

# USE OF CHECKLISTS FOR ASSESSMENT OF GREENHOUSE GAS MITIGATION AND TRANSFORMATIONAL CHANGE IMPACTS OF POLICIES IN KEY ECONOMIC SECTORS IN RWANDA

---

## WORKSHOP REPORT



Marasa Umubano Kigali Hotel, 21-22 February 2019



## DISCLAIMER

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, photocopying, recording or otherwise, for commercial purposes without prior permission of UNOPS. Otherwise, material in this publication may be used, shared, copied, reproduced, printed and/ or stored, provided that appropriate acknowledgement is given of UNOPS as the source. In all cases the material may not be altered or otherwise modified without the express permission of UNOPS.

This publication has been produced as part of a component of the Initiative for Climate Action Transparency project (ICAT) implemented by UNEP DTU Partnership (UDP). The views expressed in this publication are those of the authors and do not necessarily reflect the views of UDP.

## PREPARED UNDER

Initiative for Climate Action Transparency (ICAT) project supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the Children's Investment Fund Foundation (CIFF), the Italian Ministry of Ecological Transition (IMET) and ClimateWorks.



The ICAT project is managed by the United Nations Office for Project Services (UNOPS)





## Executive Summary

Rwanda Environment Management Agency (REMA) in partnership with Initiative for Climate Action Transparency (ICAT) hosted a two-day training workshop at Marasa Umubano Hotel from 21<sup>st</sup> to 22<sup>th</sup> February 2019. This training workshop aimed at getting stakeholder agreement on elements of checklists for the assessment of GHG mitigation impacts and transformational change generated by Rwanda's policies addressing climate change. This was done through sector-specific working groups. The overarching goal of the workshop was to sensitize the stakeholders regarding the relevance of the checklists for their daily work and this is a substantial precondition for the Government of Rwanda to be able to report internationally on the GHG mitigation impacts and transformational change achieved by Rwanda's policies.

The training workshop is one of two major outcomes of the ICAT project Rwanda "*The development of a methodological framework for assessing the impacts of climate policies and actions for energy related sectors*" addressed to national experts from energy, waste, transport, industry and buildings.



## Contents

Executive Summary .....	2
Project background .....	4
Objectives of the training workshop .....	5
Workshop attendance.....	5
Training workshop progress .....	5
Day 1: Thursday 21 <sup>st</sup> February 2019 .....	6
Opening and welcoming remarks .....	6
Overview presentation by the Director of ICAT .....	6
Aim of the workshop and Key findings of the sectoral review of policies for energy related sectors .....	7
Introduction of sectoral checklists for assessment of GHG mitigation impacts of policies.....	8
Working groups .....	8
Day 2: Friday 22 <sup>nd</sup> February 2019.....	9
Presentation of the draft GACMO model for Rwanda .....	9
Introduction of sectoral checklists for assessment of transformational change of policies.....	9
Key outcomes of the workshop.....	10
Closing remarks.....	10
Annex I: Agenda.....	11
Annex II: Attendance list.....	13
Annex III: Discussion and refinement of sectoral checklists.....	16
A. Energy Sector .....	16
B. Buildings sector .....	17
C. Industry sector .....	20
D. Transport Sector: .....	23
E. Waste Sector .....	25



## Project background

Parties to Paris Agreement (PA) under the United Nations Framework Convention on Climate Change (UNFCCC) are required to define their contribution to mitigation of climate change through their Nationally Determined Contribution (NDCs). NDCs are to provide information, among others, on policies and actions that a country will implement to achieve its greenhouse gas (GHG) mitigation targets. A transparent system that allows tracking of the progress towards NDC targets is therefore required, taking into account the rules under Article 4 of the PA regarding the information necessary for facilitating clarity, transparency and understanding of the NDC and under Article 13 which establishes an enhanced transparency framework. Detailed rules elaborating these requirements have just been agreed during the 24<sup>th</sup> Conference of Parties (CoP) in Katowice, December 2018.

Therefore, as a signatory of Paris Agreement, Rwanda is designing strategies to implement its nationally determined contributions (NDCs) through various policies and actions. The ability for Rwanda to transparently report on progress towards these NDCs will depend on its ability to effectively measure, report and verify (MRV) that progress in the context of the PA.

