REPUBLIC OF RWANDA

MINISTRY OF ENVIRONMENT

P.O.BOX 3502 KIGALI

MINISTRY OF ENVIRONMENT INDICATOR REFERENCE MANUAL

ENVIRONMENTAL AND CLIMATE CHANGE

1. **Indicator Code**	ECC01
2. Indicator Title	Percentage change in national climate change vulnerability index
3. Unit of Measurement of Indicators	%
4. Indicator Definitions	Vulnerability is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity (Parry et al, 2007) (GIZ). Climate Change Vulnerability Index A statistical number, a measure developed for comparison purposes, developed by aggregating multiple individual indicators of a complex, multi- dimensional, and meaningful societal issue (e.g., climate change vulnerability). Individual indicators and indicator sets can be selected, arranged, and combined to produce sub-indices representing the main components or dimensions of the system under investigation. The individual indicators are measures of a component of the system and can indicate a baseline or a trend over time. The measures are compiled systematically using a theoretical formula to provide the statistical number (USAID, adapted)
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	Change in national climate change vulnerability index directly impacts the result area of improved environmental Management and the reduction of vulnerability to climate change. Thus the indicator is relevant. The Indicator is very relevant to SDG 13, to Rwanda Vision 2050, to Rwanda NST1 and other important National, regional and worldwide strategic documents.
6. Result level (eg: Output, Outcome, Impact)	Impact
7. Date Indicator Established/Revised	31/07/2020

8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	List of all variables	Units of measurement of each variable
	1. Exposure 2. Sensitivity 3.Adaptive Capacity	Index (0 to 1) Index (0 to 1) Index (0 to 1)
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	The propensity or predisposition to be adversely affected (IPCC), formulated as follows: Vulnerability = f (Exposure, Sensitivity, Adaptive Capacity) $V = \frac{I + (1 - AC)}{2}$ with I = Impact, E = Exposure, and S = Sensitivity Each HH is described a score against each indicator. The vulnerability index is expressed as the product of sensitivity and exposure minus adaptive capacity.	
11. Data source	Climate change Vulnerability Index for Rwanda Survey Report	
12. Reporting Frequency	5Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	Aggregate	
15. Validation rules	0 to 100	

1. Indicator Code	**ECC02**
2. Indicator Title	Carbon dioxide (equivalent) emissions per capita

3. Unit of Measurement of Indicator	Tone of CO_2 per Capita
4. Indicator Definitions	Total CO_2 emissions: is defined in the MDGs as the estimate of total carbon dioxide (CO_2) emissions include anthropogenic emissions, less removal by sinks, of carbon dioxide (CO_2). The term "total" implies that emissions from all national activities are considered. The typical sectors for which CO_2 emissions/removals are estimated are energy, industrial processes, agriculture, waste, and the sector of land use, land- use change and forestry (LULUCF). Carbon dioxide emissions are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring (World Bank). Per capita: is defined as per person, per unit of population.
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	Carbon dioxide emissions contribute to climate change. As a Party to the United Nations Framework Convention on Climate Change Rwanda is taking precautionary measures to predict, prevent and reduce the cause of climate change and minimize their harmful effects on sustainable development SDG 13: Climate change is increasing the frequency and intensity of extreme weather events, aggravating water management problems, reducing agricultural production and food security, increasing health risks damaging critical infrastructure and interrupting the provision of basic services such water and sanitation, education, energy and transport. Carbon dioxide emissions, total, per capita and per $1 GDP (PPP) related to the environmental sustainability SDG Target 13.2 of Integrate climate change measures into national policies, strategies and planning. The indicators reflect requirements for reporting of all these as well as Rwanda's progress in addressing reduction in CO_2 and thus minimizing climate change risks. It is also relevant to Rwanda Vision 2050, to Rwanda NST1 and other Sector strategies.
6. Result level (eg: Output, Outcome, Impact)	Impact

