Eswatini's First Biennial Transparancy Report (BTR)

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ACRONYMS

AFOLU	Agriculture, Forestry and Other Land-Use
BTR	Biennial Transparency Report
BUR	Biennial Update Report
CAEP	Climate Action Enhancement Package
CBD	Convention on Biodiversity
CBIT	Capacity-building Initiative for Transparency
CCD	Convention to Combat Desertification
CH_4	Methane
CO_2	Carbon Dioxide
COVID-19	Corona Virus Disease 2019
CSER	Centre for Sustainable Energy Research
CSO	Central Statistics Office
CTF	Common Tabular Format
EEA	Eswatini Environment Authority
ETF	Enhanced Transparency Framework
EWSC	Eswatini Water Services Cooperation
GDP	Gross Domestic Product
GHG	Greenhouse Gas
HDI	Human Development Index
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immuno Deficiency Syndrome
ICAT	Initiative for Climate Action Transparency
IPPU	Industrial Processes and Product Use
IRENA	International Renewable Energy Agency
MEPD	Ministry of Economic Planning and Development
MNRE	Ministry of Natural Resources and Energy
MoA	Ministry of Agriculture
MoH	Ministry of Health
MOU	Memorandum of Understanding
MPG	Modalities, Procedures and Guidelines
MPWT	Ministry of Public Works and Transport
MRV	Monitoring, Reporting and Verification
MTAD	Ministry of Tinkhundla Administration and Development
MTEA	Ministry of Tourism and Environmental Affairs
N_2O	Nitrous Oxide
NC	National Communication
NCCC-E	National Climate Change Committee - Executive level
NCCP	National Climate Change Policy
NCV	Net Calorific Values
NDC	Nationally Determined Contribution
NDP	National Development Plan
QA/QC	Quality Assurance/Quality Control
REDD+	(efforts to) Reduce Emissions from Deforestation and forest Degradation in developing countries
SDG	Sustainable Development Goal

SWD	Solid Waste Disposal
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

The Kingdom of Eswatini's *First Biennial Transparency Report (BTR)* under the Paris Agreement provides a comprehensive account of the country's progress in implementing its climate commitments. This report aligns with the requirements of the Enhanced Transparency Framework (ETF) to promote transparency, accuracy, and accountability in reporting on climate actions and their impacts.

Eswatini, a small landlocked country in Southern Africa, faces significant climate challenges, including prolonged droughts and unpredictable rainfall patterns. With a population of approximately 1.34 million, the country is pursuing green growth strategies to harmonize socio-economic development with environmental sustainability.

The national GHG inventory, covering the period 1990–2018, serves as the foundation for tracking progress. Major emitting sectors include **Agriculture, Forestry, and Other Land Use (AFOLU) -** contributing 37% of total emissions, primarily from livestock and land-use change. **Energy,** the second-largest source, dominated by fuel combustion in transportation and industry. **Waste** and **Industrial Processes and Product Use**, are smaller but significant contributors, with emissions from solid waste disposal and industrial refrigerants.

Eswatini commits to reducing GHG emissions by 5% unconditionally and 14% conditionally below the 2030 business-as-usual (BAU) scenario. This equates to a reduction of 1.04 million tonnes of CO_2-equivalent with external support. Key sectors targeted include **Energy**, **AFOLU**, **Waste,** and **Industrial Processes** and Product Use. To achieve the targets, the country aims to expand renewable energy to constitute 50% of the electricity mix by 2030, promote sustainable agricultural and forestry practices to enhance carbon sequestration and reduce emissions, improve landfill gas recovery systems and composting initiatives to minimize methane emissions, and phase out the use of high-global-warming-potential refrigerants in line with international agreements. This integrated approach underscores Eswatini's commitment to advancing a low-carbon and climate-resilient development pathway.

A robust Measurement, Reporting, and Verification (MRV) framework has been established to monitor greenhouse gas emissions, renewable energy adoption, and energy efficiency improvements. Significant progress has been made, including the increased use of solar and biomass energy, the implementation of energy efficiency measures across various sectors, and the enhancement of waste management practices to minimize methane emissions.

The BTR also outlines GHG emissions projections under various scenarios, including "with measures" and "without measures," highlighting the impact of implemented policies. As a result, Eswatini emphasizes the need for international financial and technical support to achieve its ambitious conditional targets.

Eswatini has strengthened institutional arrangements to support climate governance. The Climate Change Unit under the Ministry of Tourism and Environmental Affairs coordinates reporting and policy implementation, supported by capacity-building initiatives like the Climate Action Enhancement Package (CAEP) and the Capacity-building Initiative for Transparency (CBIT).

As Eswatini's *First Biennial Transparency Report*, this report underscores its commitment to the Paris Agreement. While significant progress has been made, achieving the country's climate goals hinges

on sustained domestic efforts and enhanced international support for financial resources, technology transfer, and capacity building.

I. NATIONAL GREENHOUSE GAS INVENTORY REPORT

The National Inventory is being submitted as a separate National Inventory Document (NID) and Common Reporting Tables (CRTs).

II. INFORMATION NECESSARY TO TRACK THE PROGRESS MADE IN IMPLEMENTING AND ACHIEVING NATIONALLY DETERMINED CONTRIBUTIONS UNDER ARTICLE 4 OF THE PARIS AGREEMENT

1 NATIONAL CIRCUMSTANCES AND INSTITUTIONAL ARRANGEMENTS

1.1 GOVERNMENT STRUCTURE

The Kingdom of Eswatini is a constitutional monarchy that combines traditional authority with modern democratic governance, creating a dual system that reflects both African traditions and Western governmental frameworks. In this setup the King serves as the head of state, holding substantial powers in governance alongside a dual system that blends traditional authority with modern democratic governance. The **Constitution of Eswatini**, Act No. 1/2005, stands as the supreme law of the land, establishing three branches of government: the Executive, the bicameral Legislature, and the Judiciary.

Local Government and Traditional Authority

Eswatini's unique Tinkhundla based electoral system supports decentralized local governance. The country is organized into four administrative regions: Hhohho, Manzini, Shiselweni, and Lubombo, each containing Tinkhundla centers as follows:

- **Hhohho Region:** 15 Tinkhundla centers
- **Manzini Region:** 18 Tinkhundla centers
- **Shiselweni Region:** 15 Tinkhundla centers
- **Lubombo Region:** 11 Tinkhundla centers

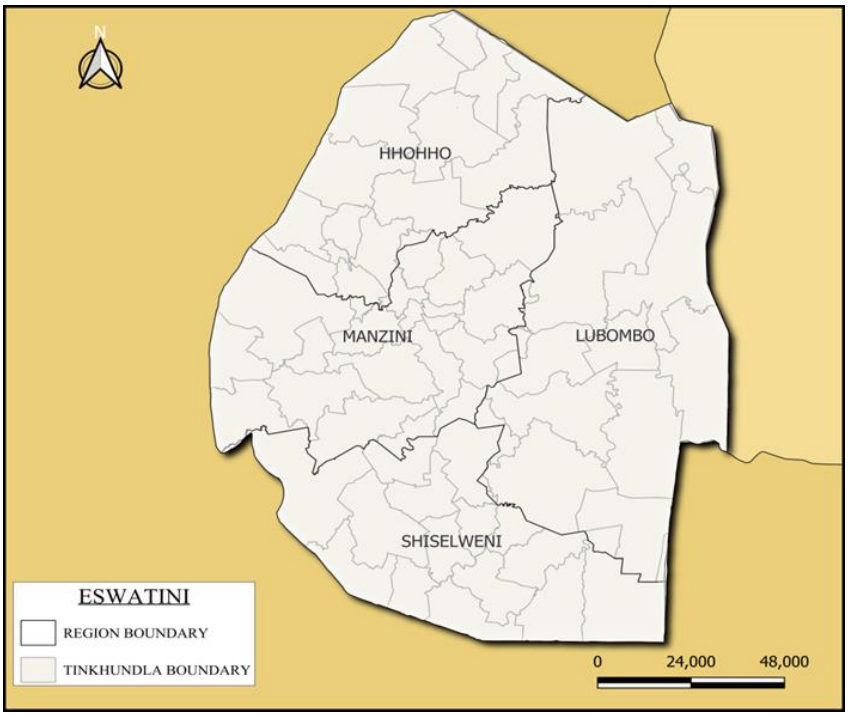

Figure 1: Eswatini administrative boundaries

These regions serve as the second level of government, with Tinkhundla centers forming the third level, promoting a grassroots approach to governance and community representation.

In addition to formal government structures, traditional leaders play an influential role in local governance. They handle community and customary matters, ensuring that local traditions and cultural values are upheld. This duality in governance allows Eswatini to balance formal legal authority with customary governance, making the system unique in its ability to integrate formal and traditional elements in national administration . This structure allows Eswatini to balance centralized governance with significant local representation, enabling regional needs and perspectives to influence national policy .

1.2 POPULATION PROFILE

Eswatini has a population of approximately 1.34 million, with women making up 51%. Population growth has slowed over the past two decades, declining from over 2% annually to 1.04% in 2024. Life expectancy increased from 43 years in 2007 to 64 years in 2024, while the death rate nearly halved in the same period. However, income inequalities remain significant, with the Gini coefficient rising from 0.51 in 2010 to 0.54 in 2016. (*United Nations Population Fund, 2017*)

Overview of Population and Human Development Trends

- **Human Development Index (HDI)**: Eswatini's HDI improved from 0.46 in 2007 to **0.611 in 2023**, placing the country in the medium human development category. However, inequality-adjusted HDI reflects a 29.3% loss due to disparities in income, resource distribution, and the high prevalence of HIV/AIDS, which affects **26% of adults aged 15-49**.

Urbanization and Rural Distribution

- **Rural Dominance**: **75.3%** of the population resides in rural areas, reliant on subsistence farming and informal employment.
- **Urbanization**: Urban population rose to nearly **24.7% by 2024**, with Manzini and Mbabane hosting nearly 20% of the nation's population. Urban areas are home to younger age groups and benefit from greater access to infrastructure, including electricity and formal employment opportunities.

Gender Dynamics and Climate Vulnerabilities

- **Employment Gaps**: Women face higher unemployment rates (**24.8% vs. 21.2% for men**) and are disproportionately employed in the informal sector (**70.9% of women vs. 64.3% of men**).
- **Climate Vulnerabilities**: Women in rural areas, as primary caregivers, are particularly vulnerable to climate change impacts such as droughts and deforestation, which increase their burden of collecting water, food, and fuel wood. These challenges underscore the importance of integrating gender considerations into climate adaptation policies.

Labour Force and Socioeconomic Well-being

- **Labour Force Participation**: The informal sector dominates employment, with subsistence farming playing a significant role in rural livelihoods. Efforts to increase formal employment opportunities for women remain essential.

- **COVID-19 Impacts**: The pandemic exacerbated vulnerabilities, with **37% of households reporting income reductions and 26.9% facing job losses in 2020**. Urban populations were particularly affected due to disrupted supply chains and increased food insecurity. (*United Nations Population Fund, 2017*)

Eswatini is pursuing a Green Growth development path through economic development transformation underpinned by principles of environmental sustainability, climate adaptation and mitigation, resource efficiency and inclusiveness. The green growth approach will lead to better quality of growth, enhanced food, water and energy security, lower environmental risks and ultimately better wellbeing and quality of life.

Green growth will be a point of transformation in bringing Eswatini towards a sustainable socio-economic development path, where improvement in quality of life are harmonized with sustainability of natural resources and the environment.

Eswatini will implement the NDC to achieve a green economy through climate mitigation by reducing the carbon footprint and climate adaptation by enhancing the resilience of the nation from impacts of climate change.

