on mitigation actions, cross-cutting issues and support received.
- Activity Data Internal Document- One of the main challenges faced by the stakeholders was the selection of activity datasets for their calculations. This document provides activity data required for Tier 1 and Tier 2 calculations for T&T reported categories.

Overall Recommended Prioritised Improvements for the T&T KMS/MRV System

- Continued Improvement of MRV System templates to meet the needs of Trinidad and Tobago for future reporting under the Enhanced Transparency Framework and submission of Biennial Transparency Reports.
- Enhanced capacity building training for the EMA members responsible for the compilation of future GHG inventory reports. Emphasis should be placed on sectoral quality control checks, uncertainty assessments, calculation methodologies to cover Forestry and Other Land Use (FOLU) and UNFCCC reporting guidelines.
- As highlighted in deliverables 1 and 2, there is the need to increase the institutional capacity at the EMA. At present, given the current workload of members of the air unit, a minimum of 2 additional staff is recommended.
- Enhanced capacity building training for stakeholders. Emphasis should be placed on the selection of emission factors and activity data, calculation methodologies, QA/QC procedures (general) and data archiving for the relevant reporting categories.

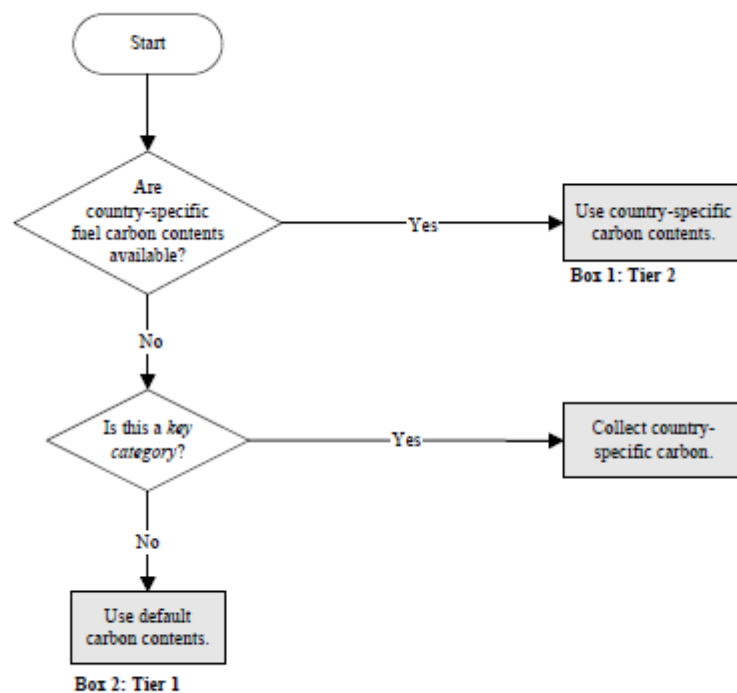
- Additional training/ walkthrough on the step by step process of interaction with the KMS/MRV system for stakeholders and intended users not included in the pilot project. N.B.- this recommendation has been included as many of the pilot project participants did not use and interact with the system for a prolonged period.
- Consideration to include ATMO GHG software (Spherical) as a potential replacement to the IPCC inventory software. The ATMO software includes components such as common reporting tables and is being developed to meet the envisaged needs of the Enhanced Transparency Framework. Given its potential to improve the outputs of the current KMS/MRV system, the consultant team has conducted initial testing to determine its feasibility.
- Pilot Projects to test the Mitigation and Support (climate finance, technology transfer and capacity building) components of the KMS/MRV system in preparation for the system's full roll-out and future NDC tracking.

Annex 1- Additional Energy Sector Guidance Excerpts

N.B.- Energy data collection sheets and country specific guidance removed for confidentiality purposes.