7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregated By Sector: 1. AFOLU 2. Energy 3. IPPU 4. Waste	Units of Measurement Tones of CO_2 per Capita
9. Responsible for data reporting	Planning and M&E Officer	
10. Indicator calculation and Computation method **1. Numerator** **2. Denominator.**	Carbon emissions per capita are measured as the total amount of carbon dioxide emitted by the country as a consequence of all relevant human (production and consumption) activities, divided by the population of the country. This means that the Numerator will be the Sum of all the gaz emitted by sector and the denominator will be the updated number of the total population in the country. $\text{Emission per capita} = \frac{\text{Total Emission}}{\text{Number of population of the country}}$	
11. Data source	Rwanda GHG inventory report for the national communications to UNFCCC.	
12. Reporting Frequency	2Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	Aggregate	
15. Validation rules	No negative value	

1. Indicator Code	**ECC03**
2. Indicator Title	Percentage change in Carbon dioxide (equivalent) emissions
3. Unit of Measurement	%
4. Indicator Definitions	**Total CO2 emissions:** is defined in the MDGs as the estimate of total carbon dioxide (CO2) emissions include anthropogenic emissions, less removal by sinks,

	of carbon dioxide (CO2). The term "total" implies that emissions from all national activities are considered. The typical sectors for which CO2 emissions/removals are estimated are energy, industrial processes, agriculture, waste, and the sector of land use, land- use change and forestry (LULUCF). National reporting to the United Nations Framework Convention on Climate Change that follows the Intergovernmental Panel on Climate Change guidelines is based on national emission inventories and covers all sources of anthropogenic carbon dioxide emissions as well as carbon sinks (such as forests). **Sector:** is defined as the priority sector of the Rwandan economy, including agriculture, energy, industry, waste management, land use and forestry.	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	CO2 (equivalent) emissions indicator is related to the result area and as a Party to the United Nations Framework Convention on Climate Change Rwanda is taking precautionary measures to predict, prevent and reduce the cause of climate change and minimize their harmful effects on sustainable development (Ministry of Natural Resource,). Since CO_2 emissions are the root causes of climate change effects, tracking the entire economy and the each priority sector CO_2 emissions in these will reflect progress in addressing the UNFCCC objectives and how we are greening the Rwanda Economy (inform policy formulation and decision making processes e.g. phasing out PIT energy).	
6. Result level (eg: Output, Outcome, Impact)	Impact	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregated by Sector	Unit of Measurement in each sector
	1. AFOLU 2. Energy 3. IPPU 4. Waste	%

9. Responsible for data reporting	Planning and M&E officer
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Carbon emissions are measured as the total amount of carbon dioxide emitted by each sector in the country as a consequence of all relevant human (production and consumption) activities. GHG inventory done after every 5 years on 5 sectors (Agriculture, Forestry and Land use, then energy, Industry, waste management). National communication takes 3 Years and then the approval of cabinet, which we don't. Based on experience we do it after 3 Years. % of change $= \frac{\text{Total Emission Year B} - \text{Total Emission Year A}}{100}$
11. Data source	Rwanda GHG inventory report for the national communications to UNFCCC
12. Reporting Frequency	5Y
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	Aggregate
15. Comments and limitations	0 to 100

1. Indicator Code	**ECC04**
2. Indicator Title	Quantity of carbon sequestered
3. Unit of Measurement	Gigaton (where 1 gigaton = 1 billion tons)
4. Indicator Definitions	Quantity of carbon sequestered: defined as the process of capture and long-term storage of atmospheric carbon dioxide (CO2) Forestry Sector: All types of forestry existent in the country, including Forest Plantations; Shrub land; Natural Forest; Agro- forestry.
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	The quantity of carbon sequestered by the forestry sector is an indicator of the sector's contribution to the overall level of net CO2 equivalent production by the economy, which is in turn an indicator of the environmental sustainability of the economy and the