1.3 GEOGRAPHIC PROFILE

Eswatini is a small, landlocked country in Southern Africa, covering approximately 17,364 square kilometres. It is bordered by Mozambique to the east and South Africa to the west, located at central coordinates of 26.30°S and 31.30°E. The country features diverse landscapes, including mountains, savanna, and river valleys, which influence its climate, agriculture, forestry, and water resources.

Eswatini is divided into four agroecological zones: Highveld, Middleveld, Lowveld, and Lubombo Plateau. These zones vary in elevation, landforms, and climate, impacting land use and economic activities. The Highveld, covering 30% of the country, has cooler temperatures and higher rainfall, making it suitable for forestry and grazing. The Middleveld, split into Upper and Lower sections, spans 25% of Eswatini's area, while the Lowveld, known for its drier and warmer climate, is ideal for sugarcane production. The Lubombo Plateau, along the eastern border, rises to about 600 meters above sea level and covers 1,500 square kilometres (8.6%). The region's diverse climates and ecosystems play a key role in Eswatini's economy but also increase vulnerability to climate change impacts, such as droughts and floods.

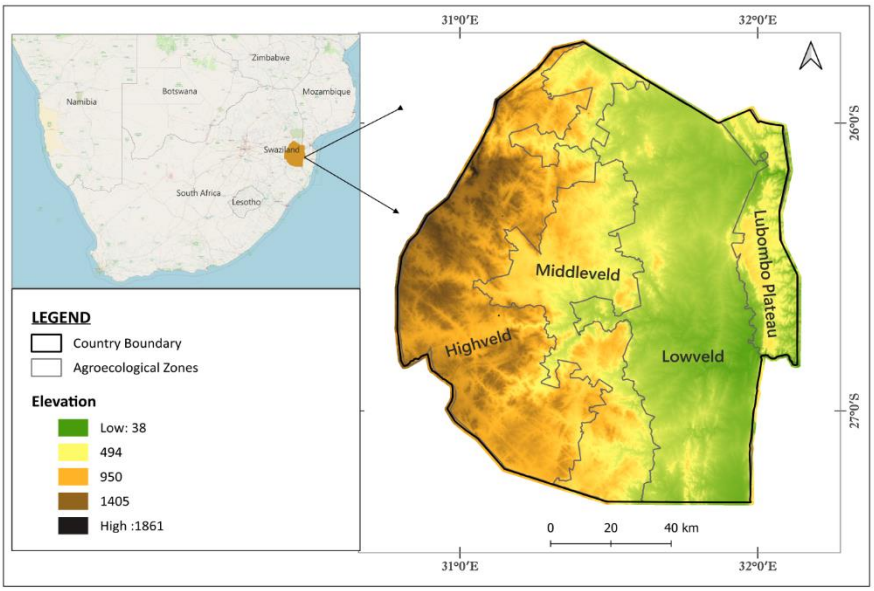

Figure 1: Eswatini's Agro-ecological zones

1.4 ECONOMIC PROFILE

Eswatini's economy has grown by 4.8%, in 2023/2024, driven by a resurgence in manufacturing, mining, and construction sectors. In the recent past the GDP per capita reached $4,146, with an average growth rate of 5.1% from 1971 to 2018. This growth was supported by improved external demand for key exports and increased production capacity in coal mining. However, domestic inflation rose to 5.0%, influenced by food and energy prices, housing, and utilities. (*Eswatini Government 2024*).

Eswatini's economy is mainly driven by three major sectors services, manufacturing, and agriculture. The GDP contribution from these major sectors is as follows; more than 55.9% in the services sector, 29.5% in the manufacturing sector with sugar industry contributing 12%-16% and nearly 8.4% in Agriculture. The manufacturing sector is primarily focused on soft drink concentrates, sugar processing, textiles, and apparel. Agriculture is predominantly based on irrigated commercial farming, with key crops including sugarcane, citrus, and pineapples.

Eswatini's agriculture sector is heavily dependent on rainfed subsistence farming which includes cultivating maize, legumes, sorghum, and rearing livestock, employing around 75% of the population, especially in rural areas. The agriculture sector is particularly vulnerable to climate change, with risks such as droughts and rising temperatures expected to further strain productivity. Unreliable and changing precipitation patterns are increasingly affecting crop yields across the various agro-ecological zones. Other major economic sectors are also faced with challenges from climate impacts but continue to play a significant role in employment.

In response, the Kingdom of Eswatini is creating an enabling environment through development and implementation of policies and strategies for climate change adaptation and mitigation. In order to achieve the Paris Agreement commitments and to track the progress made in implementing and achieving the NDC goals, Eswatini has been focusing on key areas such as sustainable agriculture, resilient infrastructure, energy efficiency, and land management. These areas have been targeted though specific policies and initiatives to enhance climate resilience and ensure alignment with the country's broader sustainable development objectives. Efforts to reduce emissions, such as improving

energy efficiency in agriculture and manufacturing, align with broader climate goals outlined in the NDC. Key contributions by sector are as follows:

1. **Energy**: The energy sector, including electricity generation, showed a slight contraction of 0.8% in 2023, due to servicing of one of the major power generation stations which resulted in scaled-down production at certain periods of the year. However, interventions such as the Network Reinforcement and Access Project (NRAP) and future expansions in hydro-power and solar energy are contributing to this sector.
2. **Agriculture, Forestry, and Land Use**: In recent years there has been a decline by 2.5% between 1995 and 2023 in Agriculture and forestry due to unreliable weather conditions and high input costs. Government has supported climate efforts including climate smart agricultural practices such as water efficient technologies.
3. **Industrial Processes and Product Use**: The manufacturing sector, part of the industrial processes, contributed 29.6% to GDP in 2023. In line with low carbon development pathway, the sector is employing renewable technologies albeit faced by challenges such as high production cost.
4. **Waste Management**: While specific economic contributions for waste management are not detailed, the sector's activities are crucial for supporting other industries and maintaining environmental standards.
   (*Eswatini Government 2024*)

1.5 CLIMATE PROFILE

Eswatini, located between Mozambique and South Africa, experiences a semi-arid subtropical climate influenced by varying altitudes. The country receives rainfall throughout the year, although it is drier during winter months. Rainfall is most abundant from October to March, with annual totals ranging from 1500mm in the northwestern Highveld to 500mm in the southeastern Lowveld. The country's moderate climate is characterized by distinct seasonal variations, with lush, green landscapes during summer and drier, cooler conditions in winter.

Key weather systems influencing Eswatini's climate include cold fronts, anti-cyclones, tropical cyclones, and the Inter-Tropical Convergence Zone (ITCZ). In summer, the ITCZ and cold fronts bring rainfall, while in winter, drier conditions prevail due to anticyclones. Climate change is intensifying the frequency and intensity of extreme weather events, especially during the transition periods.

Temperature varies significantly with elevation:

- Lowveld: The hottest region, with summer temperatures reaching up to 44°C.
- Highveld: Cooler, with maximum temperatures rarely exceeding 32°C, offering a more moderate climate.

Winter brings cooler conditions, especially in the Highveld, where temperatures can drop below 0°C, making it the coldest region. June is the coolest month, with an average minimum temperature of around 7°C.

This diversity in temperature and rainfall is critical for understanding the climate-related vulnerabilities of different regions in Eswatini, especially for agriculture, water resources, and infrastructure planning in the NDC context. See Figure 2 and Figure 3.

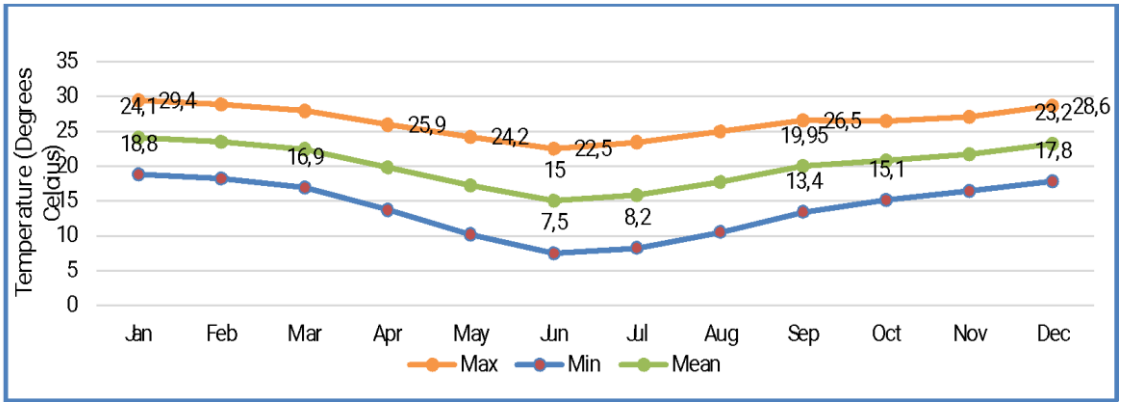

Figure 2: Temperature

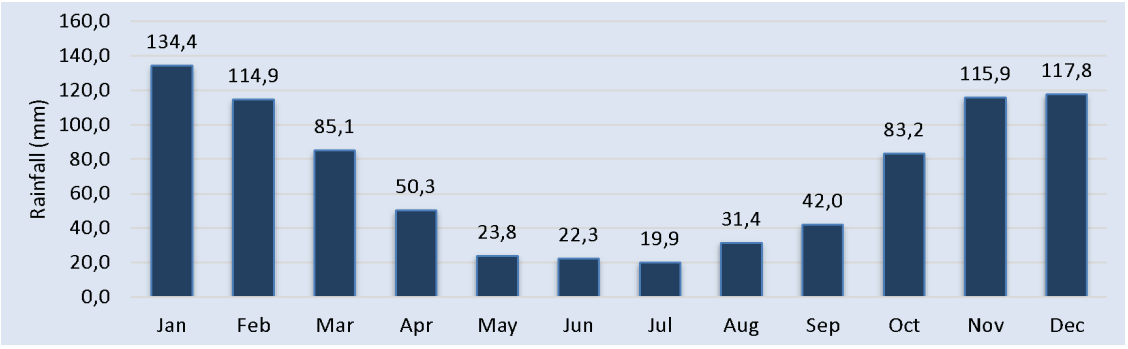

Figure 3: Figure 5: Rainfall distribution (MTEA, 2021).

1.6 SECTOR DETAILS

In relation to the country's current NDC, the GHG inventory sectors, as determined by the 2018 GHG Inventory, are as follows:

1.6.1 Agriculture, Forestry, and Other Land Use (AFOLU)

The emissions/removals from the AFOLU sector are influenced by a combination of factors including implementation of national policies, available technologies, and management practices. The aggregate effects of how policies, technologies and management practices are used largely determine land use practices and the associated emissions or removal of GHG from the AFOLU sector. Some of the practices include: (a) livestock rearing, (b) land use change via forest conversion (deforestation), (c) afforestation, (d) wood-fuel extraction, (e) wildfire disturbance, (f) application of nitrogen-based fertilisers.

AFOLU has been contributing the highest GHG emissions with 37% from the FOLU sub-sector. Aggregate sources and Non-CO_2 Emissions Sources on Land account for 29% of the total emissions. Cumulatively, 3A1. Enteric Fermentation and 3A2. Manure Management accounts for 34% of AFOLU sector emissions.

1.6.2 Energy

The Energy sector is the second largest contributor to greenhouse gas (GHG) emissions. The dominant GHG in this sector is CO_2, followed by CH_4 and N_2O.

