



GOVERNMENT OF ZIMBABWE



# ZIMBABWE NATIONALLY DETERMINED CONTRIBUTION (NDC3.0) COUNTRY STATEMENT



**FEBRUARY 2025**



**GOVERNMENT OF ZIMBABWE**

## **MINISTRY OF ENVIRONMENT, CLIMATE AND WILDLIFE**

# **Zimbabwe Nationally Determined Contribution (NDC3.0) Country Statement (2025-2035)**

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## ABBREVIATIONS AND ACRONYMS

|                         |  |
|-------------------------|--|
| <b>AFOLU</b>            | Agriculture, Forestry and Other Land-Use                             |
| <b>BAU</b>              | Business As Usual  |
| <b>BTR</b>              | Biennial Transparency Report   |
| <b>BUR1</b>             | First Biennial Update Report   |
| <b>CBIT</b>             | Capacity Building Initiative for Transparency                        |
| <b>CFCs</b>             | Chloro-fluorocarbons   |
| <b>CH<sub>4</sub></b>   | Methane  |
| <b>CO</b>               | Carbon monoxide  |
| <b>CO<sub>2</sub></b>   | Carbon dioxide   |
| <b>CO<sub>2</sub>eq</b> | Carbon dioxide equivalent  |
| <b>EMA</b>              | Environmental Management Agency                                      |
| <b>ETF</b>              | Enhanced Transparency Framework                                      |
| <b>GHG</b>              | Greenhouse Gas   |
| <b>GoZ</b>              | Government of Zimbabwe   |
| <b>GWP</b>              | Global Warming Potential   |
| <b>HFCs</b>             | Hydro-fluorocarbons  |
| <b>IPCC</b>             | Intergovernmental Panel on Climate Change                            |
| <b>IPPU</b>             | Industrial Processes and Product Use                                 |
| <b>MLAFWRD</b>          | Ministry of Lands Agriculture, Fisheries Water and Rural Development |
| <b>MSW</b>              | Municipal Solid Waste  |
| <b>MSWD</b>             | Municipal Solid Waste Disposal                                       |
| <b>N<sub>2</sub>O</b>   | Nitrous Oxide  |
| <b>NC4</b>              | Fourth National Communication  |
| <b>NDC 3.0</b>          | Third Generation Nationally Determined Contribution                  |
| <b>NIR</b>              | National Inventory Report  |
| <b>NWC</b>              | National Women Council   |
| <b>PA</b>               | Paris Agreement  |
| <b>QA/QC</b>            | Quality Assurance/Quality Control                                    |
| <b>UN</b>               | United Nations   |
| <b>UNDP</b>             | United Nations Development Programme                                 |
| <b>UNEP</b>             | United Nations Environment Programme                                 |
| <b>UNFCCC</b>           | United Nations Framework Convention on Climate Change                |



# SUMMARY OF CHANGES FROM NDC2.0

## 1.1 BACKGROUND

Zimbabwe's proposed mitigation pathways to an ambitious and implementable NDC were guided by the following factors from the national development priorities and findings in the IPCC's Sixth Assessment Report (AR6):

- The cost of inaction in the medium to long term is likely to be much higher than the cost of action. In this regard, while the country considers adaptation as the main priority, mitigation actions have been identified as an option that will lessen the future burden of national adaptation to climate change.
- The IPCC further states that in order to limit global average warming to 1.5°C, greenhouse gas (GHG) emissions will need to be reduced to about 43 to 48% by 2030, and 60 to 65% by 2035, relative to the 2019 levels. The country noted that following some recalculations of its GHG emissions/removals and assessing the mitigation potential of the 17 measures under NDC2.0, the national GHG emission reduction would only go up to 28%. In this regard the country revised NDC2.0 to raise its ambition to reduce GHG emissions by at least 40% per capita in the NDC3.0 compared to the 2035 Business-as Usual (BAU) scenario.
- Global CH<sub>4</sub> emissions specifically would need to be reduced by around one-third from 2019 levels by 2030. The country noted that from its GHG profile the major sources of CH<sub>4</sub> were cattle enteric fermentation in Agriculture sector (43.6%), burning in

Forestland and Grassland in LULUCF sector (31.1%), fuel combustion activities in Energy sector (7.2%) and Solid waste disposal in Waste sector (5.4%). These selected categories contribute about 87% of national CH<sub>4</sub> emissions. In this regard the country took a position to reduce CH<sub>4</sub> emissions by at least 20% compared to the 2035 BAU scenario.

The country's proposed adaptation pathways were guided by the following facts from the National Adaptation Plan (GoZ, 2024), Global Adaptation Gap Report (UNEP, 2023) and the global goal on adaptation referred to in Decision 7/CMA.3 provisions on adaptation under IPCC's Sixth Assessment Report (AR6):

- Urgent need to accelerate and implement adaptation action and support, considering the efforts reported in adaptation communications, Biennial Transparency Reports (BTR), National Adaptation Plans, NDCs and other relevant plans, strategies and programmes. In this regard the country has included three more adaptation sectors (Health, Tourism, and Forestry and biodiversity) in addition to the 4 reported in NDC2.0 (Agriculture, Water, Infrastructure, and Early warning and Disaster Risk Management) to make a total of 7 sectors.
- The need to adopt and align with the United Arab Emirates (UAE) Framework for Global Climate Resilience to achieve the Paris Agreement Global Goal on Adaptation. In this regard the NDC3.0 will embrace the 11

thematic and process-related targets of the UAE Framework. This includes protecting cultural heritage from the impacts of climate-related risks by developing adaptive strategies for preserving cultural practices and heritage sites and by designing climate-resilient infrastructure, guided by traditional knowledge and local knowledge systems.

## 1.2 OVERVIEW OF CHANGES FROM NDC2.0

In assessing the achievement of measures under the NDC2.0, the country has not been on track to achieve its ambition due to various factors. These factors include: (1) global geopolitical situation, (2) limited climate finance, (3) changes in methodological approaches under

the IPCC 2019 Refinements, and (4) population growth trends. Table 1 shows the changes from NDC2.0 to NDC3.0.

The country has raised its ambition by increasing its mitigation measures from 17 in NDC2.0 to 27 in NDC3.0. In the NDC2.0 the estimated GHG reduction from the 17 measures were 30,650 Gg CO<sub>2</sub>eq. in 2030 in absolute terms. For the same year in NDC3.0 the estimated GHG reduction from 27 measures were 41,489 Gg CO<sub>2</sub>eq. Comparing the mitigation potential for same year (2030), the ambition increased by 35% under NDC3.0 relative to NDC2.0. In 2035, the 27 mitigation measures will result in absolute emissions reduction of 50,104 Gg CO<sub>2</sub>eq. under NDC3.0.