	extent to which growth is green. It is relevant to SDG13 as it relates to Mitigation and adaptation to climate change and also relevant to Rwanda Vision 2050, to Rwanda NST1 and other Sector strategies.	
6. Result level (eg: Output, Outcome, Impact)	Impact	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	This indicator is measured using variables:	Units of Measurement
	1. Canopy 2. Species 3. Density	Gigaton (where 1 gigaton = 1 billion tons)
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	National communication reports to UNFCCC and interim reports (coordinated by REMA). Obviously the lab work will give a more accurate estimate, but you can get a rough estimate by the following procedure: CO2 sequestered (kg / hectare / year) = (a) annual forest growth (m^3 / ha / yr) x (b) bone-dry wood density (kg / m^3) x (c) proportion of carbon in bone-dry wood (unitless or kg / kg) x (d) ratio of molecular mass of CO2 to C (unitless or Dalton / Dalton) If the forest is a single-species, even-age plantation forest, any forester in your area can give you an estimate of (a), based on site class. Natural forests are tricker, but a good forester in your country should have an estimate. (b) mostly depends on tree species, but may be somewhat variable within species. For many species you can look up an estimate of bone-dry density. Try google, or ask a forester/wood products person. Fonseca (2005) lists several. For mixed-species stands, this will get tricky. (c) is about 0.5 (also variable, but that's a very rough rule-of-thumb) (d) is 44/12 or 3.67 A slightly more accurate way to estimate (c), but still just a rough estimate, is described in IPCC (2003). We	

	used this approach in Frey et al. (2010) to estimate carbon sequestered by hypothetical forest and agroforest plantations: IPCC (2003) Equation 3.2.3 is the formula for estimating total forest biomass from merchantable biomass. Annex 3A.1 gives international default conversion factors based on scientific estimates. Adapted Equation 3.2.3: C = [MBM x BEF2] x (1 + R) x CF, where C is total carbon in biomass (metric tons C), MBM is merchantable bone-dry biomass (metric tons), BEF2 is biomass expansion factor for conversion of merchantable volume to aboveground tree biomass (dimensionless), R is root-to-shoot ratio (dimensionless), and CF is carbon fraction. The default values used for BEF2 (from IPCC 2003, Table 3A.1.10) are: hardwoods, 1.4; pine, 1.3. The default values used for R (from IPCC 2003, Table 3A.1.8) are: oak, 0.35; other hardwoods, 0.26; pine, 0.23. The default value used for CF is 0.5 (from IPCC 2003, p. 3.25). The mass of CO2 sequestered from the atmosphere is greater than the mass of the carbon (C) alone, because C is stored and oxygen (O2) is reemitted to the atmosphere. The atomic mass of C is 12, and the molecular mass of CO2 is 44. Therefore, for every 12 metric tons of C stored, 44 metric tons of CO2 have been sequestered. The conversion factor from C to CO2 is 44/12 = 3.67.
11. Data source	National communication reports to UNFCCC and interim reports (coordinated by REMA).
12. Reporting Frequency	Every 2 Years
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National
14.Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	Aggregate
15. Validation rules	No any

1. Indicator Code	**ECC05**

2. Indicator Title	Annual percentage change in level of non point-source air pollution.	
3. Unit of Measurement	%	
4. Indicator Definitions	Air Pollution: The presence in or introduction into the air of a substance, which has harmful or poisonous effects. Nonpoint source pollution: is defined as water and air pollution from diffuse sources i.e. water pollution from agricultural runoff, construction debris, wind-borne debris and air pollution from sources such as smokestacks or car tailpipes.	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	This indicator contributes to the result area on pollution monitored and controlled.	
6. Result level (eg: Output, Outcome, Impact)	Outcome	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	It is measured using types of air pollution gaz	Unit of Measurement
	1.PM2, 5 2.CO 3.NO2 4.SO2 5.O3	micrograms per cubic meter (µg/m3) parts per million (ppm) or parts per billion (ppb)
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Through the study conducted by REMA all the types of Air pollution are computed on annually basis.	
11. Data source	Air Quality Stations/ REMA-MINEDUC -METEO	
12. Reporting Frequency	Quarterly	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	

14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked
15. Validation rules	0 to 100