In response to this need, UNEP DTU Partnership is supporting the Government of Rwanda through Rwanda Environment Management Authority (REMA), to strengthen the capacity of national institutions to meet enhanced transparency requirements of Paris Agreement. Under the Initiative for Climate Action Transparency (ICAT), UNEP DTU Partnership is helping Rwanda to develop sector-specific tools and guidance for measuring GHG emission reductions of climate change policies and actions, along with sustainable development outcomes and transformational change. These tools will better enable country to meaningfully and systematically assess impacts and improve policy. Specifically, ICAT supported project in Rwanda delivers on two major outcomes: (1) The development of a methodological framework for assessing the impacts of climate policies and actions for energy related sectors & capacity building workshop for national experts and (2) Strengthening national MRV capacity.

Outcomes of this project will allow the increase of national capacity to achieve timely, reliable and more accurate information to be reported at both national and international levels. Hence meeting enhanced transparency requirements for the implementation of Paris Agreement.



## Objectives of the training workshop

This training workshop aimed at getting stakeholder agreement on elements of checklists for the assessment of GHG mitigation impacts and transformational change generated by Rwanda's policies addressing climate change. The overarching goal of the workshop is to sensitize the stakeholders regarding the relevance of the checklists for their daily work.

## Workshop attendance

The attendance was thirty two (32) experts from Ministry of Finance and Economic Planning, Ministry of Infrastructure, Ministry of Environment, representatives from REMA, National Industrial Research and development Agency, Motor vehicle Inspection Center, Initiative for Climate Action Transparency, UNEP/DTU, Global Green Growth Institute, Energy Development Corporation Limited, Rwanda Land Management and Use Authority, Rwanda Water and Forestry Authority, METEO RWANDA, Africa Center Excellence of Energy for sustainable development /University of Rwanda, Rwanda Transport Development Agency, Rwanda Standard Board, Rwanda Utilities Regulation Agency, Rwanda Green Fund (FONERWA), Rwanda Resource Efficient and Cleaner Production Centre, Rwanda Housing Authority, Company for Environment protection and Development (COPED). A full list of attendance is attached as Annex II of this report

## Training workshop progress

This report provides an overview of training workshop on use of checklists for assessment of greenhouse gas mitigation and transformational change impacts of policies in key economic sectors in Rwanda, held from Thursday 21<sup>st</sup> to Friday 22<sup>th</sup> February 2019 at Marasa Umubano Hotel Kigali. It was organised by the Department of Climate Change and International Obligations, REMA and Checklists were prepared by Dr. Axel Michaelowa, international consultant from Perspectives Climate Group.

The Director of REMA's Department of Climate Change and International Obligations, Mr Herman Hakuzimana, moderated the training workshop following the agenda presented in Annex I.



Day 1: Thursday 21<sup>st</sup> February 2019

### Opening and welcoming remarks

The workshop was officially opened by Mr Faustin Munyazikwiye, Deputy Director General of REMA. In his opening remarks, Mr Faustin thanked ICAT for supporting Rwanda to develop its transparency system in support of its NDCs and thank UDP for support in the implementation of the ICAT project. He emphasized that Rwanda is not only fulfilling international obligations but is also developing capacity toward development. He mentioned the expected outcome of ICAT in Rwanda and regarding the workshop, emphasized that use of checklists should be the starting point in involvement of stakeholders in monitoring the implementation of Rwanda's NDC.

In his opening remarks, Mr. Henning Wuester, Director of ICAT, thanked the REMA for its hospitality and applauded Rwanda for the leadership in pursuing a green growth strategy. He emphasized that transparency systems are meant to help countries develop and implement policies that meet their strategic needs and priorities. Climate policy could be used to drive development in a direction that builds socio-economic and environmental benefits at the domestic level, and a good transparency system will help to make the necessary links across sectors and different levels of government. ICAT was committed to supporting work that is in line with national priorities while also helping countries to get ready to meet the provisions of the Paris Agreement.