Sector	Energy								
Category	Fuel combustion activities								
Category Code	1A ^(a)								
Sheet	1 of 4 (CO ₂ , CH ₄ and N ₂ O from fuel combustion by source categories – Tier 1)								
	Energy consumption			CO ₂		CH ₄		N ₂ O	
	A	B	C	D	E	F	G	H	I
	Consumption	Conversion Factor ^(b)	Consumption	CO ₂ Emission Factor	CO ₂ Emissions	CH ₄ Emission Factor	CH ₄ Emissions	N ₂ O Emission Factor	N ₂ O Emissions
	(Mass, Volume or Energy unit)	(TJ/unit)	(TJ)	(kg CO ₂ /TJ)	(Gg CO ₂)	(kg CH ₄ /TJ)	(Gg CH ₄)	(kg N ₂ O /TJ)	(Gg N ₂ O)
			C=A*B		E=C*D/10 ⁶		G=C*F/10 ⁶		I=C*H/10 ⁶
Liquid fuels									
Crude Oil									
Orimulsion									
Natural Gas Liquids									
Motor Gasoline									
Aviation Gasoline									
Jet Gasoline									
Jet Kerosene									
Other Kerosene									
Shale Oil									
Gas / Diesel Oil									

Figure 3.2.2 Decision tree for CO₂ emissions from fuel combustion in road vehicles



Note: See Volume 1 Chapter 4, “Methodological Choice and Key Categories” (noting section 4.1.2 on limited resources) for discussion of *key categories* and use of decision trees.

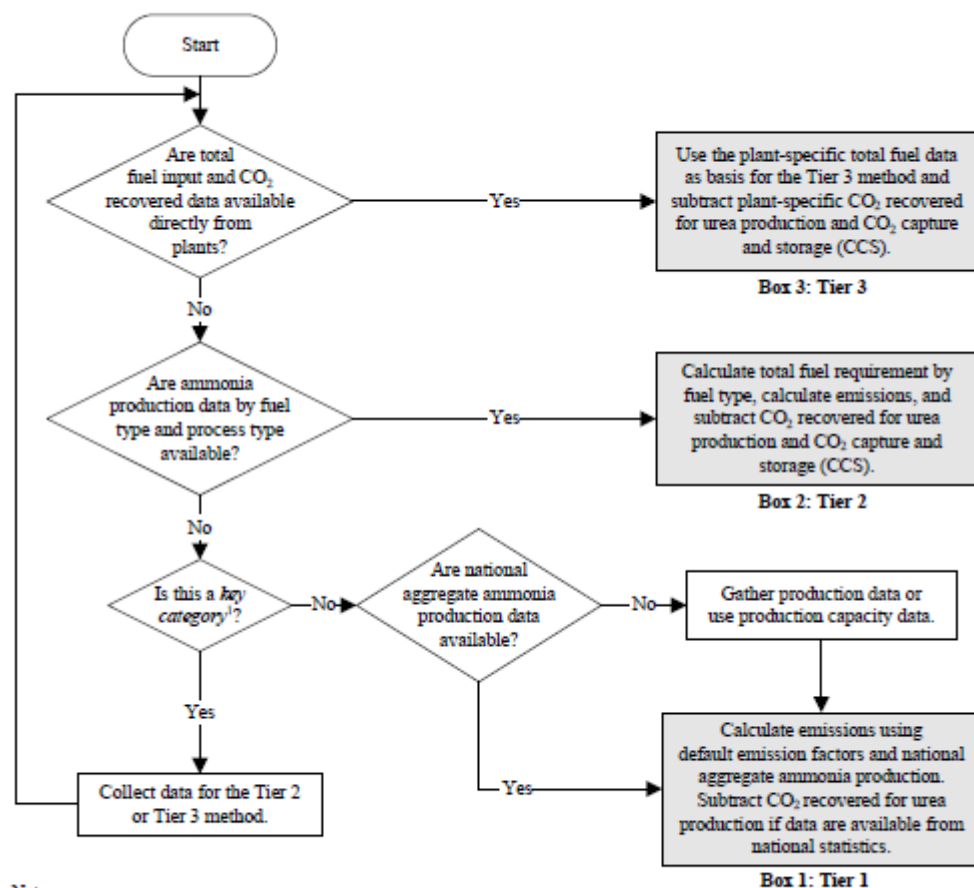
TABLE 3.2.1 ROAD TRANSPORT DEFAULT CO ₂ EMISSION FACTORS AND UNCERTAINTY RANGES ^a			
Fuel Type	Default (kg/TJ)	Lower	Upper
Motor Gasoline	69 300	67 500	73 000
Gas/ Diesel Oil	74 100	72 600	74 800
Liquefied Petroleum Gases	63 100	61 600	65 600
Kerosene	71 900	70 800	73 700
Lubricants ^b	73 300	71 900	75 200
Compressed Natural Gas	56 100	54 300	58 300
Liquefied Natural Gas	56 100	54 300	58 300
Source: Table 1.4 in the Introduction chapter of the Energy Volume.			
Notes:			
^a Values represent 100 percent oxidation of fuel carbon content.			
^b See Box 3.2.4 Lubricants in Mobile Combustion for guidance for uses of lubricants.			