Table 1 Summary of changes from NDC2.0 to NDC3.0

| PARAMETER                          | NDC 2.0   | NDC3.0  |
|------------------------------------|---|---|
| Adaptation                         | <ul style="list-style-type: none"> <li>Focused on Agriculture, Water, Infrastructure, and Early Warning and Disaster Risk Management</li> </ul>   | <ul style="list-style-type: none"> <li>In addition to the NDC2.0 sector coverage, included Health, Forestry and biodiversity, and Tourism</li> </ul>  |
| IPCC sectors covered in mitigation | <ul style="list-style-type: none"> <li>Energy, IPPU, LULUCF and Waste</li> </ul>  | <ul style="list-style-type: none"> <li>In addition to the NDC2.0 sector coverage, included Agriculture with two measures under livestock sub-category</li> </ul>  |
| GHG profile covered                | <ul style="list-style-type: none"> <li>CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and HFC (only R134a)</li> </ul>   | <ul style="list-style-type: none"> <li>In addition to the four GHGs, included other HFCs (HFC23, HFC32, HFC125, HFC143a and HFC227ea) and PFCs in IPPU sector</li> </ul>  |
| Global warming potential           | <ul style="list-style-type: none"> <li>SAR, 21 for CH<sub>4</sub> and 310 for N<sub>2</sub>O</li> </ul>   | <ul style="list-style-type: none"> <li>AR5, 28 for CH<sub>4</sub> and 265 for N<sub>2</sub>O</li> </ul>   |
| Methodological approach            | <ul style="list-style-type: none"> <li>2006 IPCC Guidelines</li> </ul>  | <ul style="list-style-type: none"> <li>2019 Refinements of the 2006 IPCC Guidelines</li> </ul>  |
| Historical emissions               | <ul style="list-style-type: none"> <li>National total emissions ranged between 25,240 Gg CO<sub>2</sub>eq in 2011 and 41,660 Gg CO<sub>2</sub>eq in 2015</li> <li>Emissions in 2017, 35,840 Gg CO<sub>2</sub>eq.</li> <li>Emissions per capita in 2017, 2,450 kg CO<sub>2</sub>eq.</li> </ul> | <ul style="list-style-type: none"> <li><b>After recalculations:</b></li> <li>National total emissions ranged between 62,230 Gg CO<sub>2</sub>eq in 2011 and 72,160 Gg CO<sub>2</sub>eq in 2015</li> <li>Emissions in 2017, 66,060 Gg CO<sub>2</sub>eq.</li> <li>Emissions per capita in 2017, 4,695 kg CO<sub>2</sub>eq.</li> </ul> |

| PARAMETER                      | NDC 2.0   | NDC3.0  |
|--------------------------------|---|---|
| BAU scenario projections       | <ul style="list-style-type: none"> <li>• <b>2030</b> Baseline, 75,390 Gg CO<sub>2</sub>eq.</li> <li>• Population, 19.5 million</li> <li>• Energy, 26,620 Gg CO<sub>2</sub>eq.</li> <li>• IPPU, 4,200 Gg CO<sub>2</sub>eq.</li> <li>• AFOLU, 41,570 Gg CO<sub>2</sub>eq.</li> <li>• Waste, 3,000 Gg CO<sub>2</sub>eq.</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>2030</b> Baseline (recalculations), 117,720 Gg CO<sub>2</sub>eq.</li> <li>• Population, 17.2 million</li> <li>• Energy, 23,100 Gg CO<sub>2</sub>eq.</li> <li>• IPPU, 12,580 Gg CO<sub>2</sub>eq.</li> <li>• AFOLU, 78,620 Gg CO<sub>2</sub>eq.</li> <li>• Waste, 3,420 Gg CO<sub>2</sub>eq.</li> <li>• <b>2035</b> Baseline, 125,769 Gg CO<sub>2</sub>eq.</li> <li>• 6,706 kg CO<sub>2</sub>eq./capita</li> <li>• Population, 18.8 million</li> <li>• Energy, 22,717 Gg CO<sub>2</sub>eq.</li> <li>• IPPU, 12,511 Gg CO<sub>2</sub>eq.</li> <li>• Agriculture, 30,320 Gg CO<sub>2</sub>eq.</li> <li>• LULUCF, 56,499 Gg CO<sub>2</sub>eq.</li> <li>• Waste, 3,719 Gg CO<sub>2</sub>eq.</li> </ul> |
| Mitigation potential           | <ul style="list-style-type: none"> <li>• Total emissions in 2030, 44,740 Gg CO<sub>2</sub>eq. (40% emission reduction)</li> <li>• Estimated reduction, <b>30,650</b> Gg CO<sub>2</sub>eq</li> <li>• Energy, 4,200 Gg CO<sub>2</sub>eq. avoided</li> <li>• IPPU, 450 Gg CO<sub>2</sub>eq. avoided</li> <li>• LULUCF, 25,350 Gg CO<sub>2</sub>eq. removed</li> <li>• Waste, 650 Gg CO<sub>2</sub>eq. avoided</li> </ul> | <ul style="list-style-type: none"> <li>• Total emissions in 2035, 73,789 Gg CO<sub>2</sub>eq. (40% emission reduction)</li> <li>• Estimated reduction, <b>50,104</b> Gg CO<sub>2</sub>eq.</li> <li>• Energy, 5,715 Gg CO<sub>2</sub>eq. avoided</li> <li>• IPPU, 1,229 Gg CO<sub>2</sub>eq. avoided</li> <li>• Agriculture, 2,097 Gg CO<sub>2</sub>eq. avoided</li> <li>• LULUCF, 39,774 Gg CO<sub>2</sub>eq. removed</li> <li>• Waste, 1,288 Gg CO<sub>2</sub>eq. avoided</li> </ul>   |
| Mitigation measures            | <ul style="list-style-type: none"> <li>• 17 Mitigation measures</li> <li>• Energy, 8</li> <li>• IPPU, 4</li> <li>• LULUCF, 3</li> <li>• Waste, 2</li> </ul>   | <ul style="list-style-type: none"> <li>• 27 Mitigation measures</li> <li>• Energy, 12</li> <li>• IPPU, 4</li> <li>• Agriculture, 2</li> <li>• LULUCF, 7</li> <li>• Waste, 2</li> </ul>  |
| Per capita emissions reduction | <ul style="list-style-type: none"> <li>• 3,900 kg CO<sub>2</sub>eq./capita (BAU) in 2030</li> <li>• 2,300 kg CO<sub>2</sub>eq./capita (with mitigation) in 2030</li> </ul>  | <ul style="list-style-type: none"> <li>• 6,830 kg CO<sub>2</sub>eq./capita (BAU) in 2035</li> <li>• 3,934 kg CO<sub>2</sub>eq./capita (with mitigation) in 2035</li> </ul>  |





# ZIMBABWE'S VISION AND CLIMATE ACTION CONTEXT

## 2.1 VISION 2030

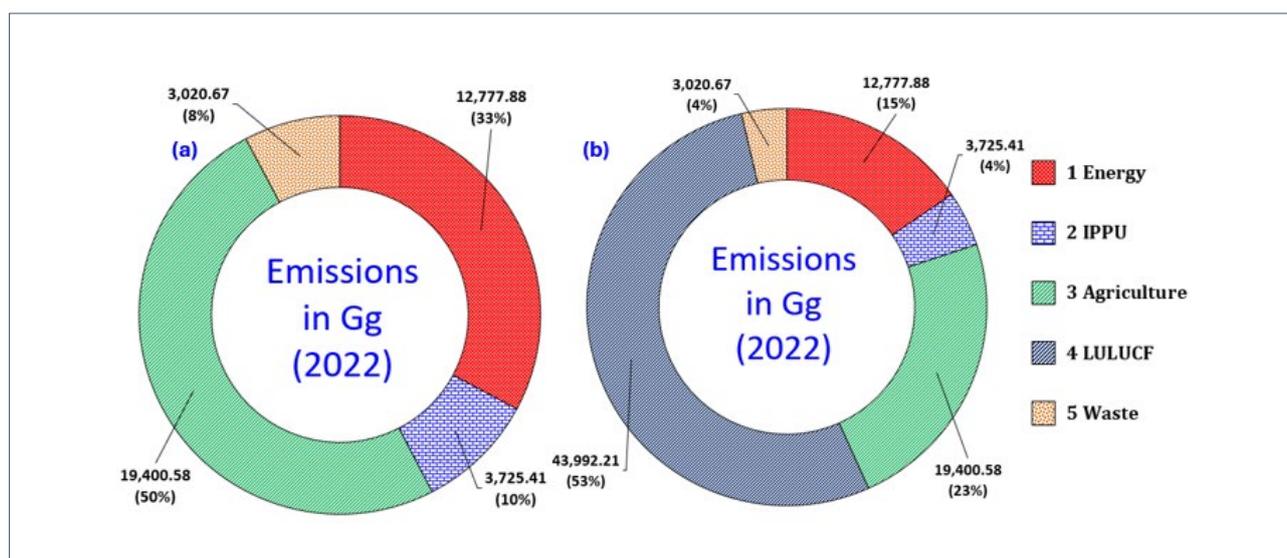
Zimbabwe has made substantial progress in integrating climate change into the national development processes. Zimbabwe's Vision 2030 aspiration to attain an "Empowered and Prosperous Upper Middle-Income Society by 2030" will be attained if climate change is integrated across different sectors. This however requires taking urgent action to address climate change related impacts as these might be a handicap to realize Vision 2030. The Zimbabwe National Development Strategy 1 recognizes environmental protection, climate resilience and natural resources management as key enablers for the realization of Vision 2030 and the sustainable development agenda. The focus of environmental protection, climate resilience and natural resource management is on sustainable management of wetlands, the