Fuel combustion activities are the primary source of emissions, with road transport contributing the largest share, followed by manufacturing industries and construction activities. The sub-categories in the Energy sector include emissions from fuel consumption in electricity production, manufacturing industries, agriculture, transport, commerce, institutional and residential sectors, as well as fugitive emissions from surface coal mining and handling. The gases estimated in this sector were CO_2, CH_4, and N_2O. Default Net Calorific Values (NCV) were used, except for conversion factors specific to motor gasoline, diesel, and illuminating paraffin, which were sourced from South African Energy Statistics. Key activity data included fuel consumption across various sub-categories, fugitive emissions from coal mining and energy production and utilization data. Data were primarily sourced from the national energy balances produced by the Department of Energy within the Ministry of Natural Resources and Energy. In cases where these data were incomplete, alternative sources were identified, such as open-access international datasets, direct inputs from relevant industries, and data provided by the University of Eswatini's Centre for Sustainable Energy Research (CSER).

1.6.3 Waste

The waste sector is the third largest contributor to GHG emissions. The GHGs included in the Waste sector are CO_2, CH_4 and N_2O. The sub-categories in the waste sector are solid waste disposal into landfill; biological treatment of waste; incineration; open burning, and wastewater treatment. The most significant source of emissions in the sector is solid waste disposal (SWD). This was followed by wastewater treatment, open burning, biological treatment of waste , and incineration of hospital waste (health care risk waste). The main activity data in this sector were population, solid waste generation and composition, quantities of waste composted, incinerated, or burnt and the utilization of waste-water treatment streams. Key data sources included Eswatini Central Statistics Office (CSO), Eswatini Environment Authority (EEA), municipalities, company towns, and Eswatini Water Services Corporation (EWSC).

1.6.4 Industrial Processes and Product Use (IPPU)

The Industrial Processes and Product Use (IPPU) sector in Eswatini is the smallest contributor to national GHG emissions. The GHGs included in the IPPU sector are CO_2, HFCs, SF_6, and N_2O. The largest emissions from this sector come from Product Uses as Substitutes for Ozone Depleting Substance Refrigeration and Air-Conditioning. This is followed by Non-Energy products from lubricant use including paraffin wax use and solvent use. The remaining emissions are from Other Product Manufacture and Use with Electrical Equipment estimated. The industries covered in this sector include mineral industry (ceramics), non-energy products from fuels and solvent use (lubricants and paraffin wax) and product uses as substitutes for ozone depleting substances (use of HFCs in the manufacture and servicing of refrigerators and air-conditioning). Other sub categories include product manufacture and use (electrical equipment), and N_2O from product uses. The sources of data include the Eswatini Environment Authority (EEA) and Eswatini Revenue Authority. Where population data is used, the Central Statistics Office (CSO) is consulted.

1.7 INSTITUTIONAL ARRANGEMENTS

The Ministry of Tourism and Environmental Affairs (MTEA) is the United Nations Framework Convention on Climate Change (UNFCCC) focal point responsible for the preparation of National Communications (NCs), Biennial Update Reports (BURs), Biennial Transparency Reports (BTR) and National Inventory Reports through the Department of Meteorology. The MTEA thus coordinates the activities needed to ensure that inputs and outputs required for reporting to the UNFCCC are prepared, and are of sufficient quality to meet Eswatini's commitments. A Measurement, Reporting, and Verification (MRV) Tool has been developed in consultation with relevant national stakeholders to enable the tracking of Greenhouse Gas (GHG) inventory, mitigation actions, SDG goals, and implementation of NDC ambitions.

As part of the interventions, the government has put initiatives in place to enable tracking of the progress made in implementing and achieving Nationally Determined Contributions (NDCs) including through the establishment of a robust national MRV framework. The specification of indicators in the MRV framework is necessary as minimum data prerequisites to assess the impact of policies on GHG emissions and track the progress made in implementing and achieving NDCs.

Formal arrangements are being established with defined roles and responsibilities to enable implementation of the structure, with Memoranda of Understanding (MOUs) being prepared for signing with relevant institutions. At the core of this framework is the MRV system, which was developed but is not yet fully functional. It includes tools to track mitigation, adaptation, and Sustainable Development Goals (SDGs). In addition, an enhanced cloud-based GHG Inventory Archiving Site, originally developed during the BUR process is not yet fully functional, supports data storage, transparency, and collaboration. Integrated Quality Assurance and Quality Control (QA/QC) mechanisms, including internal reviews, external validations, and data verification, ensure data accuracy and reliability.

There is need to strengthen a framework to improve baseline emission estimates, ensure time-series consistency, and foster cross-sector collaboration. This will enable effective monitoring of NDC progress, guiding informed decision-making and ensuring alignment with Eswatini's national priorities and international climate commitments under the Paris Agreement.

The institutional framework for tracking NDC implementation has been strengthened through capacity-building initiatives like the UNDP Climate Promise Initiative, the NDC Partnership Climate Action Enhancement Package (CAEP), the Initiative for Climate Action Transparency (ICAT), and the Capacity Building Initiative for Transparency (CBIT). These programs have supported the training of national experts and consultants, enabling Eswatini to institutionalize GHG inventory compilation. Progress in the energy sector has been achieved through collaboration with the Department of Energy, with similar arrangements planned for other sectors. These efforts contribute to the continuous reporting of emission reductions and further enhance the MRV framework.

Eswatini leverages an institutional framework established during the Biennial Update Report (BUR) process to track NDC implementation. The Ministry of Tourism and Environmental Affairs (MTEA), through the Department of Meteorology, coordinates these efforts in collaboration with key ministries, the Central Statistics Office (CSO), private sector stakeholders, and development partners. The coordination mechanism of the NDC is through the Climate Change Unit which is hosted under the Department of Meteorology of MTEA working closely with the Ministry of Economic Planning and Development (MEPD). The Executive level of the National Climate Change Committee (NCCC-E) coordinates all climate change related work in the country. The NCCC-E is composed of Principal Secretaries (PSs) covering relevant ministries of MTEA, MEPD, Ministry of Finance, Ministry of Natural

Resources and Energy (MNRE), Ministry of Agriculture (MoA), Ministry of Health (MoH), Ministry of Public Works and Transport (MPWT) and Ministry of Tinkhundla Administrations and Development (MTAD) and the National Climate Change Focal Point. An operational committee and working groups are also supporting the technical work with the Climate Change Unit, the Secretariat for all climate change work in the country. The institutional arrangements for NDC process, where MTEA and MEPD are the overseeing institutions is shown in Figure 4.

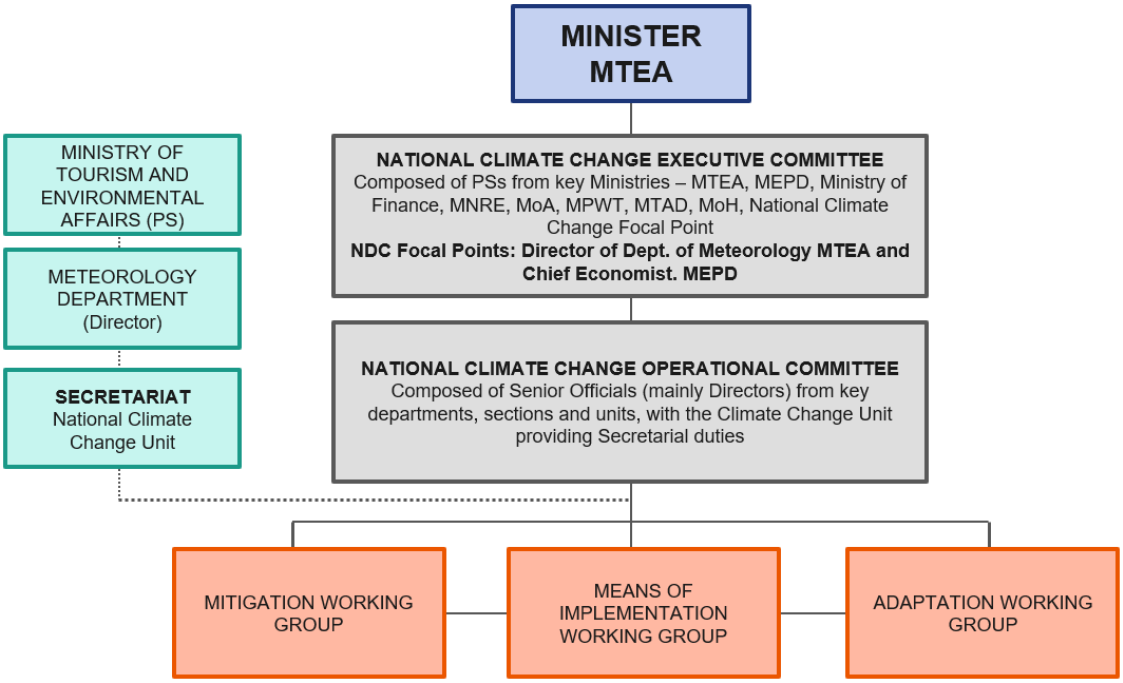

Figure 4: The institutional arrangements for NDC process, where MTEA and MEPD are the overseeing institutions.

2 DESCRIPTION OF ESWATINI'S NATIONALLY DETERMINED CONTRIBUTION UNDER ATRICLE 4 OF THE PARIS AGREEMENT INCLUDING UPDATES

2.1 OVERVIEW OF ESWATINI'S NDC COMMITMENTS

Eswatini provides a description of its NDC under Article 4, against which progress will be tracked. The information provided includes required information, as applicable, including any updates to information previously provided (para. 64 of the MPGs). The details about the previous reporting and the targets are presented in Table 1 and Table 2, summarised in CTF Appendix.

The primary target in Eswatini's NDC is an economy-wide GHG reduction of 5% below the 2030 business-as-usual (BAU) level, achievable through national efforts. Additionally, with sufficient external financing and technical support, this reduction could be increased to 14% by 2030, equivalent to reducing emissions by approximately 1.04 million tonnes of CO_2-equivalent. Eswatini's first NDC stated the country's ambition to take a path of green growth and committed to undertaking several broad climate change mitigation and adaptation measures for the priority sectors. Through the revision process, the country has set to chart out clear mitigation and adaptation targets along with comprehensive roadmaps based on the local context. As the overarching objective of NDC revision process was to further strengthen Eswatini's commitment towards strong climate action, in addition to the previously identified priority sectors, the revised NDC incorporates new sectors for mitigation and adaptation action by the country.

Table 1: Updates from previous reporting per sector.

	Targets and estimates in FY 2030

Energy and Transport	Increasing the share of renewable energy to 50% in the electricity mix by 2030 relative to 2010[1] levels through the adoption of solar, wind, biomass, hydro, and solar water heater technologies. Key measures to be implemented include:
	• **Electricity Generation**[2]
	  ○ Solar: 55.85 MW[3]
	  ○ Hydro: 80 MW
	  ○ Biomass: 95 MW[4]
	  ○ Wind: Conduct feasibility studies and assessments
	• **Residential**
	  ○ Achieving 100%[5] access to clean modern energy for cooking at household-level by 2030
	  ○ Improving by 50%, uptake of energy efficient biomass stoves used for cooking by 2030
	  ○ Replacing inefficient wood-based water heating with energy efficiency options to reduce its share by 13% by 2030

[1] The share of renewable energy in the national energy mix in 2010 was 16%. This includes both grid-connected renewable energy and sustainable/renewable biomass.
[2] This is the additional installation between 2011-2030
[3] This includes existing grid connected capacity of 15.85MW. In addition, there are a number of smaller installations by companies and individuals for self-consumption, that is not included here. What is included here are the solar power contributions into the grid electricity supply only.
[4] In 2010, 51MW of biomass electricity generation existed.
[5] In 2010, access to clean fuels and technologies for cooking (% of population) was 33.0%.