Annex 2- Additional IPPU Sector Guidance Excerpts

N.B.- IPPU data collection sheets and country specific guidance removed for confidentiality purposes.

Sector	Industrial Processes and Product Use			
Category	Chemical Industry - Petrochemical and Carbon Black Production			
Category Code	2B8			
Sheet	1 of 12 CO ₂ Emissions from Methanol Production			
	A	B	C	D
Type of Process/Type of Feedstock ^{1), 2)}	Amount of Methanol Produced	Emission Factor	CO ₂ Emissions	CO ₂ Emissions
	(tonne)	(tonne CO ₂ /tonne methanol produced)	(tonne CO ₂)	(Gg CO ₂)
			$C = A * B$	$D = C/10^3$
Type of Process = [] (please specify)				
Feedstock = [] (please specify)				
Type of Process = [] (please specify)				
Feedstock = [] (please specify)				
Total				

Figure 3.1 Decision tree for estimation of CO₂ emissions from ammonia production



Note:

1. See Volume 1 Chapter 4, Methodological Choice and Identification of Key Categories (noting Section 4.1.2 on limited resources), for discussion of *key categories* and use of decision trees.

TABLE 3.1
DEFAULT TOTAL FUEL REQUIREMENTS (FUEL PLUS FEEDSTOCK) AND EMISSION FACTORS FOR AMMONIA PRODUCTION
(PER TONNE NH₃)

Production Process	Total fuel requirement (GJ(NCV)/tonne NH ₃) ± Uncertainty (%)	Carbon content factor [CCF] ¹ (kg/GJ)	Carbon oxidation factor [COF] ¹ (fraction)	CO ₂ emission factor (tonnes CO ₂ /tonne NH ₃)
Modern plants – Europe				
Conventional reforming – natural gas	30.2 (± 6%)	15.3	1	1.694
Excess air reforming – natural gas	29.7 (± 6%)	15.3	1	1.666
Autothermal reforming – natural gas	30.2 (± 6%)	15.3	1	1.694
Partial oxidation	36.0 (± 6%)	21.0	1	2.772
Derived from European average values for specific energy consumption (Mix of modern and older plants)				
Average value – natural gas	37.5 (± 7%)	15.3	1	2.104

Annex 3- Additional Waste Sector Guidance Excerpts

N.B.- Waste data collection sheets and country specific guidance removed for confidentiality purposes.