rehabilitation of degraded mined areas, climate change adaptation and mitigation, as well as sustainable management of natural resources.

## 2.2 NATIONAL GREENHOUSE GAS PROFILE

The total national GHG emissions in 2022 were estimated at **83,118.72** Gg CO<sub>2</sub>eq., while total national GHG removals in the same year were **201.97** Gg CO<sub>2</sub>eq., giving a net total of **82,916.75** Gg CO<sub>2</sub>eq. Total emissions with and without Land Use, Land Use Change and Forestry (LULUCF) are shown in Figure 1. Emissions from LULUCF sector dominated the national GHG profile largely due to deforestation, forest degradation and biomass burning. This was followed by emissions from the Agriculture, Energy, Industrial Processes and Product Use (IPPU), and lastly the Waste sector.

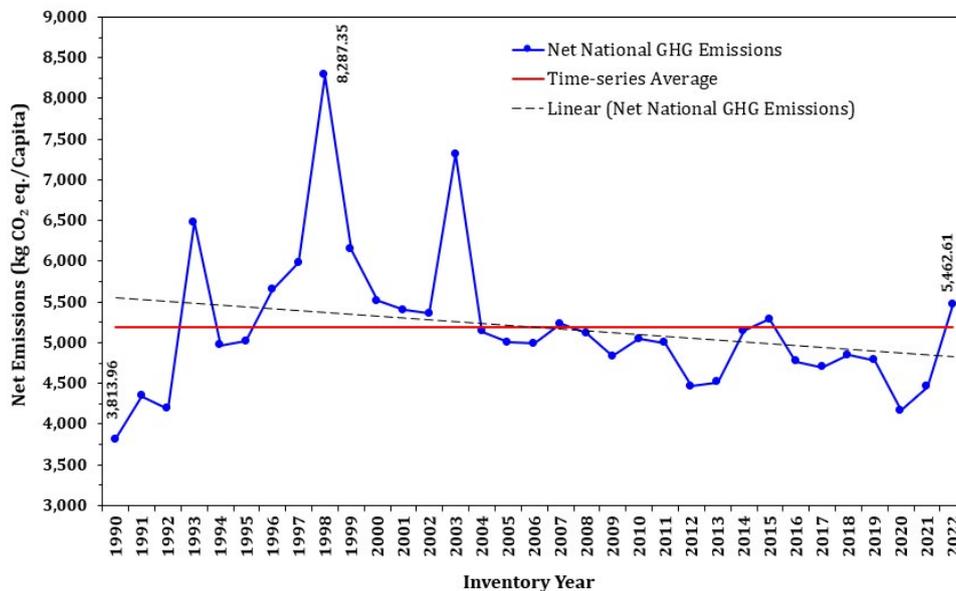
Figure 1 Sectors contribution to GHG emissions (CO<sub>2</sub>eq.) without (a) and with (b) LULUCF, 2022



The net GHG emissions increased by 43% from 3,813.96 Gg CO<sub>2</sub>eq./Capita in 1990 to 5,462.61 Gg CO<sub>2</sub>eq./Capita in 2022 (Figure 2). However, there has been a general decrease in per Capita

emissions from 1993 apart from the years 1998, 2003 and 2022 that has emission spikes largely due to considerably high biomass burning in Forest land and Grassland during these years.

Figure 2 Net GHG emissions per Capita, 1990-2022



### 2.3 CLIMATE HAZARDS AND THE NATIONAL ADAPTATION PLAN

The extreme climatic disasters experienced in Zimbabwe are largely the droughts, floods and heatwaves that have had a big effect on socioeconomic systems. Drought exposure and vulnerability vary substantially throughout the country with dire consequences on communities depending on climate sensitive natural resources (Figure 3). Recent droughts were experienced in 2012-13, 2015-16, 2018-19 and 2023-24 seasons, and there is a significant possibility of increased occurrence of droughts in future with greater severity due

to climate change. Floods occur in low lying areas, overflowing dams, river confluences, and upstream (as backlash), and tropical cyclones paths (Figure 4). Occurrence of floods has spread to areas that were previously unaffected. Zimbabwe has been badly impacted by tropical cyclones Eline (2000), Japhet (2003), Dineo (2017), Idai (2019); tropical storms Chalene (2020), Eloise (2021), Ana (2022), and Freddy (2023). With anticipated increase in the incidence and intensity of tropical cyclones, thunderstorms and hailstorms floods and flash floods are in future expected to be on the rise especially over the low-lying areas.