### Overview presentation by the Director of ICAT

Henning Wuester, Director of ICAT addressed the background, objectives and general perspective of ICAT. The presentation gave a background of the ICAT project, an insight into objectives and scope of work. ICAT is a multi-donor funded partnership to support the implementation of the Paris Agreement through a robust transparency system to provide a basis for effective climate action and policies. Funders of this project include: Investment Fund Foundation (CIFF), the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU), the Italian Ministry of the Environment and Climate Works Foundation. United Nations Office for Project Services (UNOPS) hosts the



Initiative for Climate Action Transparency administratively while UNEP-DTU offers technical support as one of four Implementing Entities.

The project was designed to put into practice the request stated at the P A to strengthen national institutions to meet enhanced transparency requirements of their actions to meet their NDCs and bring greater quality, trust and ambition to climate policies worldwide.

During his presentation, the Director of ICAT, discussed the outcomes of COP 24 that was held in Katowice, the rules for the enhanced transparency framework. Modalities of enhanced transparency framework under Article 13 of the Paris Agreement are the most important outcome of Katowice. The transparency framework is the same for developed and developing countries, but it offers some flexibility for least developed countries like Rwanda. He also highlighted the ICAT tools and methodologies that are being offered to countries to build an effective transparency framework at national level.

The focus is increasingly on tracking implementation of NDCs and ICAT provides support to Rwanda to achieve its transparency objectives through enhancing national MRV capacity which is central to ICAT Rwanda. He reported that the Initiative for Climate Action Transparency was extended to 2021 and countries may continue to use its support building on successful implementation and if there are further needs that can be met through application of the ICAT tools and methodologies.

### [Aim of the workshop and Key findings of the sectoral review of policies for energy related sectors](#)

#### **Presentation by Axel Michaelowa (Consultant, Perspectives Climate Group)**

Axel said that this training workshop aimed at getting stakeholder agreement on elements of checklists for the assessment of GHG mitigation impacts and transformational change generated by Rwanda's policies addressing climate change.

For the key findings of sectoral review of policies for energy related sectors, the consultant introduced the reporting requirements under the UNFCCC related to the Nationally Determined Contributions (NDCs) and to the Enhanced Transparency Framework (ETF) of the Paris Agreement. He gave a brief description of mitigation policies and actions in each energy related sector and also presented the key findings of the sectoral review of policies for energy, transport, waste, industry and building sectors and how these will inform the sectoral checklists for the policy assessment.



One vivid challenge in the sectoral review was information gaps that were identified by the consultant such as details current status of implementation and details of the policy instrument. Stakeholders from various institutions committed to provide all accessible information to improve the sectoral review.

### [Introduction of sectoral checklists for assessment of GHG mitigation impacts of policies](#)

#### **Presentation by Axel Michaelowa (Consultant, Perspectives Climate Group)**

The consultant presented the approach used for the preparation of the sectoral checklists which are excel based tool, with one excel file per sector and one excel sheet per policy/action. A checklist approach for policies to reduce emissions in the energy sector (for cook stoves) was given as an example to get participants familiarised with the structure of the checklist on data requirements and utilization of the checklists for policy assessment.

This session was a very central part of the workshop as it introduced a tool; sectoral checklists to be used for tracking implementation and impact of mitigation actions and policies in the context of transparency. Checklists are valuable to assist the process of implementing policy instruments that are not yet operational while monitoring key performance indicators for operational policies. It was important for stakeholders to understand this so that they can play a key role in assessing GHG mitigation impacts in their respective sectors.

### [Working groups](#)

The audience was divided into 5 working groups based on energy related sectors (Energy, Waste, Industry, Buildings and Transport) and in accordance with their expertise which allowed an effective discussion, exchange of views and inputs. Participants assessed the checklists to check how feasible and how usable they would be for assessment of mitigation policies and actions in their sectors.

For priority policies, groups focused on definition of impact areas of the policy instrument; relevant GHG impacts and co-benefits (Policy sheet, section 2) barriers assessments (Policy sheet, section 3) as well as sections 8 and 10 on transformational change. Presentations from the working groups are attached in annex III.