	○ Reduce energy consumption in water heating, through replacing conventional geysers with 1 000 solar water heaters by 2030 ○ Reducing energy intensity[6] (electricity) by 20%[7] by 2030 relative to 2010 • **Industry** ○ Reducing energy intensity[8] (electricity) by 5%[9] by 2030 relative to 2010 • **Commercial and public services** ○ Reducing energy intensity (electricity) by 3%[10] by 2030 relative to 2010 levels • **Agriculture** ○ Reducing energy intensity (electricity) by 3%[11] by 2030 relative to 2010 levels
Waste	Reduce GHG emissions by 2030 compared to baseline scenario through improvements in waste treatment (including landfilling) across urban and rural areas. Key measures to be implemented include: • Decreasing open burning of municipal solid waste (MSW) • Increasing composting of organic waste (biological treatment), capturing 30% of the organic waste generated within the country by 2030 • Introducing Landfill Gas Recovery (LGR) in existing and new solid waste disposal sites • Improving wastewater treatment and control and • Conduct assessments and develop strategies to move from a linear economy to a circular economy model to support sustainable development in the country. Eswatini is committed to reducing its carbon footprint by adopting a circular economy model to reduce the pressure and adverse impacts on our natural environment, reduce resource use, maximize the value of materials through a life cycle approach.
IPPU	Reduce GHG emissions by 2030 compared to baseline scenario by implementing the Kigali Amendment to the Montreal Protocol and other measures. Key measures to be implemented include: • Substitution of HFC consumption for low-GWP alternatives under the Kigali Amendment implementation calendar including through: ○ Substitution of HFC-134A with isobutane (HC-600A) in

[6] Definition of the energy intensity in this context of "Residential" is energy use per household.
[7] In 2010 energy intensity (residential) was 4846 kWh per household.
[8] Definition of the energy intensity in the context of "industry", "commercial and public service" and "agriculture" is energy use per unit of the sectors GDP (or unit of economic output).
[9] In 2010 energy intensity (industry) was 0.072 kWh/E.
[10] In 2010 energy intensity (commercial and public services) was 0.008 kWh/E.
[11] In 2010 energy intensity (agriculture) was 0.1 kWh/E.

	domestic and commercial refrigeration ○ Substitution of HFC-134A with ammonia in industrial refrigeration • Phasing out the use of HFC Eswatini is required to freeze HFC production and use in 2024, based on an average of HFC consumption of 2019, 2020 and 2021 levels • Servicing best practices that allow recovery and reuse of refrigerants and • Recovery and reuse of refrigerants contained in disposed equipment.
AFOLU	In the AFOLU sector Eswatini commits to move from Tier 1 to Tier 2 [12]GHG inventory and improve data collection and institutional arrangements by 2030. Furthermore, the country commits to reducing land degradation (including in mountain ecosystems) through restoration including tree planting and improving livelihoods through better livestock management. The country aims to plant 10 million trees.

Source: Final Nationally Determined Contribution (NDC) of Eswatini

Table 2: Description of Eswatini's nationally determined contribution under Article 4 of the Paris Agreement, including updates – CTF Appendix

	Description
Target(s) and description, including target type(s), as applicable (b, c)	Eswatini adopted an economy-wide GHG emissions reduction target of 5% unconditional and 14 % conditional equivalent to an estimated mitigation level of up to 1.39 million tonnes of carbon dioxide equivalent emissions by 2030 compared to the baseline scenario.
Target year(s) or period(s), and whether they are single-year or multi-year target(s), as applicable	Target year: 2030, single year target
Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s), as applicable	Reference level: 2.70 Million tonnes of GHG emissions. Base year 2010
Time frame(s) and/or periods for implementation, as applicable	2021-2030
Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases, as applicable	Eswatini commits to extend over time, the scope of its NDC to all categories of anthropogenic emissions in line with paragraph 31(c). Information to be provided in Eswatini's inventory as part of the Biennial Transparency Report (BTR) will be consistent with the IPCC

[12] IPCC provides guidance on methods for estimating emissions (and removals as appropriate) for each gas in mass units. A tier represents a level of methodological complexity. Tier 1 is the basic method, Tier 2 intermediate and Tier 3 the most demanding in terms of complexity and data requirements. Tiers 2 and 3 are sometimes referred to as higher tier methods and are generally considered to be more accurate on condition that adequate data are available to develop, evaluate and apply a higher tier method.

	guidelines. Sectors covered: Energy, transport, waste, IPPU and AFOLU Gases covered: Carbon dioxide (CO2), Methane (CH4), and Hydrofluorocarbons (HFCs). Further, the NDC also covers short-lived climate pollutants (SLCP) including Black Carbon (BC) and other air pollutants such as Organic Carbon (OC), Particulate Matter (PM2.5 and PM10), Nitrogen Oxides (NOx), Non-methane volatile organic compounds (NMVOC), Sulphur dioxide (SO2), Ammonia (NH3), and Carbon Monoxide (CO).
Intention to use cooperative approaches that involve the use of ITMOs under Article 6 towards NDCs under Article 4 of the Paris Agreement, as applicable	Eswatini will fully utilize the enhanced ambition instruments under Article 6, increase her focus on energy and mobility under the provision of cooperative approaches in Article 6.2, and target adaptation benefits for rural communities, specifically around food and water security. Where possible, Eswatini shall also utilize the provisions under the non-market approaches in Article 6.8. Eswatini recognizes the urgent need for climate action as articulated in AR6 IPCC report.
Any updates or clarifications of previously reported information, as applicable	The TNC Recalculations of years 1995 to 2003 were then undertaken using the aggregated South African Petroleum Industry Association petroleum volumes. The data could only be disaggregated by subsector for years 2004, 2005 and 2006. The NDC recognized that the GHG emissions level for the BAU scenario and conditional targets in 2030 may be updated and recalculated depending on methodological changes in the GHG inventory, such as recalculating the GHG inventory with the 2006 IPCC Guidelines or changes in Global Warming Potential (GWP) in IPCC Assessment Reports, or the adoption of the 2019 IPCC Refinement. Information on updates made will be included in the Biennial Transparency Reports (BTR) and National Communications (NC). Furthermore, when more reliable data becomes available, the GHG inventory may be recalculated.

3 INFORMATION NECESSARY TO TRACK PROGRESS MADE IN IMPLEMENTING AND ACHEVING THE NATIONALLY DETERMINED CONTRIBUTION UNDER ARTICLE 4 OF THE PARIS AGREEMENT

3.1 DESCRIPTION OF SELECTED INDICATORS

Eswatini will select total greenhouse gas emissions as an indicator to track progress in implementing and achieving the NDC with a target year of FY 2030 submitted to the secretariat of the UNFCCC under the Paris Agreement.

Details of the selected indicator are shown in the Table 3 and Table 4.

Table 3: Structured Summary: Description of selected indicators – CTF Table 1

Indicator(s) selected to track progress	Description
Total greenhouse gas emissions (GHG) excluding LULUCF per year (measured as millions of ton CO2eq emissions)	Total Emissions in all the four sectors expressed Gg CO_2eq
Information for the reference point(s), level(s), baseline(s), base year(s) or starting point(s), as appropriate	Base year 2010 Reference level: 2.70 Million tonnes of GHG emissions.
Updates in accordance with any recalculation of the GHG inventory, as appropriate	No recalculations
Relation to NDC	The indicator directly relates to the NDC target of the Party and it is the most appropriate indicator for this type of target

Table 4: Structured Summary: Definitions needed to understand NDC - CTF Table 2

Definitions	
Definition needed to understand each indicator:	
Total greenhouse gas emissions (GHG) excluding LULUCF per year (measured as millions of ton CO_2eq emissions):	In this case, this indicator is calculated as the sum of emissions of the following direct GHGs: Gases covered: Carbon dioxide (CO_2), Methane (CH_4), and Hydrofluorocarbons (HFCs). Further, the NDC also covers short-lived climate pollutants (SLCP) including Black Carbon (BC) and other air pollutants such as Organic Carbon (OC), Particulate Matter ($PM_{2.5}$ and PM_{10}), Nitrogen Oxides (NO_x), Non-methane volatile organic compounds (NMVOC), Sulphur dioxide (SO_2), Ammonia (NH_3), and Carbon Monoxide (CO). According to NDC only IPPU sector used the common weighting factors the Global Warming Potentials (GWP) for the 100-year time horizon listed in the Fifth IPCC Assessment Report used for the target. The sectoral scope of the contribution covers all emissions sources described in the IPCC 2006 Reporting Guidelines (IPCC, 2006), including emissions from the categories of energy (including transport), waste, industrial processes, and product use (IPPU) and Agriculture, excluding LULUCF.
BAU emissions baseline scenario (measured as millions of ton CO2eq	Methodology for building this baseline is included in the Chapter on information necessary to track progress made in implementing the NDC of the Party (BTR1). The GHG emissions level for the BAU scenario and conditional targets in 2030 will be updated and

emissions)	recalculated depending on methodological changes in the GHG inventory, such as recalculating the GHG inventory with the 2006 IPCC Guidelines or changes in Global Warming Potential (GWP) based on the Fifth IPCC Assessment Reports, or the adoption of the 2019 IPCC Refinement. Information on updates made will be included in the Biennial Transparency Reports (BTR) and National Communications (NC). Furthermore, when more reliable data becomes available, the GHG inventory will be recalculated.
Any sector or category defined differently than in the national inventory report:	NA
Definition needed to understand mitigation co-benefits of adaptation actions and/or economic diversification plans:	
Mitigation co-benefit(s)	NA
Any other relevant definitions:	NA

3.2 METHODOLOGIES AND ACCOUNTING APPROACHES FOR TRACKING PROGRESS TOWARDS IMPLEMENTING AND ACHIEVING THE NDC

3.2.1 OVERVIEW OF METHODOLOGIES AND ACCOUNTING APPROACHES

This subsection presents the Supplementary Methodological details and approaches from each of the sector accounting in the NDC. For details, refer to Chapter I of the National Inventory Report. The methodologies and accounting approaches are summarised in Table 5.

Table 5: Structured Summary: Methodologies and accounting approaches - consistency with Article 4, paragraphs 13 and 14, of the Paris Agreement and with decision 4/CMA 1-CTF Table 3

Reporting requirement	***Description or reference to the relevant section of the BTR***
For the first NDC under Article 4:	
Accounting approach, including how it is consistent with Article 4, paragraphs 13–14, of the Paris Agreement (para. 71 of the MPGs)	NA
For the second and subsequent NDC under Article 4, and optionally for the first NDC under Article 4:	

Information on the accounting approach used is consistent with paragraphs 13–17 and annex II of decision 4/CMA.1 (para. 72 of the MPGs)	Eswatini followed the IPCC 2006 guidelines for the quantification of GHG emissions. For other pollutants, EMEP/EEA air pollution emission inventory guidebook was also used.
Explain how the accounting for anthropogenic emissions and removals is in accordance with methodologies and common metrics assessed by the IPCC and in accordance with decision 18/CMA.1 (para. 1(a) of annex II to decision 4/CMA.1)	Assumptions about socioeconomic development in Eswatini that informed the development of the baseline scenario were derived from national documents such as the Energy Master Plan 2034, Eswatini Population Projections Report 2018-2037, unpublished projections from National Accounts data and other national statistics. Short Lived Climate Pollutants (SLCP) and air pollutants were included in the mitigation assessment. Assumptions were made as to how the activity in each economic sector are likely to change into the future, based on national plans and reports, projections in changes in activity variables were linked to socioeconomic development in Eswatini, such as expected GDP and population growth. Emission sources were grouped according to the IPCC source categories. Historical emissions of SLCP and air pollutants were analysed from 2010 to 2017.The GHG mitigation assessment conducted for Eswatini also quantified emissions of SLCPs and air pollutants, and their emission reduction potential.
Explain how consistency has been maintained between any GHG data and estimation methodologies used for accounting and the Party's GHG inventory, pursuant to Article 13, paragraph 7(a), of the Paris Agreement, if applicable (para. 2(b) of annex II to decision 4/CMA.1) diversification plans:	Methodological consistency is maintained by aligning emission reporting with the IPCC and Biennial Transparency requirement.
Explain how overestimation or underestimation has been avoided for any projected emissions and removals used for accounting (para. 2(c) of annex II to decision 4/CMA.1)	The inventory used to undertake the projections was done using IPCC guidelines, quality controlled and quality assurance undertaken. Projections were based on population and/or GDP projections, wherein the data was sourced from the Central Statistics Office. GDP projections were only available for three years and the team worked in collaboration with the Central Statistics team to project further An assumption was made that these projections are correct and therefore result in a true reflection of the future.
For each NDC under Article 4:[c]	
Accounting for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the IPCC and adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement:	The national GHG emissions were calculated based on the 2006 and 2019 refinement IPCC Guidelines. Further, the global warming potentials (GWPs) as per the fifth IPCC Assessment Report (AR5) were used to calculate the total national GHG emissions in CO2 equivalent.
Each methodology and/or accounting approach used to assess the implementation and achievement of the target(s), as applicable (para. 74(a) of the	The 2030 emissions levels in the BAU scenario were projected based on assumptions for GDP, population, sectoral activity such as fuel consumption in the residential sector, industry and services, number of vehicles, electricity generation fleet.