Figure 3 Drought probability by district in Zimbabwe

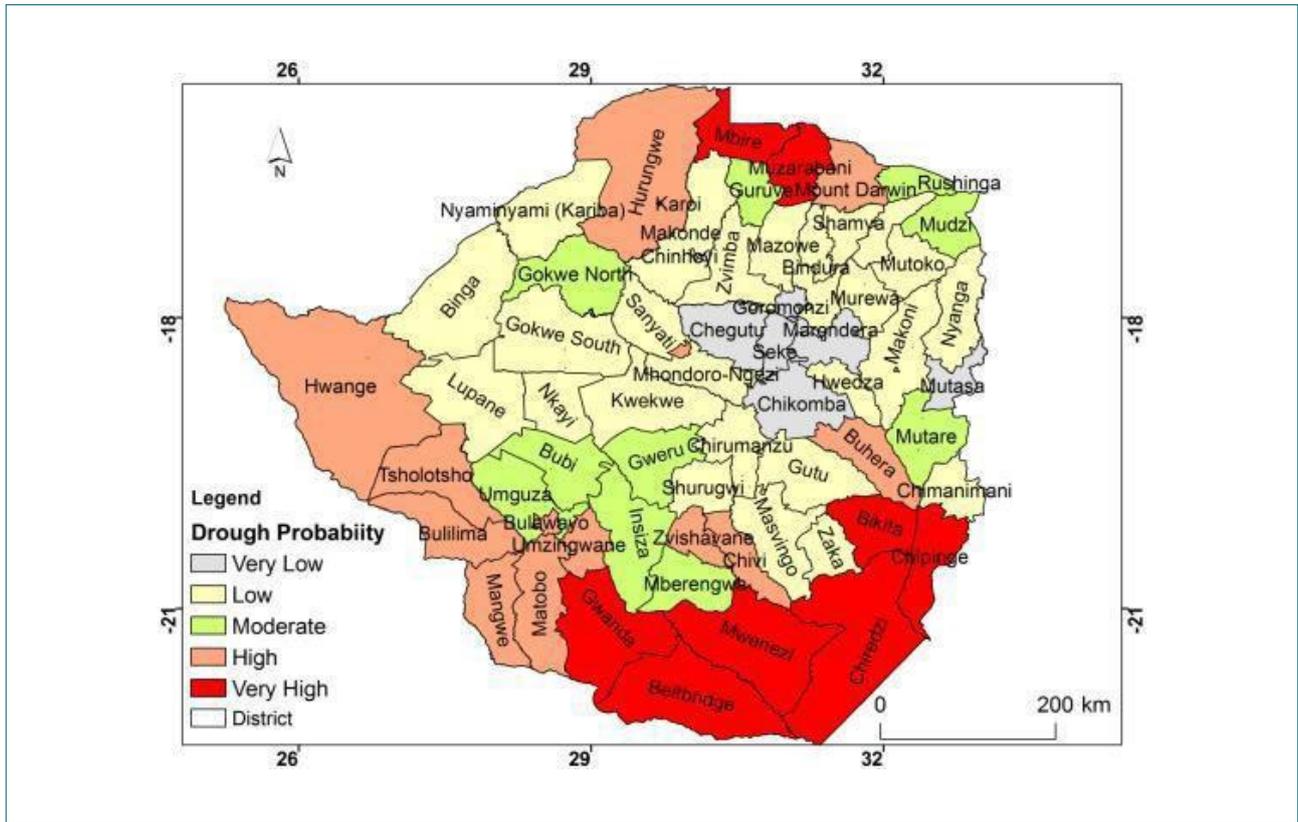
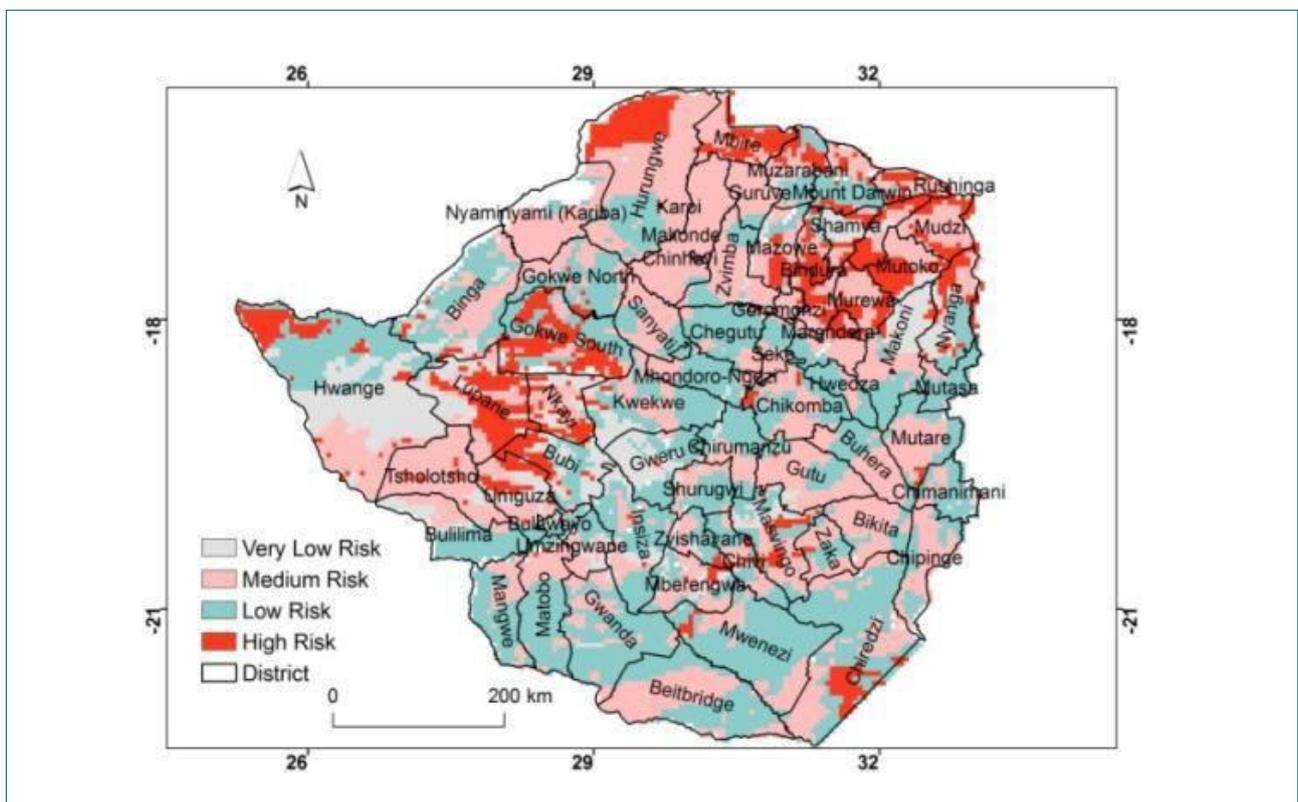


Figure 4 Floods probability by district in Zimbabwe



The Government of Zimbabwe has since developed the National Climate Change Adaptation Plan (NAP) as a transformative strategy in addressing climate change by taking climate consideration in planning, budgeting, decision making in all developmental processes. The goal of the NAP is to integrate Climate change adaptation in development policies, strategies, plans programmes and activities.

The two strategic priorities of NAP are: (1) Climate change adaptation mainstreamed and sustained; and (2) Effective and efficient climate risk management. The NAP identified 18 priority adaptation outputs in seven sectors namely: agriculture, water, health, tourism, forest and biodiversity, infrastructure and human settlements. Table 2 shows of these priority adaptation outputs.

Table 2 Sectorial adaptation priority outputs identified in the NAP

| SECTOR                    | ADAPTATION PRIORITY OUTPUTS  | COSTING USD   |
|---------------------------|--|---------------|
| Agriculture               | <ul style="list-style-type: none"> <li>Improved weather access and to climate information services</li> <li>Climate Smart Agriculture practices adopted</li> <li>Agriculture technologies promoted</li> <li>Frameworks for sustainable intensification and commercialization of agriculture developed</li> <li>Efficient value chains and markets for crop and livestock established.</li> </ul> | 4.77 billion  |
| Water                     | <ul style="list-style-type: none"> <li>Water resources developed and sustainably managed including catchment management and wetlands protection</li> <li>Water use efficient systems adopted and</li> </ul>  | 3.55 billion  |
| Health                    | <ul style="list-style-type: none"> <li>Integrate climate change, weather and climate information into the health surveillance and information system</li> <li>Improved research and response to climate-related diseases</li> </ul>  | 0.5 billion   |
| Infrastructure            | <ul style="list-style-type: none"> <li>Climate resilient infrastructure standards developed and adopted</li> </ul>   | 0.16 billion  |
| Human settlement          | <ul style="list-style-type: none"> <li>Increased integration of climate in spatial planning</li> <li>Populations at risk from climate related hazards relocated</li> </ul>   | 1 billion     |
| Forestry and biodiversity | <ul style="list-style-type: none"> <li>Enhanced alternative natural resource-based livelihoods options</li> <li>Improved biodiversity and reduced habitat loss</li> </ul>  | 0.12 billion  |
| Tourism                   | <ul style="list-style-type: none"> <li>Promotion of Climate Smart infrastructure products and facilities</li> <li>Establishment and or support of Eco-tourism enterprises</li> <li>Adoption of Circular economy practices by the hospitality industry.</li> </ul>  | 0.21 billion  |
| Total costing             |  | 10.31 billion |

Zimbabwe requires about USD 10.31 billion for implementing the adaptation actions between 2023 and 2030. This amount is over and above the finances that the country is receiving from treasury, bilateral and multilateral sources of funds, grants, innovative finances among others.