Day 2: Friday 22<sup>nd</sup> February 2019

Presentation of the draft GACMO model for Rwanda

**Presentation by Jorgen Fenhann , UNEP DTU**

This presentation focused on **Greenhouse Gas Abatement Cost Model (GACMO)** for Rwanda which is a tool made to assist Rwanda in making an analysis of its GHG mitigation options to be used in the NDC, the National Communication, or a Low Carbon Development Plan.

The model provides various possible mitigation actions that are appropriate to Rwanda and is recommended for calculation and visualization of the Business as Usual Scenario (BAU), mitigation scenario and provides calculations for all the desired mitigation options selected. There are over 107 mitigation options to choose from to track progress within Rwanda's NDCs.

The input required for this model to run is a GHG balance and cells where inputs are required are highlighted in yellow in the workbook. The outcome of the use of the GACMO Model is a table providing an overview of the cost and impact of different mitigation initiatives, outputted in the format of a table and an Abatement Revenue Curve.

[Introduction of sectoral checklists for assessment of transformational change of policies](#)

**Presentation by Axel Michaelowa (Consultant, Perspectives Climate Group)**

The consultant illustrated the concept of transformational change in the context of climate action and policies. It is fundamental change that disrupts the status quo of a society and is sustained over a long period of time. GHG mitigation policies can perform well beyond reducing emissions and bring about transformational change contributing to achieving SDGs as well as achieving economic development goals. Training on the data requirements and on the practical use of the checklist for the assessment of the transformational change achieved by the mitigation policies was provided.

After this presentation, the working groups continued their work on the refinement of sectoral checklists and identification of potential gaps and measures to close them with a focus on transformational change. Views and inputs from sectoral groups are attached as Annex III.



### Key outcomes of the workshop

**Axel Michaelowa and Jorgen Fenhann**

The introduction of sectoral checklists and the GAMCO model for Rwanda to sector experts was a success. Working groups were able to review and include information from their various sectors. It was agreed that the consultant would work closely with sector experts on information needs to inform the sectoral review of policies such as with policy documents that have been updated.

### Closing remarks

**Henning Wuester, Director of ICAT**

In his closing remarks, the Director of ICAT thanked the participants for their active engagement in the discussions and inputs given from a sectoral perspective. He emphasized the need to be pragmatic but not lose sight of the need to map out how to move from strategies and targets to specific policies and measures that would actually lead to change. He also highlighted that greater transparency will help to mobilize the finance needed for implementation and that ICAT was ready to continue support Rwanda in this regard. He finally emphasized the need for coordination of different support initiatives in Rwanda and mentioned that ICAT would also support countries to access Capacity Building Initiative for Transparency (CBIT) funding if required.

## Annex I: Agenda

### TRAINING WORKSHOP ON USE OF CHECKLISTS FOR ASSESSMENT OF GREENHOUSE GAS MITIGATION AND TRANSFORMATIONAL CHANGE IMPACTS OF POLICIES IN KEY ECONOMIC SECTORS IN RWANDA

---

*Marasa Umubano Kigali Hotel, 21-22 February 2019*

#### *Day 1: Thursday, 21 February 2019*

Time	Topic/Activity	Speaker/Responsible Person(s)
08:30 - 09:00	Registration	Participants
09:00 - 09:20	Opening and Welcoming remarks	DG REMA
09:20 - 09:40	Climate Action Transparency after Katowice: ICAT's support to countries	Henning Wuester, Director of ICAT
09:40 - 10:00	Aims of the workshop and the underlying project	Axel Michaelowa (Consultant, Perspectives Climate Group)
10:00-10:10	Photo session	REMA /PRCO
10:10 - 10:30	Coffee Break	All
10:30 - 11:15	Key findings of the sectoral review of policies for energy, transport, waste, industry and building sectors	Axel Michaelowa (Consultant, Perspectives Climate Group)
11:15 - 11:45	Q & A Discussions	All
11:45 - 13:00	Lunch break	All
13:00 - 13:45	Introduction of sectoral checklists for assessment of GHG mitigation impacts of policies	Axel Michaelowa (Consultant, Perspectives Climate Group)
13:45 - 14:00	Q & A Discussions	All
14:00 - 15:00	Working groups (energy, transport, waste, industry and building sectors) to discuss and refine sectoral checklists	Sector participants to be grouped, groups select moderator and rapporteur, Axel Michaelowa and Jorgen Fenhann serve as resource persons
15:00 - 15:15	Coffee break	All
15:15 - 16:30	Working groups (continued)	All
16.30 - 17:15	Plenary: Group presentations	Group rapporteurs
17:15 - 17.30	Summary of day 1	REMA/ Axel Michaelowa/ Jorgen Fenhann