1. Indicator Code	**ECC06**	
2. Indicator Title	Total amount of funds mobilized for NDC implementation	
3. Unit of Measurement	($)	
4. Indicator Definitions	Nationally Determined Contribution (NDC) covering a broad range of sectors: agriculture, forestry, water resources, land-use, disaster management; renewable energy, off-grid electrification, transport, industry, and waste. For each sector, the NDC provides a list of suggested measures to achieve adaptation and mitigation targets that require different types of work. In order to fully implement the mitigation and adaptation measures contained in this NDC, Rwanda will require finance, capacity building, and technology transfer and country driven policy process and institutional arrangements.	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	**This indicator responding to the Environmental and climate change Policy Objective 7** Policy statement 1: Strengthen the capacity of national environment and climate change Finance mechanisms for greater efficiency, effectiveness and impact	
6. Result level (eg: Output, Outcome, Impact)	Outcome	
7. Date Indicator Established/Revised	31/07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregated By	Unit of Measurement
	1. Mitigation 2. Adaptation	Amount (USD)
9. Responsible for data reporting	Planning and M&E Officer	

10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Computation of all amount mobilized in reference to the mitigation.
11. Data source	IFMIS reported by FONERWA/ MoE and Annual reports
12. Reporting Frequency	Quarterly
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked
15. Validation rules	No Negative value

1. Indicator Code	**ECC07**	
2. Indicator Title	Value of projects developed and financed for NDC implementation	
3. Unit of Measurement	Number	
4. Indicator Definitions	Amount mobilized will help in different project developed. This indicator will measure in terms of money the total amount of project developed and the available resources to finance the given projects	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	**This indicator responding to the Environmental and climate change Policy Objective 7** Policy statement 1: Strengthen the capacity of national environment and climate change Finance mechanisms for greater efficiency, effectiveness and impact	
6. Result level (eg: Output, Outcome, Impact)	Outcome	
7. Date Indicator Established/Revised	31/07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured).	List of variables if Applicable	Unit of Measurement
	NA	NA
9. Responsible for data reporting	Planning and M&E Officer	

10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Compute Value in terms of money for the project developed and financed
11. Data source	Annual Report on NDC implementation from MoE
12. Reporting Frequency	1Y
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked
15. Validation rules	No negative value

1. Indicator Code	**ECC08**
2. Indicator Title	Number of projects developed and financed for NDC implementation
3. Unit of Measurement	Number
4. Indicator Definitions	Different project will be developed and financed in accordance to responding to The Government of Rwanda (GoR) commitment of taking urgent action to mitigate and adapt to the effects of climate change. As a Party to the UNFCCC, the country seeks to contribute to the ambitious goal of limiting temperature rise to 2oC with efforts to reach 1.5oC agreed under the Paris Agreement. This indicator will count all project whether are public or private project developed and financed.
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	This indicator responding to the Environmental and climate change Policy Objective 7 Policy statement 1: Strengthen the capacity of national environment and climate change Finance mechanisms for greater efficiency, effectiveness and impact
6. Result level (eg: Output, Outcome, Impact)	Outcome
7. Date Indicator Established/Revised	31/07/2020

8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregation by:	Units of Measurement
	Developed Financed	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Annual Report on NDC implementation from MoE Count all project developed and others financed in a given period.	
11. Data source	IFMIS reported by FONERWA/ MoE and Annual reports	
12. Reporting Frequency	Quarterly	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14.Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	No negative value	

1. Indicator Code	**ECC09 (Districts)**
2. Indicator Title	Percentage of the rural population living in Green Villages
3. Unit of Measurement	%
4. Indicator Definitions	Rural population living in 'Green Villages These are local residents Living in a pleasant environment "Green Village".
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	Rural population living in 'Green Villages indicators is more relevant to the ENR sector Goal reflecting Poverty reduction. However, the rural population living in Green Villages will as well be less susceptible to vulnerability due to climate change.
6. Result level (eg: Output, Outcome, Impact)	Output

7. Date Indicator Established/Revised	31/07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured).	Disaggregated By Gender	Unit of Measurement
	Male Female	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Number of population living in Green Villages as a proportion of the population living in all the District Villages X 100	
11. Data source	Green Assessment tool	
12. Reporting Frequency	1Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	District.	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	0 to 100	

1. Indicator Code	**ECC10**
2. Indicator Title	Percentage of villages assessed as Green (satisfactorily applying sound environmental management approaches)
3. Unit of Measurement	%
4. Indicator Definitions	Green Village: Defined as a low carbon resilient village. A Green Village is an establishment for attaining sustainable development where the local residents can live in a pleasant environment. In other words, by Green village we understand a village, which is integrated, and can be developed economically by using natural resources without affecting the natural environment. This Village has to incorporate a Smart component with the incorporation of appropriate Information Communication Technology (ICT) capabilities for the Green Villages.