As the Government of Zimbabwe implements its National Adaptation Plan, which is hinged on mainstreaming climate change in development planning, Treasury has, since 2022, consistently set aside budgetary allocations for climate change management.

## 2.4 NDC DEVELOPMENT AND AMBITION RAISING

The Technical Working Group on NDC working under the Climate Change Mitigation wing within the Institutional Arrangements for Transparency under the Climate Change Management Department conducted a detailed economy-wide analysis to establish the mitigation ambition for 2035. A total of 76 mitigation measures were identified, 57 of which were from the national reports of previous mitigation assessments, namely the National Climate Change Response Strategy (GoZ, 2014<sup>1</sup>); Initial NDC (GoZ, 2015<sup>2</sup>); Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (GoZ, 2022<sup>3</sup>); Zimbabwe Revised NDC (GoZ, 2021<sup>4</sup>); Zimbabwe First Biennial Update Report (GoZ, 2021<sup>5</sup>) and the Fourth National Communication (GoZ, 2022<sup>6</sup>). The other 19 measures were identified from consultations with stakeholders during the implementation of the Capacity Building Initiative for Transparency (CBIT) project. Individual consultations and group discussions were conducted during the training component of the assignment in which participants from the public, private and other sectors, including academia were selected

at different levels of authority from directors, managers to officers and other. All the 5 IPCC sectors were fully represented.

From the 17 measures in the Revised NDC (NDC 2.0) of 2021 a total of **14** measures were retained for progress tracking in the NDC3.0 development (Table 3). The mitigation measures halted included measures energy efficiency improvement in five sectors, and 2% biodiesel from the energy sector that were set on halt due to technical challenges with their take-off. In the process of ambition raising **13** additional measures added in the NDC3.0, mainly **8** from the Energy sector, **2** from Agriculture, and **3** from LULUCF. The **7** measures in the LULUCF included revisions of the measures from NDC 2.0 (Table 3).

- 1 GoZ (2014) Zimbabwe's National Climate Change Response Strategy. Ministry of Environment Water and Climate, Government of Zimbabwe (GoZ), Harare.
- 2 GoZ (2015) Zimbabwe Nationally Determined Contributions. Ministry of Environment Water and Climate, Government of Zimbabwe (GoZ), Harare.
- 3 GoZ (2022) Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050). Government of Zimbabwe, Harare.
- 4 GoZ (2021) Zimbabwe Revised Nationally Determined Contribution. Government of Zimbabwe, Harare.
- 5 GoZ (2021) Zimbabwe's First Biennial Update Report 2020. Ministry of Environment, Climate, Tourism and Hospitality Industry, Government of Zimbabwe, Harare.
- 6 GoZ (2022) Zimbabwe Fourth National Communication to the United Nations Framework Convention on Climate Change. Ministry of Environment, Climate, Tourism and Hospitality Industry, Government of Zimbabwe (GoZ), Harare.

Table 3 Mitigation measures retained/added for progress tracking under NDC3.0

| NO. | MITIGATION MEASURE  | MAIN INDICATOR                          | AMBITION   |   |
|-----|---|---|--|---|
|     |   |   | NDC2.0   | NDC3.0  |
|     | Transmission and distribution losses reduction  | Percentage loss reduced                 | 18% in 2020 to 11% in 2025   | 16% in 2022 to 11% in 2030 and maintain to 2035         |
|     | Expansion of grid-connected solar   | MW added                                | 300 MW in 2025   | 300 MW in 2035  |
|     | Expansion of microgrids   | MW added                                | 2 MW by 2028   | 2 MW by 2035  |
|     | Biogas energy production  | MW added                                | 4.1 MW in 2024   | 4.1 MW in 2035  |
|     | Energy efficiency Improvements in agriculture, commercial, domestic, manufacturing and mining sectors | Percentage energy savings added by 2030 | Agriculture: 12%<br>Commercial: 16%<br>Domestic: 22.08%<br>Manufacturing: 18.63%<br>Mining: 8% | Set on halt   |
|     | Biodiesel in fuel   | Percentage biodiesel added              | 2% by 2030   | Set on halt   |
|     | Fuel efficiency improvement through fuel economy policy 2025-2030                                     | Annual percentage efficiency added      | Motorcycles: 2.2%<br>Light Duty Vehicles: 2.9%<br>Buses: 2.6%<br>Heavy Duty Vehicles: 2.5%     | Set on halt   |
|     | Public transport (modal shift) from private car to public transport in 2030                           | Percentage shift                        | 5% in 2030   | Set on halt   |
|     | Combined Cycle Gas Turbine (CCGT) power plant   | MW added                                | Not included   | 160 MW by 2029<br>500 MW by 2033<br>1,000 MW by 2036    |
|     | Repurposed small thermal  | MW of solar added                       | Not included   | 200 MW by 2028  |
|     | Minimum energy performance standard: domestic refrigeration   | GWh saved                               | Not included   | 135 GWh by 2030<br>188 GWh by 2035<br>328 GWh by 2050   |
|     | Minimum energy performance standard: distribution transformers  | GWh saved                               | Not included   | 302 GWh by 2030<br>498 GWh by 2035<br>1,299 GWh by 2050 |
|     | Minimum energy performance standard: room air conditioners  | GWh saved                               | Not included   | 188 GWh by 2030<br>279 GWh by 2035<br>363 GWh by 2050   |
|     | Minimum energy performance standard: lighting   | GWh saved                               | Not included   | 63 GWh by 2030<br>57 GWh by 2035<br>40 GWh by 2050      |
|     | Wind power plant  | MW added                                | Not included   | 500 by 2035   |

| NO. | MITIGATION MEASURE  | MAIN INDICATOR                                 | AMBITION   |  |
|-----|---|--|--|--|
|     |   |  | NDC2.0   | NDC3.0                                   |
|     | Industrial energy efficiency improvement  | Energy intensity per GDP \$                    | Not included   | 8% reduction by 2035                     |
|     | Increased clinker substitution with fly ash   | Percentage of clinker substituted              | 16% by 2030, 20% by 2050   | 17% by 2035                              |
|     | Increased clinker substitution with BFS (up to 16% by 2030, 20% by 2050).   | Percentage of clinker substituted              | 16% by 2030, 20% by 2050   | 17% by 2035                              |
|     | Decomposition of N <sub>2</sub> O emissions through use of a secondary catalyst during nitric acid production.                    | Percentage of N <sub>2</sub> O decomposed      | 75% by 2023  | 75% by 2030                              |
|     | HFC Phasedown schedule Kigali Amendment   | Reduced HFCs                                   | Freeze by 2024; 10% reduction by 2029  | Freeze by 2024; 15% reduction by 2035    |
|     | Improved feed for cattle  | Added proportion of cattle under improved feed | Not included   | 5% of cattle on improved feed by 2035    |
|     | Improved livestock health for cattle  | Added proportion of cattle on improved health  | Not included   | 10% of cattle on improved health by 2035 |
|     | Increase area of forest land from 9.9 million hectares to 10.4 million hectares by 2025   | Added natural forest                           | Add 100,000 hectares of natural forest land per year between 2021 and 2025   | Redefined                                |
|     | Increase area of forest plantation from 68848 hectares to 118848 hectares by 2025   | Added plantation forest                        | Add 10,000 hectares of plantation forest land per year between 2021 and 2025 | Redefined                                |
|     | Reduce area burned  | Reduced area burnt                             | 500,000 hectares between 2020 and 2025                                       | Redefined                                |
|     | Plant 2000 hectares of degraded and fallow land annually with native trees, Includes natural regeneration and enrichment planting | Added natural forest                           | Included, with different target (L1)   | 2,000Ha/year                             |
|     | Increase area of forest plantation from 68848 hectares to 118848 hectares by 2025   | Added plantation forest                        | Included, with different target (L2)   | 7,000 ha/year                            |
|     | Reduce the area of natural forest burned by 50,000 hectares compared to the area burned in 2020                                   | Reduced area burnt                             | Included, but aggregated (L3)  | 50,000 ha/year from 2023 to 2035         |
|     | Reduce the forest plantation area burned by 2,000 hectares compared to the area burned in 2022                                    | Reduced area burnt                             | Included, but aggregated (L3)  | 2,000 ha/year                            |