Figure 3.1 Decision Tree for CH₄ emissions from Solid Waste Disposal Sites

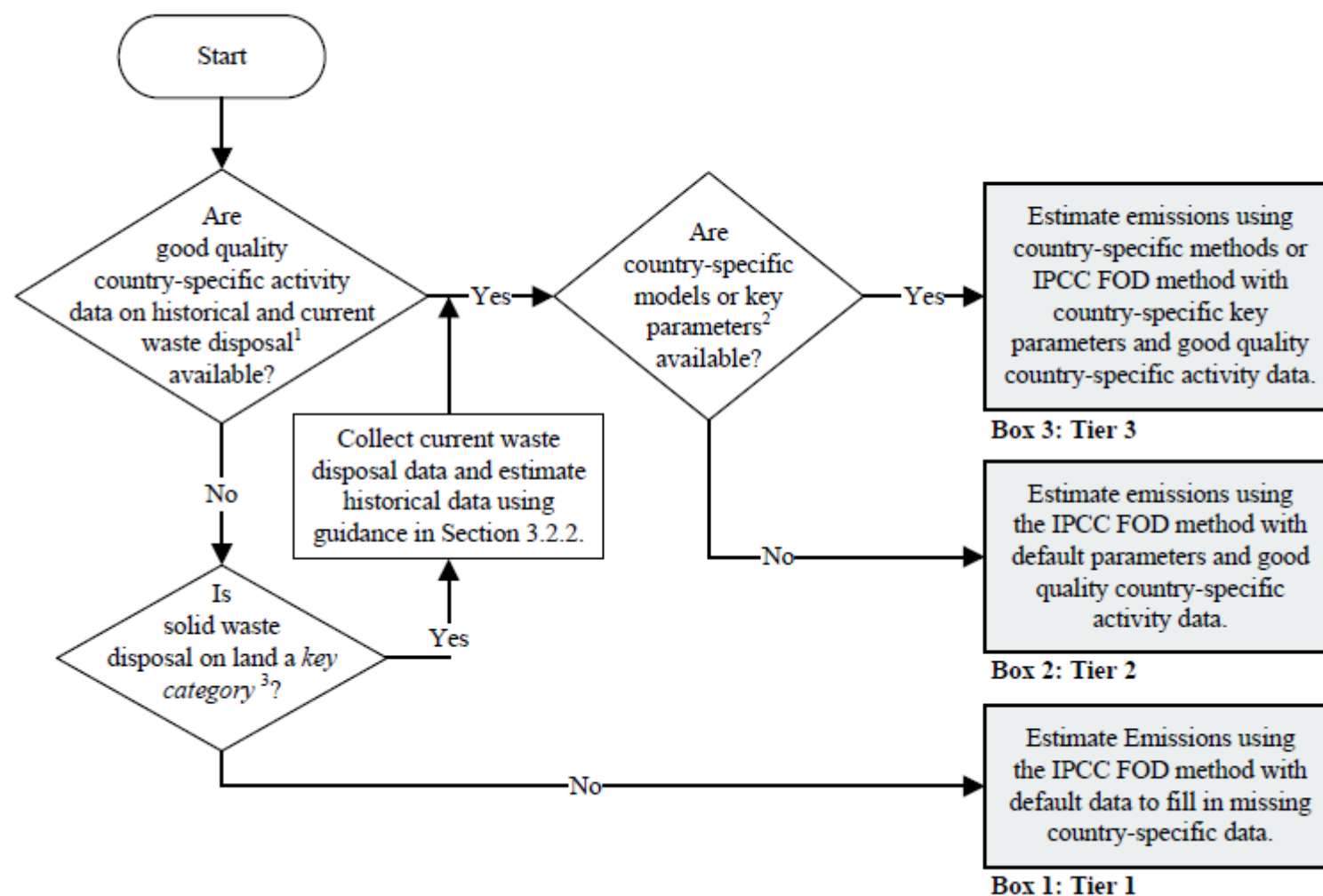


TABLE 3.1
SWDS CLASSIFICATION AND METHANE CORRECTION FACTORS (MCF)

Type of Site	Methane Correction Factor (MCF) Default Values
Managed – anaerobic ¹	1.0
Managed – semi-aerobic ²	0.5
Unmanaged ³ – deep (>5 m waste) and /or high water table	0.8
Unmanaged ⁴ – shallow (<5 m waste)	0.4
Uncategorised SWDS ⁵	0.6

¹ **Anaerobic managed solid waste disposal sites:** These must have controlled placement of waste (i.e., waste directed to specific deposition areas, a degree of control of scavenging and a degree of control of fires) and will include at least one of the following: (i) cover material; (ii) mechanical compacting; or (iii) levelling of the waste.