MPGs)	
Each methodology and/or accounting approach used for the construction of any baseline, to the extent possible (para. 74(b) of the MPGs)	Assumptions about socioeconomic development in Eswatini that informed the development of the baseline scenario were derived from national documents such as the Energy Master Plan 2034, Eswatini Population Projections Report 2018-2037, unofficial projections from National Accounts data and other national statistics. For other pollutants, EMEP/EEA air pollution emission inventory guidebook was also used.
If the methodology or accounting approach used for the indicator(s) in table 1 differ from those used to assess the implementation and achievement the target, describe each methodology or accounting approach used to generate the information generated for each indicator in the tables 4 and 5 (para. 74(c) of the MPGs)	Methodologies and accounting approaches used to generate the information on each indicator in the CTF Table 4 are identical to those used for each indicator in the CTF Table 1.
Any conditions and assumptions relevant to the achievement of the NDC under Article 4, as applicable and available (para. 75(i) of the MPGs)	The GHG emissions level for the BAU scenario and conditional targets in 2030 may be updated and recalculated depending on methodological changes in the GHG inventory.
Key parameters, assumptions, definitions, data sources and models used, as applicable and available (para. 75(a) of the MPGs)	Information on methodologies, data sources, models used, etc on national GHG emissions and contributions is explained in the National Inventory Report.
IPCC Guidelines used, as applicable and available (para. 75(b) of the MPGs)	Eswatini followed the IPCC 2006 guidelines for the quantification of GHG emissions using Tier 1 methodology across all sectors.
Report the metrics used, as applicable and available (para. 75(c) of the MPGs)	GWPs of a 100-year time horizon as presented in the IPCC Fifth Assessment Report (AR5)
For Parties whose NDC cannot be accounted for using methodologies covered by IPCC guidelines, provide information on their own methodology used, including for NDCs, pursuant to Article 4, paragraph 6, of the Paris Agreement, if applicable (para. 1(b) of annex II	NA

to decision 4/CMA.1)	
Provide information on methodologies used to track progress arising from the implementation of policies and measures, as appropriate (para. 1(d) of annex II to decision 4/CMA.1)	Emission sources were grouped according to the IPCC source categories. Historical emissions of SLCP and air pollutants were analysed from 2010 to 2017.
Where applicable to its NDC, any sector-, category or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, taking into account any relevant decision under the Convention, as applicable (para. 75(d) of the MPGs)	Estimation of the GHG emissions and removals were calculated based on the 2006 and 2019 refinement IPCC Guidelines. Further information on the specific sectors can be found in the NIR.
For Parties that address emissions and subsequent removals from natural disturbances on managed lands, provide detailed information on the approach used and how it is consistent with relevant IPCC guidance, as appropriate, or indicate the relevant section of the national GHG inventory report containing that information (para. 1(e) of annex II to decision 4/CMA.1, para. 75(d)(i) of the MPGs)	No Information
For Parties that account for emissions and removals from harvested wood products, provide detailed information on which IPCC approach has been used to estimate emissions and removals (para. 1(f) of annex II to decision 4/CMA.1, para. 75(d)(ii) of the MPGs)	Emissions and removals from annual carbon stock changes of harvested wood products were estimated based on the production approach.
For Parties that address the effects of age-class structure in forests, provide detailed information on the approach used and how this is consistent with relevant IPCC guidance, as appropriate (para. 1(g) of annex II to decision 4/CMA.1, para. 75(d)(iii) of the MPGs)	Removals by forestry were estimated with consideration given to the difference in amounts of carbon accumulation due to age-class structure.

How the Party has drawn on existing methods and guidance established under the Convention and its related legal instruments, as appropriate, if applicable (para. 1(c) of annex II to decision 4/CMA.1)	Metrics used for the total GHG emissions and removals (CO2 equivalent) are the GWPs of a 100-year time horizon presented in the IPCC Fifth Assessment Report.
Any methodologies used to account for mitigation co-benefits of adaptation actions and/or economic diversification plans (para. 75(e) of the MPGs	NA
Describe how double counting of net GHG emission reductions has been avoided, including in accordance with guidance developed related to Article 6 if relevant (para. 76(d) of the MPGs)	2006 IPCC guidelines were used.
Any other methodologies related to the NDC under Article 4 (para. 75(h) of the MPGs)	NA
Ensuring methodological consistency, including on baselines, between the communication and implementation of NDCs (para. 12(b) of the decision 4/CMA.1):	
Explain how consistency has been maintained in scope and coverage, definitions, data sources, metrics, assumptions and methodological approaches including on baselines, between the communication and implementation of NDCs (para. 2(a) of annex II to decision 4/CMA.1)	100-year GWPs in the IPCC Fifth Assessment Report will be used for tracking and evaluating progress toward implementing and achieving the NDC, in accordance with MPGs. There is no methodological inconsistency with respect to matters other than metrics between the communication and implementation of the NDC.
Explain how consistency has been maintained between any GHG data and estimation methodologies used for accounting and the Party's GHG inventory, pursuant to Article 13, paragraph 7(a), of the Paris Agreement, if applicable (para. 2(b) of annex II to decision 4/CMA.1) and explain methodological inconsistencies with the Party's most recent national inventory report, if applicable (para. 76(c) of the MPGs)	There are no methodological inconsistencies between the most recent national inventory report and the NDC accounting.

For Parties that apply technical changes to update reference points, reference levels or projections, the changes should reflect either of the following (para. 2(d) of annex II to decision 4/CMA.1):	
Technical changes related to technical corrections to the Party's inventory (para. 2(d)(i) of annex II to decision 4/CMA.1)	NA
Technical changes related to improvements in accuracy that maintain methodological consistency (para. 2(d)(ii) of annex II to decision 4/CMA.1)	NA
Explain how any methodological changes and technical updates made during the implementation of their NDC were transparently reported (para. 2(e) of annex II to decision 4/CMA.1)	NA
Striving to include all categories of anthropogenic emissions or removals in the NDC and, once a source, sink or activity is included, continue to include it (para. 3 of annex II to decision 4/CMA.1):	
Explain how all categories of anthropogenic emissions and removals corresponding to their NDC were accounted for (para. 3(a) of annex II to decision 4/CMA.1)	Information provided in Eswatini's inventory as part of the Biennial Transparency Report (BTR) will be consistent with the IPCC guidelines (b) Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines; Information to be provided in Eswatini's inventory as part of the Biennial Transparency Report (BTR) will be consistent with the IPCC guidelines. Sectors covered: **Energy, transport, waste, IPPU and AFOLU** Gases covered: Carbon dioxide (CO2), Methane (CH4), and Hydrofluorocarbons (HFCs). Further, the NDC also covers short-lived climate pollutants (SLCP) including Black Carbon (BC) and other air pollutants such as Organic Carbon (OC), Particulate Matter (PM2.5 and PM10), Nitrogen Oxides (NOx), Non-methane volatile organic compounds (NMVOC), Sulphur dioxide (SO2), Ammonia (NH3), and Carbon Monoxide (CO).
Explain how Party is striving to include all categories of anthropogenic emissions and removals in its NDC, and, once a source, sink or activity is included, continue to include it (para. 3(b) of annex II to decision 4/CMA.1)	Eswatini commits to extend over time, the scope of its NDC to all categories of anthropogenic emissions
Provide an explanation of why any categories of anthropogenic emissions or removals are excluded (para. 4 of annex II to decision 4/CMA.1)	All categories are included
Each Party that participates in cooperative approaches that involve the use of ITMOs towards an NDC under Article 4, or authorizes the use of mitigation outcomes for international mitigation purposes other than achievement of its NDC	

Provide information on any methodologies associated with any cooperative approaches that involve the use of ITMOs towards an NDC under Article 4 (para. 75(f) of the MPGs)	NA
Provide information on how each cooperative approach promotes sustainable development, consistent with decisions adopted by the CMA on Article 6 (para. 77(d)(iv) of the MPGs)	NA
Provide information on how each cooperative approach ensures environmental integrity consistent with decisions adopted by the CMA on Article 6 (para. 77(d)(iv) of the MPGs)	NA
Provide information on how each cooperative approach ensures transparency, including in governance, consistent with decisions adopted by the CMA on Article 6 (para. 77(d)(iv) of the MPGs)	NA
Provide information on how each cooperative approach applies robust accounting to ensure, inter alia, the avoidance of double counting, consistent with decisions adopted by the CMA on Article 6 (para. 77(d)(iv) of the MPGs)	NA
Any other information consistent with decisions adopted by the CMA on reporting under Article 6 (para. 77(d)(iii) of the MPGs)	NA

3.2.2 METHODOLOGICAL DETAILS OF ITMOs UNDER THE PARIS AGREEMENT

Eswatini is committed to contributing towards developing market mechanisms via international cooperation under Article 6 of the Paris Agreement. While at present, there is no clarity on Article 6, Eswatini does not exclude the possibility of utilizing international market mechanisms to achieve its NDC targets.

As a signatory to the Paris Agreement, Eswatini will fully utilize the enhanced ambition instruments under Article 6, increase her focus on energy and mobility under the provision on cooperative approaches in Article 6.2 and on targeting adaptation benefits for rural communities, specifically around food and water security. Where possible, Eswatini shall also utilize the provisions under the non-market approaches in Article 6.8. Eswatini recognizes the urgent need for climate action as articulated in AR6 IPCC report.