*Day 2: Friday, 22 February 2019*

Time	Topic/Activity	Responsible Person(s)
08:30 - 09:00	Registration	Participants
09:00 - 09:30	Presentation of the draft GACMO model for Rwanda	Jorgen Fenhann (UNEP DTU)
09:30-10:00	Introduction of sectoral checklists for assessment of transformational change of policies	Axel Michaelowa (Consultant, Perspectives Climate Group)
10:00-10:15	Q&A Discussions	All
10:15-10:30	Coffee Break	All
10:30-12:30	Working groups (energy, transport, waste, industry and building sectors) to discuss and refine sectoral checklists for the topics covered on both days	Sector participants to be grouped, groups select moderator and rapporteur, Axel Michaelowa and Jorgen Fenhann serve as resource persons
12:30-13:30	Lunch break	All
13:30-14:30	Plenary: Group presentations on refinement of sectoral checklists	Group rapporteurs
14:30-14:45	Wrap up: key outcomes of the workshop	Axel Michaelowa and Jorgen Fenhann
14:45-15:00	Closing remarks	ICAT Director DG REMA
15:00	Coffee break	All

### Annex III: Discussion and refinement of sectoral checklists

#### A. Energy Sector

The energy sector was used as a training sample and, therefore, the working group made changes accordingly.

Sheet	Changes made	Description	Section/ Column	Comment
Overview of energy sector	Replacement	Electricity Access	Priority subsector 1	on-grid generation, off-grid generation, transmission and access
	Replacement	Biomass	Priority subsector 2	Fire wood, Biogas, charcoal, pellets
	Replacement	Petroleum	Priority subsector 3	upstream, downstream
	Replacement	Energy efficiency	Priority subsector 4	This covers efficiency for transmission lines (Loss reduction), efficient cooking, efficient lighting, standards and labelling
Policies overview table	Additions	Minimum standards for solar home systems Forest Policy Biomass Energy Strategy Energy Sector Strategic Plan Energy efficiency Strategy	Name of Policy	

<b>Policy Action 1:</b> EE cooking & balancing demand	Additions	Awareness campaigns	Section 2: Relevant GHG impacts	
	Additions	Gender Equity Affordable and clean energy	Section 2: Relevant co-benefits	
	Addition	Limited skills	Section 3: Barrier type	
	Addition	Incentives	Section 4: Implementation potential of the selected policy	
	Addition	Energy sector strategic plan, Biomass energy strategy, Forest policy and NST1 as relevant policies	Section 5: Relevant Policies	
	Addition	Quantity of biomass used for cooking	Section 8.1 KPI related to GHG emissions/emission reduction	
	Addition	Item: Uncertainty analysis	Section 9: Baseline emissions and emission reductions estimations	
	Addition	Private involvement	Section 10. Transformational change	

### B. Buildings sector

Sheet	0. General information of the policy		
Policy 1: Efficient lighting	Item	Description	Comment
	Name of the policy	Dissemination of efficient lighting equipment	
	Policy instrument(s)	Rwanda Green Building Minimum Compliance System	