² **Semi-aerobic managed solid waste disposal sites:** These must have controlled placement of waste and will include all of the following structures for introducing air to waste layer: (i) permeable cover material; (ii) leachate drainage system; (iii) regulating pondage; and (iv) gas ventilation system.

³ **Unmanaged solid waste disposal sites – deep and/or with high water table:** All SWDS not meeting the criteria of managed SWDS and which have depths of greater than or equal to 5 metres and/or high water table at near ground level. Latter situation corresponds to filling inland water, such as pond, river or wetland, by waste.

⁴ **Unmanaged shallow solid waste disposal sites:** All SWDS not meeting the criteria of managed SWDS and which have depths of less than 5 metres.

⁵ **Uncategorised solid waste disposal sites:** Only if countries cannot categorise their SWDS into above four categories of managed and unmanaged SWDS, the MCF for this category can be used.

Sources: IPCC (2000); Matsufuji *et al.* (1996)

Annex 4- Additional AFOLU Sector Guidance Excerpts

N.B.- AFOLU data collection sheets and country specific guidance removed for confidentiality purposes.

Sector	Agriculture, Forestry and Other Land Use				
Category	Methane Emissions from Enteric Fermentation and Manure Management				
Category code	3A1 and 3A2				
Sheet	1 of 1				
Equation	Equation 10.19		Eq. 10.19 and 10.20	Equation 10.22	
Species/Livestock category	Number of animals	Emission factor for Enteric Fermentation	CH ₄ emissions from Enteric Fermentation	Emission factor for Manure Management	CH ₄ emissions from Manure Management
	(head)	(kg head ⁻¹ yr ⁻¹)	(Gg CH ₄ yr ⁻¹)	(kg head ⁻¹ yr ⁻¹)	(Gg CH ₄ yr ⁻¹)
		Tables 10.10 and 10.11	CH ₄ Enteric = N _(T) * EF _(T) * 10 ⁻⁶	Tables 10.14 - 10.16	CH ₄ Manure = N _(T) * EF _(T) * 10 ⁻⁶
T	N _(T)	EF _(T)	CH ₄ Enteric	EF _(T)	CH ₄ Manure
Dairy Cows					
Other Cattle					
Buffalo					
Sheep					
Goats					
Camels					
Horses					
Mules and Asses					
Swine					
Poultry					

TABLE 10.1
REPRESENTATIVE LIVESTOCK CATEGORIES^{1,2}

Main categories	Subcategories
Mature Dairy Cow or Mature Dairy Buffalo	<ul style="list-style-type: none"> • High-producing cows that have calved at least once and are used principally for milk production • Low-producing cows that have calved at least once and are used principally for milk production
Other Mature Cattle or Mature Non-dairy Buffalo	<p>Females:</p> <ul style="list-style-type: none"> • Cows used to produce offspring for meat • Cows used for more than one production purpose: milk, meat, draft <p>Males:</p> <ul style="list-style-type: none"> • Bulls used principally for breeding purposes • Bullocks used principally for draft power
Growing Cattle or Growing Buffalo	<ul style="list-style-type: none"> • Calves pre-weaning • Replacement dairy heifers • Growing / fattening cattle or buffalo post-weaning • Feedlot-fed cattle on diets containing > 90 % concentrates
Mature Ewes	<ul style="list-style-type: none"> • Breeding ewes for production of offspring and wool production • Milking ewes where commercial milk production is the primary purpose
Other Mature Sheep (>1 year)	<ul style="list-style-type: none"> • No further sub-categorisation recommended
Growing Lambs	<ul style="list-style-type: none"> • Intact males • Castrates • Females