5. Relevance/strength (how indicator indicates the result and linked to strategic document).	Green Villages are a reflection of Environmental Management improved and vulnerability to climate change reduced. Therefore, the indicator is of great contribution to the result area.	
6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31/07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	List of variables if Applicable.	Unit of Measurement
	1. Total Village assessed as green. 2. Summation of all villages.	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Sum of villages assessed as 'Green' (satisfactorily applying similar and sound environmental management approaches as a proportion of all villages*100	
11. Data source	Green Assessment tool	
12. Reporting Frequency	1Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	0 to 100	

1. Indicator Code	**ECC11**
2. Indicator Title	Percentage of (development) sectors, which have satisfactorily mainstreamed environmental sustainability principles into their policies, strategies, plans and reports.
3. Unit of Measurement	%

4. Indicator Definitions	This indicator is intended to measure sector integration of Climate and Environment issues into policies, strategies, plans and reports. Environmental sustainability principles: are defined as general principles in the environmental policy, which has the purpose to ensure the protection and sustainable management of the environment: 1. Every individual has the right to live in a healthy and Balanced environment and has the obligation of safeguarding environmental health; 2. Economic growth in Rwanda should be based on a more rational utilization of resources and take into account the environmental dimension; 3. Active and effective participation of the entire population in the protection and management of environment; 4. Special attention should be paid to educational and awareness creation programs in environment at all levels with a greater involvement of women and the youth; 5. Introduction of the principle of prevention; 6. Introduction of the principle of polluter-pays 7. Environmental impact should be analyzed during consideration of developmental projects; 8. The principle of equality among generations and fair share in the utilization of resources should be respected; 9. Establishment of a favorable social and economic environment for the utilization of natural resources; 10. Recognition of sub-regional, regional and global Environmental interdependence. climate change adaptation/ resilience building: Aiming to lower or to reduce the risks and vulnerability posed by the consequences of climatic changes.
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	This indicator is relevant for the direct integration of Environment and Climate change issues into in to their policies, strategies, plans and reports as part of the mainstreaming underlined in the result of Environment and climate change issues mainstreamed across all sectors.
6. Result level (eg: Output, Outcome, Impact)	Output

7. Date Indicator Established/ Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured).	Disaggregated by	Unit of Measurement
	1. Strategies 2. Policies 3. Plans 4. Report	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Summation of policies, strategies, plans and reports incorporating Environment and Climate Change Issues based on set Mainstreaming standards as developed by REMA.	
11. Data source	REMA-Summary Table indicating Policies, strategies, plan and reports with Environment and Climate change issues incorporated.	
12. Reporting Frequency	1Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14.Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	0 to 100	

1. Indicator Code	**ECC11**
2. Indicator Title	Percentage of districts, which have satisfactorily mainstreamed environmental sustainability principles into their strategies, plans and reports.
3. Unit of Measurement	%
4. Indicator Definitions	This indicator is intended to measure District integration of Climate and Environment issues into policies, strategies, plans and reports.

5. Relevance/strength (how indicator indicates the result and linked to strategic document).	This indicator is relevant for the direct integration of Environment and Climate change issues into in to their policies, strategies, plans and reports as part of the mainstreaming underlined in the result of Environment and climate change issues mainstreamed across all district.	
6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregated by where it is mainstreamed	Unit of Measurement
	1) DDP 2) Imihigo 3) Reports	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Summation of policies, strategies, plans and reports incorporating Environment and Climate Change Issues based on set Mainstreaming standards as developed by REMA.	
11. Data source	REMA-Summary Table indicating districts with DDPs, Imihigo and Reports with Environment and Climate change issues considered.	
12. Reporting Frequency	1Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	From 0 to 100	