3.2.3 INFORMATION TO TRACK PROGRESS MADE IN IMPLEMENTING AND ACHIEVING THE NDC UNDER ARTICLE 4

3.2.3.1 Progress Tracking Indicators

Eswatini has established a set of indicators within its Measurement, Reporting, and Verification (MRV) framework to track NDC progress and support transparent reporting. Key indicators include:

- **GHG Emissions Reductions**: Regular monitoring of emissions across sectors such as energy, IPPU, AFOLU, and waste.
- **Renewable Energy Capacity**: Tracking the installed capacity of renewable energy sources, measured in megawatts, and the percentage of renewable energy in the national electricity mix.
- **Energy Intensity Reduction**: Annual assessment of energy intensity, especially in industrial and residential sectors, relative to the baseline year of 2010.
- **Water Resource Management**: Metrics to track the efficiency of water usage, implementation of smart water systems, and progress in building water storage infrastructure.
- **Agricultural Resilience**: Monitoring crop yields, adoption of drought-resistant crops, and water-efficient irrigation systems

3.2.3.2 Updates and Enhancements since the initial NDC

Since Eswatini's first NDC submission in 2015, the revised NDC has incorporated new measures and enhanced existing targets:

- **Increased Ambition in Energy Sector**: Expansion of renewable energy sources and commitment to achieving 50% renewable energy in the electricity mix by 2030. Solar and biomass projects have been prioritized, with new feasibility studies underway for potential wind power integration.
- **Strengthened Climate Governance**: Development of a National Adaptation Plan (NAP) and progress toward the establishment of a National Climate Change Bill to support climate governance and cross-sectoral coordination.
- **Enhanced Waste Management Policies**: Implementation of improved waste diversion strategies, including composting and recycling initiatives aimed at reducing landfill emissions.
- **Expanded Conservation Efforts**: The NDC update includes measures to expand protected area networks, focusing on biodiversity conservation and climate resilience for ecosystems

Eswatini's progress in implementing and achieving its Nationally Determined Contribution (NDC) under Article 4 of the Paris Agreement is detailed in this section. Table 7 outlines the key indicator, providing information on reference point, baseline, and starting level. It also includes data from previous reporting years and the most recent updates, offering a transparent and structured summary of the country's advancements toward its climate targets.

Table 6: Structured summary: Tracking progress made in implementing and achieving Eswatini's NDC under Article 4 of the Paris Agreement - CTF Table 4

4. Structured summary: Tracking progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement													
Example for Parties that participates in cooperative approaches that involve the use of ITMOs towards an NDC under Article 4 of the Paris Agreement													
	Unit, as applicable	*Reference point(s), level(s), baseline(s), base year(s) or starting point(s){MPGs, p. 67, 77(a)(i)}* *2010*	*Implementation period of the NDC covering information for previous reporting years and the most recent year, including the end year or end of period {MPGs, p. 68, 77(a)(ii–iii)}*						*Target level*[b]		*Target year or period*	*Progress made towards the NDC, as determined by comparing the most recent information for each selected indicator, including for the end year or end of period, with the reference point(s), level(s), baseline(s), base year(s) or starting point(s) (paras. 69–70 of the MPGs)*	
			2021	2022	…	…	…	2030					
Indicator(s) selected to track progress towards the implementation and/or achievement of the NDC under Article 4 of the Paris Agreement[c]: {MPGs, p. 65, 77(a)}		Year 2010											
Total greenhouse gas emissions (GHG) excluding LULUCF per year (measured as millions of ton CO_2eq emissions)	(millions of ton CO2eq)	2.70	1.70	1.80				1.04	Eswatini represents a progression beyond the 2015 NDC by adopting an economy wide GHG emissions reduction unconditional target of 5% this translates to 0.37 million tonnes fewer	This economy wide emission reduction can increase to 14% with external financing (conditional) and this translates to 1.04 million tonnes fewer GHG emissions in	2030	*0.90*	*There has been progress made towards the target of 2030.*

									GHG emissions in 2030 compared to the baseline scenario and help achieve a low carbon and climate resilient development.	2030 compared to a baseline scenario.			
{Parties can add rows for each additional indicator and supporting information for each indicator, e.g. baseline values, baseline for the portion of NDC, target values, mitigation effects of policies and measures, etc.}													
Where applicable, total GHG emissions and removals consistent with the coverage of the NDC *{MPGs, p. 77(b)}*	(millions of ton CO2eq)												
Contribution from the LULUCF sector for each year of the target period or target year, if not included in the inventory time series of total net GHG emissions and removals, as applicable *{MPGs, p. 77(c)}*	NA	NA											
Each Party that participates in cooperative approaches that involve the use of ITMOs towards an NDC under Article 4 of the Paris Agreement, or authorizes the use of mitigation outcomes for international mitigation purposes other than achievement of the NDC, shall provide: *{MPGs, p. 77(d)}*													

If applicable, an indicative multi-year emissions trajectory, trajectories or budget for its NDC implementation period (para. 7(a)(i), annex to decision -/CMA.3)													
If applicable, multi-year emissions trajectory, trajectories or budget for its NDC implementation period that is consistent with the NDC (para. 7(b), annex to decision -/CMA.3)													
Annual anthropogenic emissions by sources and removals by sinks covered by its NDC or, where applicable, from the emission or sink categories as identified by the host Party pursuant to paragraph 9 of annex to decision -/CMA.3 (para. 23(a), annex to decision -/CMA.3) (as part of para. 77 (d)(i) information)													
Annual anthropogenic emissions by sources and removals by sinks covered by its NDC or, where applicable, from the portion of its NDC in accordance with paragraph 10, annex to decision -/CMA.3 (para. 23(b), annex to decision -/CMA.3)													
If applicable, annual level of the relevant non-GHG indicator that is being used by the Party to track progress towards the implementation and achievement of its NDC and was selected pursuant to paragraph 65, annex to decision 18/CMA.1 (para. 23(i), annex, decision -/CMA.3)													
Annual quantity of ITMOs first transferred (para. 23(c), annex to decision -/CMA.3) (para. 77(d)(ii) of the MPGs)	-	-	-	-	-	-	-	-	-	-	-	-	-

Annual quantity of mitigation outcomes authorized for use for other international mitigation purposes and entities authorized to use such mitigation outcomes, as appropriate (para 23(d), annex to decision -/CMA.3) (para. 77(d)(ii) of the MPGs)													
Annual quantity of ITMOs used towards achievement of the NDC (para. 23(e), annex to decision -/CMA.3) (para. 77(d)(ii) of the MPGs)													
Net annual quantity of ITMOs resulting from paras. 23(c)-(e), annex to decision -/CMA.3 (para. 23(f), annex to decision -/CMA.3)													
If applicable, the cumulative amount of ITMOs, divided by the number of elapsed years in the NDC implementation period (para. 7(a)(ii), annex to decision -/CMA.3)													
Total quantitative corresponding adjustments used to calculate the emissions balance referred to in para. 23(k)(i), annex to decision -/CMA.3, in accordance with the Party's method for applying corresponding adjustments consistent with section III.B, annex to decision -/CMA.3 (Application of corresponding adjustments) (para. 23(g), annex to decision -/CMA.3)													
The cumulative information in respect of the annual information in para. 23(f), annex to decision -/CMA.3, as applicable (para. 23(h), annex to decision -/CMA.3)													
For metrics in tonnes of CO2 eq. or non-GHG, an annual emissions balance consistent with chapter III.B (Application of corresponding adjustment), annex, decision -/CMA.3 (para. 23(k)(i), annex to decision -/CMA.3) (as part of para. 77 (d)(ii) of the MPGs)													

Any other information consistent with decisions adopted by the CMA on reporting under Article 6 (para. 77(d)(iii) of the MPGs)													
Assessment of the achievement of the Party's NDC under Article 4 of the Paris Agreement (para. 70 of the MPGs):													
Restate the target of the Party's NDC:													
Information for reference point(s), level(s), baseline(s), base year(s), or starting point(s):													
Final information for the indicator for the target year/period, including the application of the necessary corresponding adjustments consistent with chapter III, annex, decision -/CMA.3 (Corresponding adjustments) and consistent with future decisions from the CMA (para. 23(l), annex to decision -/CMA.3):	NA												
Comparison:	NA												
Achievement of NDC: {yes/no, explanation}	NA												
Documentation Box:													
Notes: (1) Pursuant to para. 79 of the MPGs, each Party shall report the information referred to in paras. 65–78 of the MPGs in a narrative and common tabular format, as applicable. (2) A Party may amend the reporting format (e.g. Excel file) to remove specific rows in this table if the information to be provided in those rows is not applicable to the Party's NDC under Article 4 of the Paris Agreement, in accordance with the MPGs. (3) The Party could add rows for each additional selected indicator. **[a]This table could be used for each NDC target in case Party's NDC has multiple targets.** **[b] Parties may provide information on conditional targets in a documentation box with references to the relevant page in their biennial transparency report.**													

4 MITIGATION POLICIES AND MEASURES, ACTIONS AND PLANS, INCLUDING THOSE WITH MITIGATION CO-BENEFITS RELATING FROM ADAPTATION ACTIONS AND ECONOMIC DIVERSIFICATION PLANS, RELATED TO IMPLEMENTATION AND ACHIEVING AN NDC

Eswatini has developed a robust policy framework to address climate change mitigation across key economic sectors, including Energy, Agriculture Forestry and Land Use (AFOLU), Waste, and Industrial Processes and Products Use (IPPU). Eswatini emitted a total of 4.5 million tonnes of CO_2 equivalent ($MtCO_2e$) in 2017, with agriculture, forestry and land use (AFOLU) and energy sectors majorly contributing 56% and 39% respectively followed by industrial processes and product use (IPPU) and waste. The emissions are projected to increase by 63% to 7.33 $MtCO_2eq$ in 2030 under the baseline scenario in the absence of GHG mitigation policies and measures being implemented. The government's climate strategy aligns with national development goals and international commitments under the Paris Agreement, aiming to foster a low-carbon economy and reduce vulnerability to climate impacts. The National Climate Change Policy and Strategy, NDC implementation plan, and sectoral policies together provide the foundation for mitigation actions.

Key National Policies Supporting Mitigation

1. **The National Climate Change Policy (NCCP)**
   The National Climate Change Policy (NCCP) was introduced in 2016 and is the enabling framework for the country's planning to address climate change. The framework has a longer time frame than the NCCSAP but also prioritises mitigation actions which have greater co-benefits for sustainable development. For example, an integrated approach is intended to enhance synergies in the implementation of the three Rio Conventions, namely: (1) the United Nations Framework Convention on Climate Change, (UNFCCC), (2) the Convention on Biological Diversity (CBD), and (3) the Convention to Combat Desertification (CCD). Key sectors emphasised in the framework include AFOLU, energy, industry, transport, waste management, and buildings. The objectives of the NCCP include:
   - Providing an enabling policy framework for the effective implementation of climate change adaptation and mitigation measures.
   - Enhancing climate-resilient and inclusive low-carbon green growth investments.
   - Promoting public education, information, and awareness on climate change.
   - Providing mechanisms for coordination and building of partnerships in addressing climate change.

   The NCCP is to be reviewed periodically, no later than after every five years, which is ongoing.

2. **NDC Implementation Plan**:
   The NDC Implementation Plan for Eswatini focuses on specific, actionable measures in the energy, Agriculture Forestry and Other Land Use (AFOLU), Waste and IPPU sectors that will help the country meet its climate goals. By enhancing energy efficiency, promoting renewable energy, increasing forest cover, adopting climate-smart agriculture practices, and implementing sound governance mechanisms, Eswatini is committed to reducing its carbon footprint while also building resilience to the impacts of climate change. Through these efforts, Eswatini aims to contribute to global climate action while ensuring sustainable development for its population.

3. **National Development Plans**

Eswatini's National Development Plan (NDP) 2023–2028 places climate action at the forefront of its agenda for sustainable development and economic recovery. Rooted in the country's Nationally Determined Contributions (NDCs) under the Paris Agreement, the NDP commits to reducing greenhouse gas emissions through a comprehensive suite of mitigation strategies. A cornerstone of these efforts is the promotion of renewable energy, including the construction of solar and biomass power plants, with a target to achieve 50% renewable energy in the national energy mix by 2030. Complementing this is a focus on sustainable agriculture, leveraging climate-smart practices such as agroforestry, efficient water use, and the adoption of resilient crop systems to minimize emissions in the Agriculture, Forestry, and Other Land Use (AFOLU) sector.