Annex 5- Excerpt from Internal Guidelines Review checklist

GHG Inventory

- Has the submitted BUR by THE PARTY shall covered at a minimum- the GHG inventory for the calendar year no more than four years prior to the date of the submission? More recent years can be included if relevant information is available. (*Biennial Update Reports (decision 2/CP.17, annex III) para 41(g)*)
- Has THE PARTY used the methodologies established by the latest UNFCCC guidelines for the preparation of national communications from non-Annex I Parties approved by COP or those determined by any future decision of the COP on this matter? (Example- THE PARTY should clearly report the use of the 2006 IPCC Guidelines or the Revised 1996 IPCC Guidelines) (*Decision 2/CP.17 and its annex: "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention" para 4*)
- Has THE PARTY during the updates of the sections in its national GHG inventories- updated data on activity levels based on the best information available using at a minimum- the Revised 1996 IPCC Guidelines for National GHG Inventories, the IPCC good practice guidance GPG and Uncertainty Management in National GHG Inventories, and the IPCC GPG for LULUCF? N.B.- Any change to the emission factor may be made in the subsequent full national communication. (*Decision 2/CP.17 and its annex: "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention" para 5*)

Needs and Support Received

- Has THE PARTY provided updated information on the following?

(i) Constraints and gaps

(ii) Related financial, technical, and capacity-building needs

Decision 2/CP.17 and its annex: "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention", Para 14

- Has THE PARTY provided updated information on financial resources, technology transfer, capacity-building and technical support received from the Global Environmental facility, Annex II Parties and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current biennial update report?

Decision 2/CP.17 and its annex: "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention", Para 15

- With regard to the development and transfer of technology, has THE PARTY provided information on:

(a) Technology needs (nationally determined)

(b) Technology support received

Decision 2/CP.17 and its annex: "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention", Para 16

Annex 6- Excerpt from Internal Activity Data Sheet

IPCC Code	IPCC Category	Relevant Reported Gases	Minimum Activity Data
2.A	Mineral industry		
2.A.1	Cement		Mass of cement produced Mass of imports of clinker Mass of exports of clinker
2.A.2	Lime		Mass of lime produced
2.A.3	Glass		Mass of glass produced
2.A.4	Other process uses of carbonates		Mass of total (pure) carbonates consumed. Indicate if only amount of carbonate rock or clays are known, as opposed to pure carbonates.
2.B	Chemical Industry		
2.B.1	Ammonia		Option 1 (preferred): Mass of ammonia produced , Option 2. National production capacity of ammonia plants
2.B.2	Nitric acid		Option 1 (preferred): Mass of nitric acid produced , Option 2- National production capacity of nitric acid plants
2.B.3	Adipic acid		Option 1 (preferred): Mass of adipic acid produced, Option 2- National production capacity of adipic acid plants

IPCC Code	IPCC Category	Relevant Reported Gases	Minimum Activity Data
3A1	Enteric Fermentation		Typical Animal Mass (kg/head), Nitrogen excretion rate, annual average number of head, type of manure management system
3A2	Manure Management		Typical Animal Mass (kg/head), Nitrogen excretion rate, annual average number of head, type of manure management system
3.C	Aggregated sources and non-CO2 emission sources		
3.C.1	Emissions from biomass burning		For the sub-categories below under category 3C, the following should be collected- available area (Ha), Area Burnt (Ha) and type of burning
3.C.1.a	Biomass burning from Forestlands		forest land remaining forestland, land converted to forestland and other emissions from biomass burning
3.C.1.b	Biomass burning from Croplands		copland remaining cropland, land converted to cropland and other emissions from biomass burning
3.C.1.c	Biomass burning from Grasslands		Grassland remaining grassland, land converted to grassland and other emissions from biomass burning
3.C.1.d	Biomass burning in all other Land		land remaining land, land converted to land and other emissions from biomass burning
3.C.2	Liming		tonnes per year of limestone, dolomite and other applicable datasets
3.C.3	Urea application		tonnes per year of urea applied