	Detailed description of the policy/policy instrument	Mandatory instrument for large-scale non-residential buildings	
	GHG targeted		Target for building sector specified in TNC
	Expected impacts of the policy on GHG emissions/emission	<p>i)Energy efficient lighting reduces energy consumption in buildings leading to reduced GHG emissions.</p> <p>ii)Buildings designed to maximize natural daylighting will reduce energy consumption thereby leading to reduced GHG emissions.</p>	
	2. Definition of impact areas of the policy instrument		
	Relevant GHG impacts	<p>i) Reduced GHG emissions through use of energy efficient lighting fixtures</p> <p>ii) Reduced GHG emissions through maximizing natural daylighting</p>	
	Relevant co-benefits	<p>i)Reduced electricity bill leading to reduced operational costs, life of fixtures increased</p> <p>ii) Reduced electricity bill leading to reduced operational costs, health co-benefits through use of natural lighting</p>	
	3. Barriers Assessment		
	Barrier Type	<p>i) Low levels of awareness</p> <p>ii) Affordability</p>	



	iii) Technical capacity such as with availability of materials	
5. Interaction of the selected policy with existing ones		
Relevant Policy	i) Rwanda Building Code ii) Energy efficiency strategy iii) Green Growth and Climate Resilient Strategy	
6 and 7. Monitoring Parameters: Relevant for GHG emission impacts		
Parameter	i) Buildings using efficient lighting (as % of the total) ii) Wattage of efficient light fixture iii) Grid Emission Factor iv) Incentives provided per year v) Number of demonstration activities to showcase benefits of efficient lighting	Section 6 and 7 refer to same parameters
6 and 7. Monitoring Parameters: Relevant for transformational change		
Parameter	vi) Number of coordination meetings between agencies vii) Number of private companies providing efficient lighting products viii) Electricity Saving Cost per building	Section 6 and 7 refer to same parameters
8.1 Key Performance Indicators (KPI) related to GHG emission reductions		
Parameter	Number of buildings using efficient lighting Number of buildings using natural lighting Emission reduction with efficient lighting	
8.2 Key Performance Indicators (KPI) related to transformational change		

	Parameter	<ul style="list-style-type: none"> <li>• Productivity of occupants</li> <li>• Reduced electricity bills</li> <li>• Number of jobs created by efficient lighting products</li> </ul>	
	10. Transformational change assessment (Outcomes by 2030): Increased number of buildings relying on efficient lighting systems		
	Outputs	<ol style="list-style-type: none"> <li>1. Large number of buildings relying on efficient fixtures reducing the consumption of electricity</li> <li>2. Inefficient lighting replaced by efficient lighting</li> <li>3. Incentives mobilized to encourage transformation</li> </ol>	
	Inputs	<ol style="list-style-type: none"> <li>1. Availability</li> <li>2. Affordability (purchase power)</li> <li>3. Involvement of private sector</li> </ol>	
	Process element (agent of change, technology, economic & regulatory incentives, norms & behaviour)	Incentive (reducing taxes for local and imported products) law enforcement of existing mandatory codes demonstration projects	
	Impact level (local, sectoral/, national)	National	
	Replicability (low, medium, high)	High	

### C. Industry sector

Sheet	0. General information of the policy		
Policy 1: Energy Efficiency in the food industry	Item	Description	Comment
	Name of the policy	Energy efficiency improvements in the food industry	
	Policy instrument(s)	Resource Efficient and Cleaner Production Programme	

	Detailed description of the policy/policy instrument	Promotion of source reduction of wastes and negative impacts on the environment as well as enhancing resource efficiency through the application of cleaner production technologies and techniques	
	GHG targeted		Target for building sector specified in TNC
	Expected impacts of the policy on GHG emissions/emission	Positive	
	Responsible Institution for the legal aspects/legislation related to the policy	NIRDA	
	Responsible institution for policy implementation and monitoring	MINICOM	
	Supporting Programmes that exist	EIA Environmental Audit Services Label & Certificate Programme Facilitating the implementation of standards Development of EST and appropriate technology Technology Investment funding Policy advice	
	Policy level	National	
	Targeted entities/beneficiaries	Private	
	Other involved stakeholders	MoE, REMA, PSF	

2. Definition of impact areas of the policy instrument		
Relevant GHG impacts	Awareness raising Information dissemination Walk throughs and in-plant assessments Trainings Technical assistance	
Relevant co-benefits	Improved occupational Health Improved collaboration between organisations Improvement options identified	
3. Barriers Assessment		
Barrier Type	Low in-house capacity at Rwanda Resource Efficient and Cleaner Production Centre(RRECPC) Limited analysis equipment Limited access to appropriate technologies	
5. Interaction of the selected policy with existing ones		
Relevant Policy	GGCRS Rwanda Energy Policy	
6 and 7. Monitoring Parameters: Relevant for GHG emission impacts		
Parameter	Use of fuel food during food production	Section 6 and 7 refer to same parameters