The NDP further prioritizes forest conservation, afforestation, and reforestation to enhance carbon sequestration while advancing waste management initiatives aimed at reducing methane emissions. These include banning single-use plastics, improving recycling systems, and implementing a national waste management strategy. To ensure sustained progress, the plan integrates climate considerations into national planning and budgeting, promoting resilience across sectors. Aligning with international frameworks like the Sustainable Development Goals (SDGs) and the African Union's Agenda 2063, the NDP underscores investments in climate-resilient infrastructure, environmental governance, and disaster risk reduction as integral to achieving a low-carbon and sustainable development pathway. Through these measures, Eswatini positions itself as a proactive actor in global climate action while fostering a greener, more inclusive economy.

Sectoral Mitigation Actions and Plans

Eswatini has outlined a comprehensive suite of mitigation policies and measures to achieve its Nationally Determined Contribution (NDC) under Article 4 of the Paris Agreement. These actions are aimed at reducing greenhouse gas (GHG) emissions while advancing sustainable development goals. A review highlights that most mitigation efforts are concentrated within the energy sector, reflecting its central role in Eswatini's emissions reduction strategy.

Energy Sector

The energy sector is central to Eswatini's mitigation strategy, with policies aimed at transitioning to renewable energy sources and improving energy efficiency. Key actions include:

- **Renewable Energy Development**: Expansion of hydropower, solar, and wind energy capacity to reduce reliance on imported electricity and fossil fuels.
- **Rural Electrification**: Promotion of renewable energy sources for rural areas to support sustainable development and reduce deforestation caused by reliance on fuelwood.
- **Energy Efficiency Measures**: Implementation of energy efficiency programs in

    - Industrial- The industrial and commercial sectors will also contribute to energy efficiency targets by reducing electricity use by 10% (38.89 GWh) by 2034. Commercial and public services aim for a 10% reduction (16.67 GWh) in the same timeframe, as per the National Energy Efficiency Strategy and Action Plan.

Residential, and commercial sectors to lower GHG emissions and reduce energy demand.

- Transport-Eswatini aims to enhance sustainability in the transport sector by introducing the commercial use of a 10% ethanol blend in petrol by 2030. This measure supports cleaner fuel adoption and aligns with the country's commitments under its Intended Nationally Determined Contribution (INDC).
- Electricity Generation-To meet a 50% renewable energy target, Eswatini plans significant capacity expansions, including biomass co-generation (140-165 MW), hydro (+40-60 MW), solar (+100-120 MW), and wind (+20-50 MW). These targets reflect the priorities outlined in the National Energy Policy 2018.
- Residential Electricity Use-The residential sector will lead in electricity efficiency improvements, targeting a 20% reduction (205.7 GWh) by 2034 under the National Energy Efficiency Strategy and Action Plan.
- Sugar and Other Agriculture- The sugar industry is set to achieve a 15% reduction in electricity consumption (95.84 GWh) by 2034, while the broader agricultural sector will aim for a 10% reduction (41.66 GWh) in electricity use. Both measures are part of the National Energy Efficiency Strategy and Action Plan, enhancing energy sustainability.

AFOLU Sector

Improving livestock productivity through artificial insemination, better feed digestibility, and manure management will reduce emissions while boosting efficiency, as outlined in the Agriculture Sector NDC update mitigation assessment.

Waste Sector

Eswatini is advancing sustainable waste management practices by reducing open burning, increasing composting of organic waste, and enhancing landfill gas recovery. These measures are aligned with the Waste Sector NDC update mitigation assessment

IPPU Sector

Eswatini will implement an HFC phase-out schedule in line with Annex 5 countries under the Kigali Amendment to the Montreal Protocol, starting with a freeze on consumption by 2024 and a 10% reduction by 2029 compared to 2019-2021 levels.

Table 7: Summary of mitigation measures evaluated for GHG emission reduction potential from plans and strategies in Eswatini

Number	Sector	Mitigation Measure	Source: Plan/Strategy/Regulation
1	Transport	Introduction the commercial use of 10% ethanol blend in petrol by 2030	Eswatini's Intended Nationally Determined Contribution
2	Residential	50% improvement in efficiency of biomass stoves used for cooking	Energy Master Plan 2034
3	Residential	The most inefficient wood-based water heating is replaced by other more efficient options, reducing its share by 13 % by 2034. Reflecting its promotion under the SE4ALL initiative, the share of solar water heating is assumed to reach 50 % of households (25 % with back-up and 25 % without back-up).	Energy Master Plan 2034

4	Residential	100% access to clean energy at household level attained by 2030	Sustainable Energy for All Action Agenda
5	Electricity Generation	To achieve 50% renewables target: biomass-based co-generation: 140-165MW hydro: +40-60MW Solar: +100-120MW Wind: +20-50 MW	National Energy Policy 2018
6	Sugar	15% (95.84 GWh) reduction in electricity consumption in 2034	National Energy Efficiency Strategy and Action Plan
7	Other Agriculture	10% (41.66 GWh) reduction in electricity consumption in 2034	National Energy Efficiency Strategy and Action Plan
8	Industry	10% (38.89 GWh) reduction in electricity consumption in 2034	National Energy Efficiency Strategy and Action Plan
9	Commercial and Public Services	10% (16.67 GWh) reduction in electricity consumption in 2034	National Energy Efficiency Strategy and Action Plan
10	Residential	20% (205.7 GWh) reduction in electricity consumption in 2034	National Energy Efficiency Strategy and Action Plan
11	Ozone Depleting Substances	Implement HFC phase-out with the corresponding schedule for Annex 5 countries (freeze consumption in 2024 compared to average 2019-2021 levels, 10% reduction in consumption compared to 2019-2021 levels in 2029)	Kigali Amendment to Montreal Protocol IPPU Sector NDC update mitigation assessment
12	Livestock	Improvements in productivity of cattle, sheep and goat production through artificial insemination, improved digestibility of feed, and improved manure management	Agriculture Sector NDC update mitigation assessment
14	Solid Waste	Implement best practices in solid waste management considering i) reduction in open burning of waste, ii) increase composting of organic waste, and iii) increase landfill gas recovery at solid waste disposal sites	Waste Sector NDC update mitigation assessment

This section further outlines Eswatini's mitigation policies, measures, and plans aimed at implementing and achieving its Nationally Determined Contribution (NDC) under Article 4 of the Paris Agreement. Table 10 below provides a structured summary of key mitigation actions, highlighting their objectives, status, and estimated impact on GHG emissions reductions. It also emphasizes mitigation co-benefits resulting from adaptation actions and economic diversification plans, offering transparency and clarity on Eswatini’s progress toward its climate goals.

Eswatini has applied flexibility provisions under paragraphs 6 and 7 of the MPGs due to capacity constraints related to methodological expertise, data availability, and institutional arrangements. While progress has been made through initiatives such as the Capacity-Building Initiative for Transparency (CBIT) and the NDC Partnership Climate Action Enhancement Package (CAEP), challenges persist in adopting advanced estimation methodologies and ensuring consistent, high-quality data across all sectors.

Table 8: Mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving a nationally determined contribution under

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
1	National Energy Policy	Provides overall vision to address the challenges facing transformation of the energy sector Emphasized the principles of availability, accessibility and affordable energy for all through optimal use of national resources	Eswatini intends to generate 50% power from renewable energy by 2030 relative to 2010 levels and this measure alone will lead to 9% reduction in total GHG emissions in 2030.	Regulatory Framework	Planned	Energy	CO2, CH4, HFCs	2003	Ministry of Natural Resources and Energy	FX	FX

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
2	*National Energy Policy and Implementation Strategy*	• *Emphasizes the need to meet energy needs taking into cognizance larger economic and developmental priorities. Key focus areas include:* *- Security of electricity supply* *- Access to modern energy by 2022 for all households* *- Evaluate options and establish a National Electricity Fund* *- Support development of renewable*	*To provide a comprehensive strategy to meet Eswatini's energy needs while promoting renewable resources and ensuring equitable energy access for households.*			*Energy*	*CO2, CH4, HFCs*	*2018*	*Ministry of Natural Resources and Energy*	*FX*	*FX*

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		energy resources									
3	*Energy Efficiency and Conservation Policy*	*Integrated with the National Energy Efficiency and Strategy Action Plan for securing energy supply through locally available resources and provides guidance on*	*To enhance energy efficiency across multiple sectors, promote affordable energy, and provide a roadmap for energy*	*Regulatory Framework*	*Adopted*	*Energy*	*CO2, CH4*	*2019*	*Ministry of Natural Resources and Energy*	*FX*	*FX*

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		achieving affordable energy access for all. Promotes energy efficiency in buildings, lighting, appliances & equipment, transport and industry demand sectors High-level roadmap for implementation covering regulations, financing, institutional responsibilities and monitoring & evaluation	*conservation measures.*								

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
4	Energy Masterplan	Provides foundation to prioritise renewable energy projects based on the optimal energy mix trajectory	Increasing the share of renewable energy to 50% in the electricity mix by 2030 relative to 2010 levels through the adoption of solar, wind, biomass, hydro, and solar water heater technologies	Regulatory Framework	Planned	Energy	CO2, CH4	2034	Ministry of Natural Resources and Energy	FX	FX
5	National Energy Efficiency Strategy and Action Plan	15% (95.84 GWh) reduction in electricity consumption in 2034. 10% (41.66 GWh) reduction in electricity				Sugar Other Agriculture Industry Commercial and Public Services				FX	FX

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		consumption in 2034 *10% (38.89 GWh) reduction in electricity consumption in 2034* *10% (16.67 GWh) reduction in electricity consumption in 2034* *20% (205.7 GWh) reduction in electricity consumption in 2034*				*residential*					

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
6	National Solid Waste Management Strategy	This report offers an analysis of Swaziland's waste management infrastructure, identifying shortcomings and outlining areas that require development to ensure effective and sustainable waste management practices.	To evaluate the effectiveness of Swaziland's solid waste management system, aiming for a 50% reduction in improperly managed waste within the next decade through systematic improvements and targeted interventions.	Regulatory Framework	Implemented	Waste	CO2, CH4	2003	Ministry of Tourism and Environmental Affairs, Ministry of Natural Resources and Energy,Ministry of Health, Ministry of Housing and Urban Development, Eswatini Environment Authority, The Ministry of Public Works & Transport, The Deputy Prime Minister's Office	FX	FX

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
7	*Waste Regulations 2000*	It provides a detailed framework for managing waste in an environmentally sustainable manner. It addresses issues such as the collection, transportation, treatment, disposal, and licensing of waste management facilities. The regulations include mechanisms to classify and define waste categories, regulate hazardous and	*To ensure compliance with waste management regulations failure can result in fines of up to E100,000 or imprisonment for up to two years and importing hazardous waste incurs higher penalties, with fines up to E250,000 or imprisonment for up to five years. To ensure that no landfill, incinerator, or permanent*	*Regulatory Framework*	*Implemented*	*Waste*	*CO2, CH4*	*2000*	*Ministry of Tourism and Environmental Affairs, Ministry of Agriculture, Sugarcane Growers' Association*	*FX*	*FX*

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		clinical waste, and implement a system of fees and penalties to ensure compliance.	*waste disposal facility operate without a valid license.*								
8	National Sanitation and Hygiene Strategy	It outlines a comprehensive plan to enhance access to sanitation and hygiene facilities and eliminate open defecation. Spearheaded by the Ministry of Health, the strategy seeks to promote improved public health and environmental sustainability, leveraging participatory	Increase Eswatini's national sanitation coverage from 46% to 100% and hygiene coverage from 26% to 80% by 2023, while achieving Open Defecation Free (ODF) status by 2022.	Regulatory Framework	Implemented	Waste	CO2, CH4	2019	Ministry of Tourism and Environmental Affairs, Ministry of Natural Resources and Energy,Ministry of Health, Ministry of Housing and Urban Development, Eswatini Environment Authority, The Ministry of Public Works & Transport, The Deputy Prime	*FX*	*FX*