1. Indicator Code	**ECC12**

2. Indicator Title	Level (%) of implementation of domesticated regional and international conventions on environment, **% of domesticated international conventions complying with commitments**	
3. Unit of Measurement	%	
4. Indicator Definitions	Conventions defined as an agreement between states covering particular matters, especially one less formal than a treaty. Ratification defines the international act whereby a state indicates its consent to be bound to a treaty if the parties intended to show their consent by such an act. Domesticated: Integration of convention decisions into National Policies, strategies, plans and legislation.	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	Regional and international conventions ratified are very relevant for strengthened policy, legal and regulatory framework for sustainable Environment and Natural Resources management, which as reflected in the result.	
6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregated by	Unit of Measurement
	1. Regional 2. International	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Summation of MEAs (Multilateral Environmental Agreements) ratified and domesticated.	
11. Data source	REMA report (annual)	
12. Reporting Frequency	1Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	

14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked
15. Validation rules	From 0 to 100

1. Indicator Code	**ECC13**	
2. Indicator Title	Number of sectors with approved Strategic Environmental Assessments monitored	
3. Unit of Measurement	Number	
4. Indicator Definitions	A Strategic Environmental Assessment (SEA) is a systematic process for evaluating the environmental implications of a proposed policy, plan or program and provides means for looking at cumulative effects and appropriately address them at the earliest stage of decision making alongside economic and social considerations. Effective SEA works within a structured and tiered decision framework, aiming to support more effective and efficient decision-making for sustainable development and improved governance by providing for a substantive focus regarding questions, issues and alternatives to be considered in policy, plan and program (PPP) making.	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	**This indicator is relevant to NST1 as Cross-cutting areas in Environment and Climate Change, 5.17** strengthening monitoring and evaluation. High impact areas selected include implementation of: Environmental and social Impact Assessments, biodiversity and ecosystem management, pollution and waste management.	
6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31/07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregation Type.	Unit of Measurement
	NA	
9. Responsible for data reporting	Planning and M&E Officer	

10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Summation of the number of sectors monitored
11. Data source	REMA report (annual)
12. Reporting Frequency	1Y
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked
15. Validation rules	No negative value

1. Indicator Code	**ECC14**	
2. Indicator Title	Percentage of identified significant pollution sources controlled	
3. Unit of Measurement	%	
4. Indicator Definitions	This indicator tracks control of sources of pollution that could be defined as a stationary location or fixed facility from which pollutant are released. Example: power stations, steel works, industries, processing facilities, etc.	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	As stipulated by the Rwanda Constitution, every Rwandan has the right to live in a healthy and balanced environment and has the obligation of safeguarding environmental health; The Vision 2050 aims at achieving high quality and standards of living and; NST1 focus aims to be on improving cross sectoral coordination to ensure smooth implementation of environmental policies and regulations.	
6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables	By type of source:	Unit of Measurement

that define how indicators will be measured).	1. Mining 2. Industry 3. Transport 4. Agriculture 5. Health 6. Commercial facilities 7. Prisons 8. Abattoirs	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Summation of all pollution sources controlled against all pollution sources identified	
11. Data source	REMA & MoE reports (annual)	
12. Reporting Frequency	1Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	0 to 100	

1. Indicator Code	**ECC15**
2. Indicator Title	Number of green jobs created through implementation of environmental projects.
3. Unit of Measurement	Number
4. Indicator Definitions	Established positions: Job descriptions as prescribed in the organization structure occupied by staff members with formal qualification. Formal Qualification: These are qualifications approved, registered and recognized by the Government of Rwanda.
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	This indicator is very relevant to the achievement of the sector goal and the effective institution set up reform and human resource capacity development.

6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured).	JOB CATEGORY AND Gender	Unit of Measurement
	By Category: 1. Casual 2. Temporally 3. Permanent **By Gender** 1. Male 2. Female	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Summation of all green jobs created through implementation of environmental projects	
11. Data source	Sector annual report (to be coordinated) by MoE	
12. Reporting Frequency	1Y	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	No negative value	