| NO. | MITIGATION MEASURE   | MAIN INDICATOR   | AMBITION                      |  |
|-----|--|--|-------------------------------|--|
|     |  |  | NDC2.0                        | NDC3.0                                   |
|     | Reduce wooded grassland area burned by 30,000 hectares compared to the area burned in 2022   | Reduced area burnt   | Included, but aggregated (L3) | 30,000 ha/year                           |
|     | Plant exotic trees on degraded and fallow land in tobacco growing areas, adding 5,000 hectares per year  | Added area of exotic trees plantation                                | Not included                  | 5,000 ha/year planted                    |
|     | Conservation tillage (CT)  | Added area under CT  | Not included                  | 100,000 ha in 2022 to 200,000 ha in 2035 |
|     | Waste to Energy: It was assumed that 42% of the methane generated would be collected and used for energy production through waste to energy projects | Proportion of solid waste diverted from disposal site to power plant | 42% by 2030                   | 42% by 2035                              |
|     | Organic matter composting  | Percentage of organic matter composted                               | 20% in 2030                   | 20% in 2035                              |



# MITIGATION PRIORITIES AND ACTIONS

## 3.1 BASELINE PROJECTION

The historical and projected Business-as-Usual (BAU) scenario emissions for all IPCC sectors are shown in Figure 5. The total national GHG emissions under BAU are expected to increase

to 125,769.11 Gg CO<sub>2</sub>eq. in 2035, an increase by 89% compared to the 2022 emissions (Table 4)

Figure 5 Historical emissions and baseline scenario projections by sector

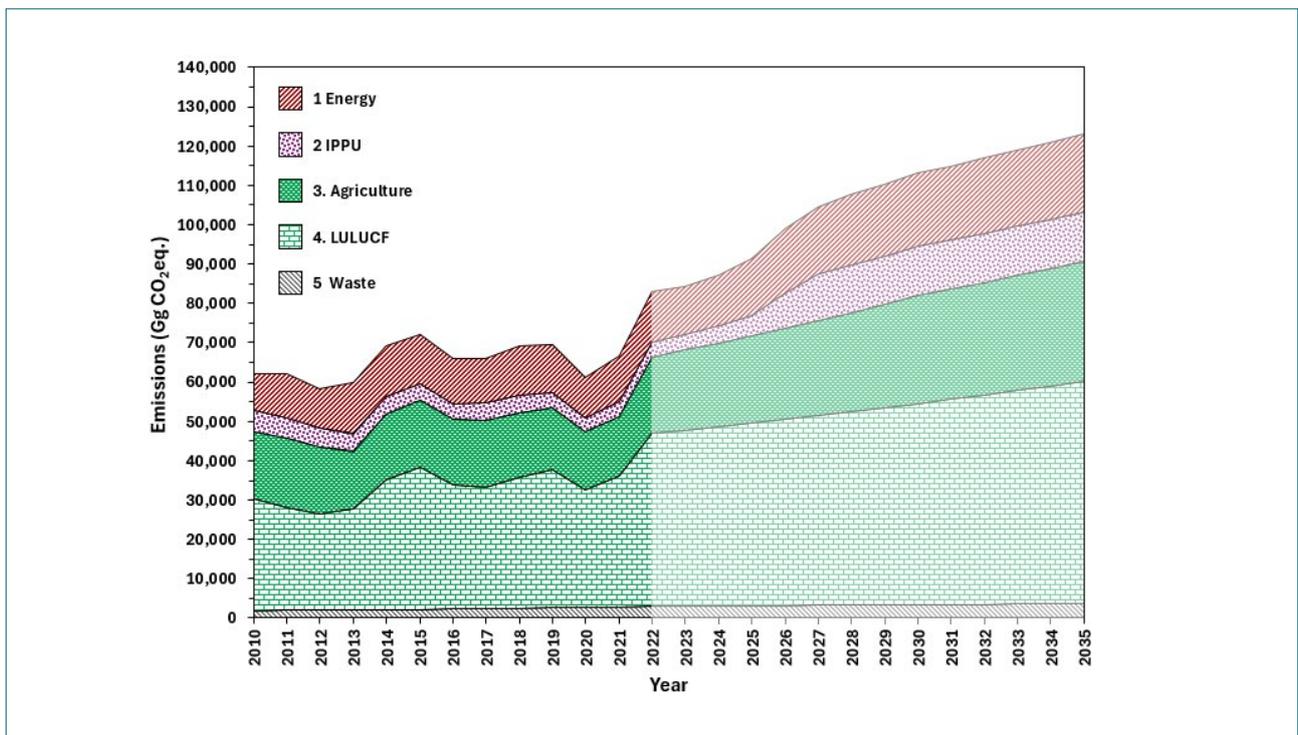


Table 4 Changes in historical and baseline scenario projections by selected years

| YEAR                   | EMISSIONS BY SECTOR (GG CO2EQ.) |           |             |           |          | NATIONAL<br>(GG CO2EQ.) |
|------------------------|---------------------------------|-----------|-------------|-----------|----------|-------------------------|
|                        | ENERGY                          | IPPU      | AGRICULTURE | LULUCF    | WASTE    |                         |
| 2010                   | 9,478.77                        | 5,331.28  | 16,945.09   | 28,583.62 | 1,884.49 | 62,223.26               |
| 2015                   | 12,546.34                       | 4,309.84  | 17,067.21   | 36,012.37 | 2,224.75 | 72,160.50               |
| 2020                   | 10,302.34                       | 3,787.78  | 14,563.85   | 29,889.93 | 2,767.85 | 61,311.74               |
| 2021                   | 11,489.95                       | 3,833.64  | 15,141.67   | 33,226.31 | 2,906.54 | 66,598.11               |
| 2022                   | 12,777.88                       | 3,725.41  | 19,400.58   | 43,992.21 | 3,020.67 | 82,916.75               |
| 2025                   | 19,368.33                       | 5,170.76  | 22,064.92   | 46,467.34 | 3,140.80 | 96,212.15               |
| 2030                   | 23,100.95                       | 12,578.49 | 27,509.12   | 51,113.01 | 3,417.32 | 117,718.90              |
| 2035                   | 22,719.17                       | 12,511.45 | 30,320.48   | 56,498.61 | 3,719.41 | 125,769.11              |
| 2010 vs 2035, % change | +140                            | +135      | +79         | +98       | +97      | +102                    |
| 2015 vs 2035, % change | +81                             | +190      | +78         | +57       | +67      | +74                     |
| 2020 vs 2035, % change | +121                            | +230      | +108        | +89       | +34      | +105                    |
| 2022 vs 2035, % change | +98                             | +226      | +100        | +70       | +28      | +89                     |