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		approaches, infrastructure development, and capacity building to address critical gaps in sanitation coverage and hygiene practices							Minister's Office		
9	*The Ozone Depleting Substance Regulations, 2003 amended in 2014*	*The regulation aims to control and phase out substances harmful to the ozone layer. These regulations align with the Montreal Protocol by specifying prohibited substances, licensing*	*To eliminate the import, export, production, and use of controlled ozone-depleting substances by 2040 for HCFCs and by earlier deadlines for other harmful substances, such as 2010*	*Regulatory Framework*	*Implemented*	*IPPU*	*CO2, CH4, HFCs, CFCs*	*2003*	*Ministry of Tourism and Environmental Affairs, Ministry of Natural Resources and Energy,Ministry of Health, Ministry of Housing and Urban Development, Eswatini Environment*	*FX*	*FX*

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		requirements for handling controlled products, and promoting the adoption of ozone friendly alternatives	*for CFCs and halons and 2015 for methyl bromide and 1,1,1-trichloroethane*						*Authority, The Ministry of Public Works & Transport, The Deputy Prime Minister's Office*		
10	*NDC Implementation Plan*	*Focus Areas:* *• Energy: Enhance energy efficiency across all sectors. Promote the adoption of renewable energy sources, such as solar, wind, and biomass.* *• Agriculture, Forestry, and Other Land Use (AFOLU): Increase forest cover through*	*The second NDC of Eswatini represents a progression beyond the 2015 NDC by adopting an economy-wide GHG reduction target of reducing total GHG emissions by 14% by 2030 compared to the baseline scenario*	*Regulatory Framework*	*Planned*	*Energy, Waste, AFOLU, IPPU*	*CO2, CH4, HFCs*	*2015*	*Ministry of Tourism and Environmental Affairs, Ministry of Natural Resources & Energy, Ministry of Agriculture, Ministry of Health*	*FX*	*FX*

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		afforestation and reforestation. *• Adopt climate-smart agriculture practices to enhance resilience and reduce emissions.* *• Waste: Improve waste management practices to reduce emissions from landfill and promote recycling.* *• IPPU: Implement measures to reduce emissions from industrial*									

No.	Name [c]	Description [d,e,f]	Objectives	Type of instrument [g]	Status [h]	Sector(s) affected [i]	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (kt CO2 eq) [j, k]	
										Achieved	Expected
		processes and product use									

Include Information on mitigation policies and measures (CTF Table 5)

4.1 PROGRESS TOWARDS NDC IMPLEMENTATION

Eswatini's progress in implementing its NDC is tracked through national GHG inventories, sectoral emissions monitoring, and regular updates to mitigation plans. Key indicators of success include the increase in renewable energy capacity, hectares of reforested land, and reductions in waste-related methane emissions. Enhanced transparency in tracking these measures ensures alignment with NDC targets and demonstrates Eswatini's commitment to low-carbon development and climate resilience.

This integration of mitigation policies with adaptation and economic diversification efforts ensures that Eswatini's climate actions contribute to sustainable development, economic stability, and environmental protection.

5 SUMMARY OF GREENHOUSE GAS EMISSIONS AND REMOVALS

CTF Summary of greenhouse gas emissions and removals in accordance with the common reporting table 10 emission trends – summary (CTF Table)

This chapter provides a summary of Eswatini's greenhouse gas (GHG) emissions and removals across key sectors, drawing on the latest data from the national inventory. Eswatini has undertaken emissions tracking in accordance with the 2006 IPCC Guidelines, aiming to meet transparency requirements under the Enhanced Transparency Framework (ETF) of the Paris Agreement. The summary reflects national efforts to measure and manage emissions, ensuring that emissions reduction targets align with Eswatini's Nationally Determined Contribution (NDC).

6 PROJECTIONS OF GREENHOUSE GAS EMISSIONS AND REMOVALS

Table 9: Information on projections of greenhouse gas emissions and removals under a 'with measures' scenario a,b – CTF Table 7

	Most recent year in the Party's national inventory report (Mt CO2 eq)[c]	***Projections of GHG emissions and removals, (Mt CO2 eq)[c]***		
	2015	*2020*	*2025*	*2030*
Sector[d]				
Energy				
Transport				
Industrial processes and product use				
Agriculture				
LULUCF				
Waste				
Other (specify)				
Gas				
CO_2 emissions including net CO_2 from LULUCF				
CO_2 emissions excluding net CO_2 from LULUCF				
CH_4 emissions including CH_4 from LULUCF				
CH_4 emissions excluding CH_4 from LULUCF				
N2O emissions including N_2O from LULUCF				
N2O emissions excluding N2O from LULUCF				
HFCs				
PFCs				
SF6				
NF3				
Other (specify)				
Total with LULUCF				
Total without LULUCF	5.33	7.27	8.26	10.16

[a] Each Party shall report projections pursuant to paras. 93–101 of the MPGs; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report such projections (para. 92 of the MPGs).

[b] Those developing country Parties that need flexibility in the light of their capacities with respect paras. 93–101 of the MPGs can instead report using a less detailed methodology or coverage (para. 102 of the MPGs).

[c] Projections shall begin from the most recent year in the Party's national report and extend at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement (para. 95 of the MPGs).

[d] In accordance with para. 82(f) of the MPGs.

Table 10: Information on projections of greenhouse gas emissions and removals under a 'with additional measures' scenario a,b -CTF Table 8

	Most recent year in the Party's national inventory report (Mt CO2 eq)[c]	***Projections of GHG emissions and removals, (Mt CO2 eq)[c]***		
	2015	*2020*	*2025*	*2030*
Sector[d]				
Energy	NA	NA	NA	NA
Transport	NA	NA	NA	NA
Industrial processes and product use	NA	NA	NA	NA
Agriculture	NA	NA	NA	NA
LULUCF	NA	NA	NA	NA
Waste	NA	NA	NA	NA
Other (specify)	NA	NA	NA	NA
Gas				
CO2 emissions including net CO2 from LULUCF	NA	NA	NA	NA
CO2 emissions excluding net CO2 from LULUCF	NA	NA	NA	NA
CH4 emissions including CH4 from LULUCF	NA	NA	NA	NA
CH4 emissions excluding CH4 from LULUCF	NA	NA	NA	NA
N2O emissions including N2O from LULUCF	NA	NA	NA	NA
N2O emissions excluding N2O from LULUCF	NA	NA	NA	NA
HFCs	NA	NA	NA	NA
PFCs	NA	NA	NA	NA
SF6	NA	NA	NA	NA
NF3	NA	NA	NA	NA

Other (specify)	NA	NA	NA	NA
Total with LULUCF				
Total without LULUCF	5.33	6.59	6.64	7.5

[a] Each Party shall report projections pursuant to paras. 93–101 of the MPGs; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report such projections (para. 92 of the MPGs).

[b] Those developing country Parties that need flexibility in the light of their capacities with respect paras. 93–101 of the MPGs can instead report using a less detailed methodology or coverage (para. 102 of the MPGs).

[c] Projections shall begin from the most recent year in the Party's national report and extend at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement (para. 95 of the MPGs).

[d] In accordance with para. 82(f) of the MPGs.

Table 11: Information on projections of greenhouse gas emissions and removals under a 'without measures' scenarioa,b - CTF Table 9

	Most recent year in the Party's national inventory report (kt CO2 eq)[c]		***Projections of GHG emissions and removals, (kt CO2 eq)[c]***	
	20XX	*20X(0)(5)*	*20X(0)(5)*	*20X(0)(5)*
Sector[d]				
Energy				
Transport				
Industrial processes and product use				
Agriculture				
LULUCF				
Waste				
Other (specify)				
Gas				
CO2 emissions including net CO2 from LULUCF				
CO2 emissions excluding net CO2 from LULUCF				
CH4 emissions including CH4 from LULUCF				
CH4 emissions excluding CH4 from LULUCF				
N2O emissions including N2O from				

LULUCF				
N2O emissions excluding N2O from LULUCF				
HFCs				
PFCs				
SF6				
NF3				
Other (specify)				
Total with LULUCF				
Total without LULUCF				

[a] Each Party shall report projections pursuant to paras. 93–101 of the MPGs; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report such projections (para. 92 of the MPGs).

[b] Those developing country Parties that need flexibility in the light of their capacities with respect paras. 93–101 of the MPGs can instead report using a less detailed methodology or coverage (para. 102 of the MPGs).

[c] Projections shall begin from the most recent year in the Party's national report and extend at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement (para. 95 of the MPGs).

[d] In accordance with para. 82(f) of the MPGs.

Table 12: Projections of key indicators a,b - CTF Table 10

Key indicator(s):[c]	**Unit, as applicable**	***Most recent year in the Party's national inventory report, or the most recent year for which data is available***	***Projections of key indicators[d]***		
		2015	*2020*	*2025*	*2030*
Total greenhouse gas emissions (GHG) excluding LULUCF per year (measured as millions of ton CO2eq emissions)	million tons CO2eq	5.33	7.27	8.26	10.16

Note: The Party could add rows for each additional key indicator.

[a] Each Party shall report projections pursuant to paras. 93–101 of the MPGs; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report such projections (para. 92 of the MPGs).

[b] Those developing country Parties that need flexibility in the light of their capacities with respect paras. 93–101 of the MPGs can instead report using a less detailed methodology or coverage (para. 102 of the MPGs).

[c] Each Party shall also provide projections of key indicators to determine progress towards its NDC under Article 4 of the Paris Agreement (para. 97 of the MPGs)

[d] Future years extended to at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement (para. 95 of the MPGs).

Table 13: 11. Key underlying assumptions and parameters used for projections a,b - CTF Table 11

Key underlying assumptions and parameters:[c]	**Unit, as applicable**	***Most recent year in the Party's national inventory report, or the most recent year for which data is available***	***Projections of key underlying assumptions and parameters[d]***		
		2015	*2020*	*2025*	*2030*
{Key underlying assumption/parameter}					
Economic growth within key sectors	USD				
Population growth					

Note: The Party could add rows for each additional key underlying assumptions and parameters.

[a] Each Party shall report projections pursuant to paras. 93–101 of the MPGs; those developing

country Parties that need flexibility in the light of their capacities are instead encouraged to report such projections (para. 92 of the MPGs).
[b] Those developing country Parties that need flexibility in the light of their capacities with respect to paragraphs 93–101 of the MPGs can instead report using a less detailed methodology or coverage (para. 102 of the MPGs).
[c] Information provided by each Party in describing the methodology used to develop the projections should include key underlying assumptions and parameters used for projections (e.g. gross domestic product growth rate/level, population growth rate/level) (para. 96(a) of the MPGs).
[d] Future years extended to at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement (para. 95 of the

Table 14: Information necessary to track progress on the implementation and achievement of the domestic policies and measures implemented to address the social and economic

Sectors and activities associated with the response measures[b]	***Social and economic consequences of the response measures[c]***	***Challenges in and barriers to addressing the consequences[d]***	***Actions to address the consequences[e]***
[a] Each Party with an NDC under Article 4 that consists of adaptation actions and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, para. 7, of the Paris Agreement shall provide the information necessary to track progress on the implementation and achievement of the domestic policies and measures implemented to address the social and economic consequences of response measures (para. 78 of the MPGs).			
[b] In accordance with para. 78(a) of the MPGs.			
[c] In accordance with para. 78(b) of the MPGs.			
[d] In accordance with para. 78(c) of the MPGs.			
[e] In accordance with para. 78(d) of the MPGs.			

7 OTHER INFORMATION

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