1. Indicator Code	**ECC16**
2. Indicator Title	Percentage of approved EIA and EA certified capital projects in compliance (75% or above) with EIAs, EAs Studies and Conditions of approval
3. Unit of Measurement	%
4. Indicator Definitions	**Projects:** is defined as a development activity or proposal, which has or is likely to have an impact on the environment. This encompasses polices, plans and programs or strategic environmental assessment as well as technology and other

	categories of activities (EIA Guideline). **Compliant:** is defined as adherence to the conditions in the EIA certificate **EIA approval conditions.:** These are requirements set by the proposed certifying body and approved by the developer to which he has to abide by during project implementation. **Certificate:** is defined as a Certificate of Authorization after a proposed project is approved. This Document is legally binding and authorizes the developer to implement a proposed project, subject to any terms and conditions stipulated (EIA Guideline).	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	The intention of the indicator is to determine the level of compliance of projects in the country to EIA requirements i.e. are there projects which do not have EIAs. This is directly related to the mainstreaming of Environment and climate change issues as indicated in the result area. To-date, EIA applications have been integrated in investment licensing procedures, financing institutions and local government project development clearances (ENR Strategy, 2013). EIA procedures are in place to address environmental concerns related to any activity and to ensure sustainability development. This indicator relates to ensuring that an activity adheres to the conditions attached to their environmental authorization, provided in the EIA.	
6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured).	Disaggregated by counting	Unit of Measurement
	1. Project Complying with EIA certificate. 2. Total assessed projects.	
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Number of projects complying with EIA certificate conditions/ total number of EIA certified projects x 100	

11. Data source	EIA certificates
12. Reporting Frequency	3M
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	National
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked
15. Validation rules	0 to 100

1. Indicator Code	**ECC17**	
2. Indicator Title	Number of ha of degraded wetland ecosystems rehabilitated	
3. Unit of Measurement	Number (Ha)	
4. Indicator Definitions	Wetlands are among the world's most productive and valuable ecosystems. They provide a wide range of economic, social, environmental and cultural benefits – in recent times classified as ecosystem services. These services include maintaining water quality and supply, regulating atmospheric gases, sequestering carbon, protecting shorelines, sustaining unique indigenous biota, and providing cultural, recreational and educational resources.	
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	This indicator is relevant for improved environmental management and reduced vulnerability to climate change as any degradation of the ecosystem has a direct effect on the environment.	
6. Result level (eg: Output, Outcome, Impact)	Output	
7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured).	Disaggregated by:	Unit of Measurement
	NA	
9. Responsible for data reporting	Planning and M&E Officer	

10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Multiple methods possible: GIS (Measures surface area degraded)
11. Data source	Quarterly report from REMA
12. Reporting Frequency	Quarterly
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	District
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked
15. Validation rules	No negative Value

1. Indicator Code	**ECC18**
2. Indicator Title	Number of environmental offences case registered
3. Unit of Measurement	Number
4. Indicator Definitions	Environmental offences: Is an illegal act, which directly harms the environment. Typically these breach national and international environmental laws or conventions that exist to ensure the conservation and sustainability of the world's environment. These may include poaching, illegal logging of timber; unreported and unregulated fishing, illegal trade in chemicals including ozone-depleting substances; and illegal disposal of hazardous waste. New types of environmental crimes are also emerging, for example in carbon trade and water management.
5. Relevance/strength (how indicator indicates the result and linked to strategic document).	This indicator is relevant in operationalizing the result area of Strengthened policy, legal and regulatory framework for sustainable Environment and Natural Resources management as it measures the effectiveness of the legal and regulatory framework.
6. Result level (eg: Output, Outcome, Impact)	Output

7. Date Indicator Established/Revised	31st /07/2020	
8. Type of disaggregation in monitoring and reporting (Variables that define how indicators will be measured)	Disaggregated by types of offence registered.	Unit of Measurement
	1. Deforestation 2. Illegal hunting 3. Illegal fishing 4. Illegal mining 5. Illegal import of plastic 6. Violating 50m of buffer zone	Number
9. Responsible for data reporting	Planning and M&E Officer	
10. Data collection and Computation method **1. Numerator** **2. Denominator.**	Summation of Environmental crimes cases resulting in a prosecution/Environmental CrimesX100	
11. Data source	Annual report from Districts	
12. Reporting Frequency	3 Months	
13. Level of data collection (Admin: National/District/Sector) (Catchment: Level 1; Level 2; Level 3).	District	
14. Reporting Methodology (Domain-Type Either Aggregate or to be tracked)	To be tracked	
15. Validation rules	No negative value	