### 3.2 THE UPDATED GHG MITIGATION CONTRIBUTION

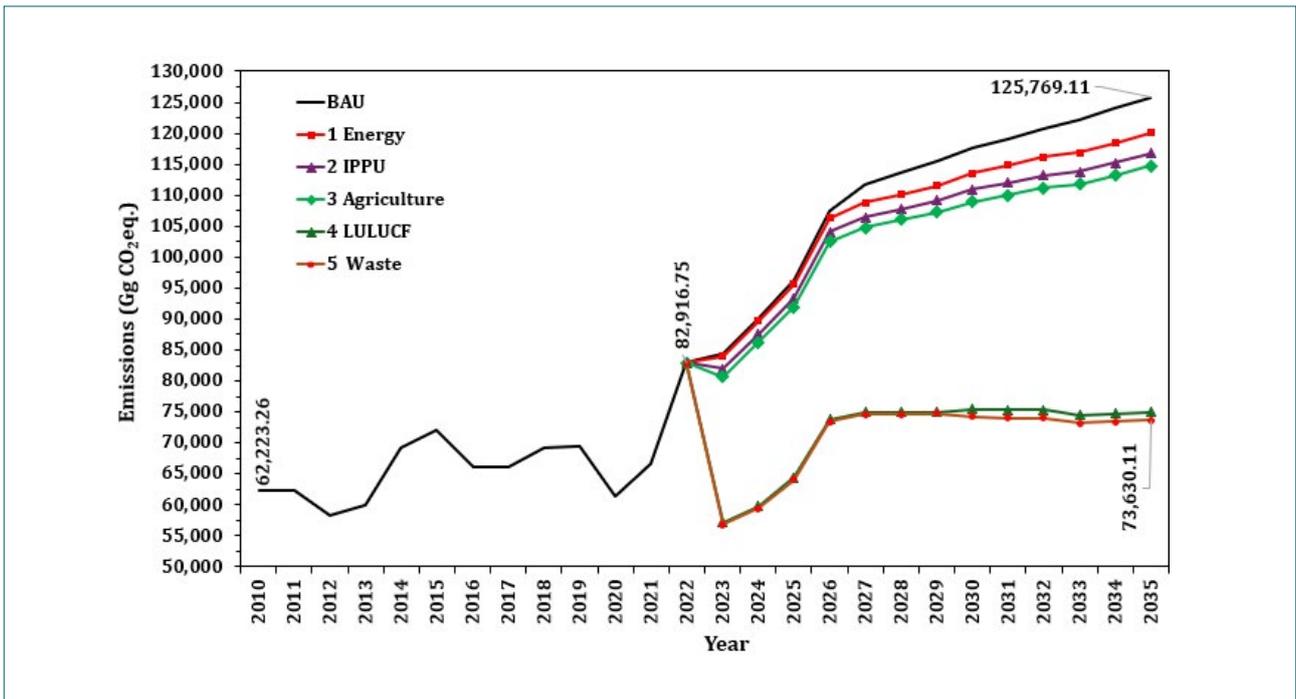
The assessed mitigation measures in all sectors are expected to reduce the 2035 BAU emissions by 49,945.40 Gg CO2eq. through a total of 27 economy-wide mitigation measures (Table 5).

The projected trends in the BAU and mitigation scenarios are given in Figure 6. Emissions removals are projected to increase from 19% in 2023 to 40% in 2035.

Table 5 Analysis of selected mitigation potential from selected IPCC sector at national level

| SECTOR        | ANNUAL AMOUNT AND PROPORTION OF GHG REMOVED FROM SECTORAL AND NATIONAL TOTAL EMISSIONS BY YEAR (GG CO2EQ.) |       |           |       |           |       |           |       |           |       |           |       |           |       |
|---------------|--|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
|               | 2023   |       | 2024      |       | 2025      |       | 2026      |       | 2028      |       | 2030      |       | 2035      |       |
|               | GG   | %     | GG        | %     | GG        | %     | GG        | %     | GG        | %     | GG        | %     | GG        | %     |
| 1 Energy      | 436.14   | 3.51  | 460.59    | 2.93  | 653.01    | 3.37  | 1,201.58  | 4.83  | 3,450.28  | 14.42 | 4,150.77  | 17.97 | 5,715.76  | 25.16 |
| 2 IPPU        | 44.93  | 1.15  | 72.78     | 1.60  | 139.63    | 2.70  | 210.55    | 4.07  | 366.89    | 7.10  | 627.13    | 4.99  | 1,229.03  | 9.82  |
| 3 Agriculture | 1,289.33   | 6.37  | 1,369.92  | 6.48  | 1,455.54  | 6.60  | 1,643.17  | 6.82  | 1,854.98  | 7.05  | 1,970.92  | 7.16  | 2,097.22  | 7.16  |
| 4 LULUCF      | 23,490.96  | 52.44 | 26,490.53 | 58.07 | 27,591.35 | 59.38 | 28,717.54 | 60.66 | 31,042.48 | 63.13 | 33,452.62 | 65.45 | 39,774.00 | 70.40 |
| 5 Waste       | 341.00   | 11.23 | 341.00    | 11.04 | 341.00    | 10.86 | 341.00    | 10.50 | 341.00    | 10.15 | 1,288.00  | 37.69 | 1,288.00  | 34.63 |
| National      | 25,602.36  | 30.33 | 28,734.82 | 31.88 | 30,180.53 | 31.37 | 32,113.84 | 29.88 | 37,055.63 | 32.62 | 41,489.44 | 35.24 | 50,104.01 | 39.84 |

Figure 6 Mitigation potential of 27 selected measures at national level



### 3.3 FAIRNESS AND AMBITION

Zimbabwe's updated target represents a fair and ambitious contribution. Zimbabwe is a highly vulnerable country to the impacts of climate change and the priority is to enhance climate resilience. Despite this, Zimbabwe is committed to ensuring a fair contribution to the Paris Agreement by demonstrating enhanced ambition, through an expansion of the mitigation contribution.

### 3.4 CONDITIONALITY

The mitigation contribution outlined above is conditional on appropriate international support. The total investment cost of meeting the mitigation contribution is approximately US\$ 19 billion. However, it should be noted that not all of this will be new additional cost – some of the investments are already being made for non-climate reasons, for example investments into the energy sector. Furthermore, the cost data does not consider the expected benefits of climate action, both in terms of avoiding future

climate change but also from co-benefits such as green jobs, improved health and air quality and better access to energy. The scope of gases covered by the mitigation contribution will be expanded to include Black Carbon and HFCs from combustion, upon availability of financial resources. This will be assessed for their mitigation potential as well as any co-benefits associated. For this reason, co-emitted air pollutants will also be included in the analysis.

### 3.4 CO-BENEFITS OF IDENTIFIED MITIGATION MEASURES

Using solar PV to power irrigation water pumps is an adaptation measure because of the erratic and little rainfall in some parts of the country. The use of solar energy results in reduced demand of grid and diesel-generated electricity, and hence a reduction in greenhouse gas emissions. Around 2,300 GgCO<sub>2</sub>eq. of emissions will be avoided in 2035 by using solar PV to irrigate 200,000 ha of land.

## 3.5 SECTOR LEVEL MITIGATION ACTIONS

### 3.5.1 Energy Sector

Currently, Zimbabwe is failing to meet its power demand. The large hydropower plant, whose installed capacity is 1,050 MW is operating at 185 MW because of water shortages. To reduce the power deficit the GoZ intends to refurbish the old generating units at the coal-powered Hwange Power Station in 2025 and raise its efficiency to around 40% and increase the capacity by 400 MW. The GoZ is also planning to build a 720 MW coal plant and commission it in 2026. The Figure 7 shows that emissions will peak in 2026 at around 24,900 GgCO<sub>2</sub>eq and decrease to 23,100 GgCO<sub>2</sub>eq in 2030, and to 22,700 GgCO<sub>2</sub>eq in 2035.