D. Transport Sector:

Sheet	0. General information of the policy		
Policy 1: Setting standards for public transport	Item	Description	Comment
	Name of the policy		
	Policy instrument(s)		
	Detailed description of the policy/policy instrument		
	GHG targeted		
	Expected impacts of the policy on GHG emissions/emission		
	2. Definition of impact areas of the policy instrument		
	Relevant GHG impacts	<p>Emission reduction as result of change from private vehicles to mass transport which will reduce the number of vehicles, motos</p> <p>Emission reduction as a result of congestion reduction (less idling of vehicles)</p> <p>Emission reduction from improved quality and reliability of buses</p>	
	Relevant co-benefits	<p>Air Quality Improvement/ positive health impact Transport Cost reduction Time Efficiency</p>	

3. Barriers Assessment		
Barrier Type	Resistance to change from private vehicle use to public transport Narrow and insufficient roads	
5. Interaction of the selected policy with existing ones		
Relevant Policy	Construction of 17 km Bus Rapid Transit (BRT) main corridor and 6 modern interchanges in Kigali City  Use of higher fuel efficiencies and low carbon technologies for new vehicles  Setting emission standards for new vehicles	
6 and 7. Monitoring Parameters: Relevant for GHG emission impacts		
Parameter	Number of private transport users switching to public transport  Number of registered buses  Waiting time at bus stops/ bus delay time	Section 6 and 7 refer to same parameters
6 and 7. Monitoring Parameters: Relevant for transformational change		
Parameter	Number of Private transport users switching to public transport  Number of VIPs adopting public transport system  Number of jobs created in public transport	Section 6 and 7 refer to same parameters
8.1 Key Performance Indicators (KPI) related to GHG emission reductions		

	Parameter	Number of Private transport users switching to public transport Fuel Efficiency	
	8.2 Key Performance Indicators (KPI) related to transformational change		
	Parameter	Number of Private transport users switching to public transport  Number of VIPs adopting public transport system  Number of jobs created in public transport	
	10. Transformational change assessment (Outcomes by 2030): -Increased revenue from more investments in public transport -Improved air quality -Increased job creation -Increased productivity due to efficiency in public transport system		

### E. Waste Sector

Sheet	0. General information of the policy		
Policy 1:	Item	Description	Comment
	Name of the policy		
	Policy instrument(s)		
	Detailed description of the policy/policy instrument		
	GHG targeted		
	Expected impacts of the policy on GHG emissions/emission		
	2. Definition of impact areas of the policy instrument		
	Relevant GHG impacts	Reduction of emission of GHG due to burning CH <sub>4</sub>	

		Reduction of environmental pollution caused by open dumping  Reduction of emission of GHG due to dead animals (animal decomposition)	
	Relevant co-benefits	Reduction of inconvenience caused by landfills  Health benefit due to proper management of landfill.  Reducing the risks caused by the environmental pollution  Recovery of degraded environment and eco systems	
<b>3. Barriers Assessment</b>			
	Barrier Type	Financial constraints Limited technology Lack of awareness of the community Adequate regulatory framework	
<b>5. Interaction of the selected policy with existing ones</b>			
	Relevant Policy	Composting  Use of solid waste for electricity generation  National Sanitation policy	
<b>6 and 7. Monitoring Parameters: Relevant for GHG emission impacts</b>			
	Parameter	Quantity of wastes Types of wastes	Section 6 and 7 refer to same parameters



		Chemical composition of wastes Efficiency of landfill system Number of landfills Percentage of recyclables	
	8.1 Key Performance Indicators (KPI) related to GHG emission reductions		
	Parameter	Quantity of wastes deposited at landfills Chemical composition of waste at landfill Types of wastes	
	8.2 Key Performance Indicators (KPI) related to transformational change		
	Parameter		
10. Transformational change assessment (Outcomes by 2030): -Amount of GHG emissions reduced -Health risks reduction -Management of efficient landfill system			