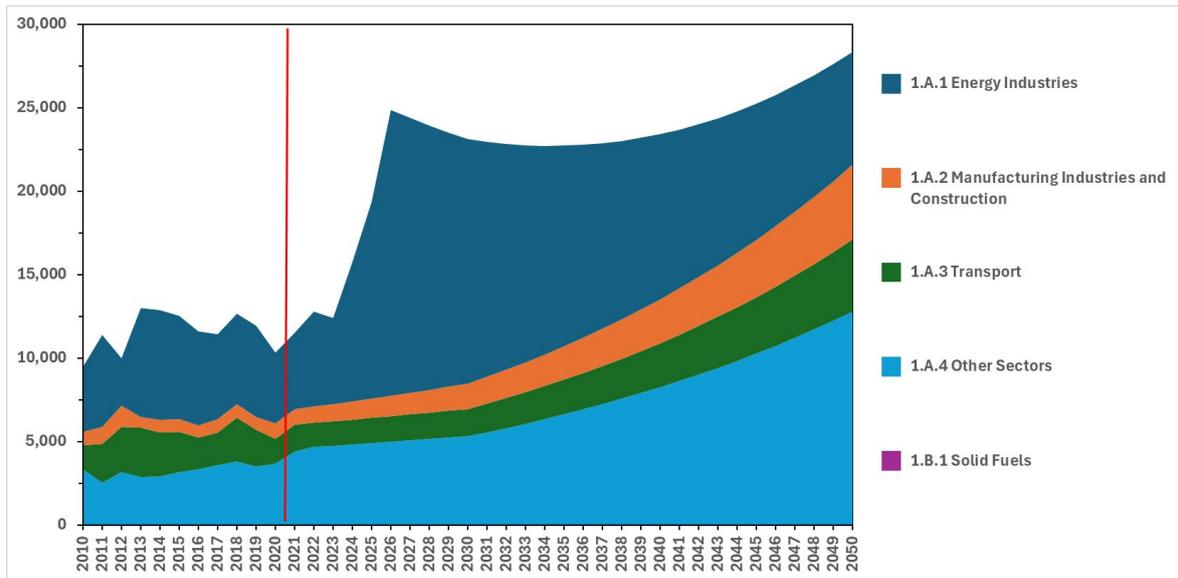
During the period 2025-2035 the Energy Industries and Other sectors will be the top 2 emitting source categories. Out of the 12 mitigation projects, seven are from the Energy Industries (power generation and evacuation) and the remaining five are from Other Sectors and Manufacturing Industries and Construction. Zimbabwe is experiencing severe power shortages and more than 70% of its electricity is coming from coal plants (as of February 2025) and cannot afford to have Transmission and Distribution losses hovering around 18% of the electricity sold. The minimum energy performance standards (MEPS) on distribution transformers will go a long way in reducing the technical losses. Other measures that are being taken to reduce these technical losses include transmitting electricity at large voltage and

using more energy-efficient transmission and distribution cables. Efforts to increase access to electricity over the years resulted in high technical losses (by extending the grid).

The Ministry of Energy and Power Development (MoEPD) with funding as well as technical assistance of the United Nations Environment Programme (UNEP)'s United for Efficiency (U4E) is implementing the Cooling MEPS targeting domestic refrigerators and room air-conditioners in partnership with the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE), the Standard Association of Zimbabwe and the National Ozone Unit (NOU) in the Ministry of Environment, Climate and Wildlife. The trainer the trainer workshop aimed at building technical capacity of Government agencies so that they can provide trainings on MEPS to a wide audience at regional level to ensure smooth implementation of the project was conducted in August 2024 and three (3) regional workshops were conducted in September, October and November 2024 as part of the implementation of the Cooling MEPS for Zimbabwe. The objectives of the regional training workshop were to build capacity to practitioners in refrigeration and air-conditioning and to raise public awareness on the Cooling MEPS programme. Overall, 182 individuals participated at regional training workshops.

Promotion of microgrids will result in improved access to electricity without increasing transmission and distribution losses.

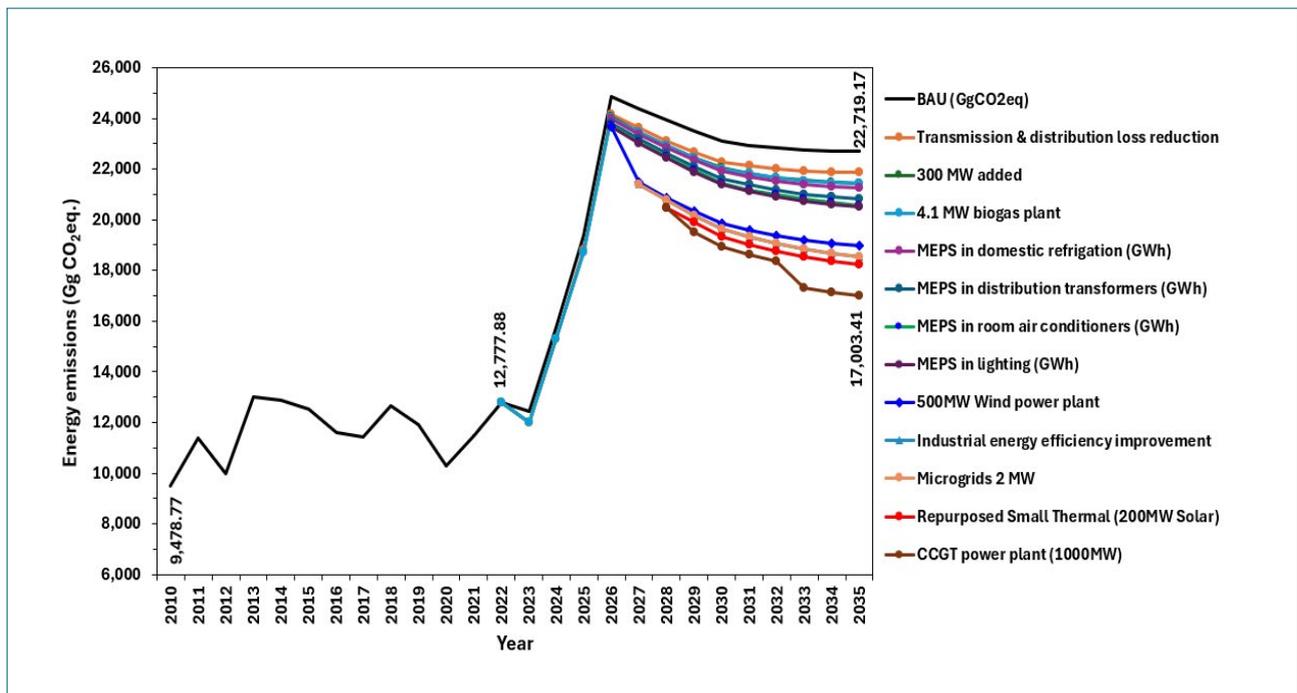
Figure 7 The BAU emissions profile for the energy sector (2010 – 2050)



The CCGT plant, that will run on natural gas, will start with 160 MW in 2029 and will be ramped up to 500 MW in 2033 and finally to 1000 MW in 2036. Although it is a fossil fuel, natural gas can replace coal and reduce emissions considerably. The 500 MW wind plant, the repurposed 200 MW solar power plant, 300 MW solar plant, microgrids expansion and 4.1 MW biogas power plant are renewable energy projects and will go a long way to reduce emissions.

The demand for cooling (both refrigeration and air-conditioning) is expected to increase as temperatures soar due to global warming. Coming up with minimum energy performance standards for refrigerators and air-conditioners will save electricity and reduce emissions at the coal power plants and transmission and distribution networks.

Figure 8 Mitigation potential of 12 selected measures in the Energy sector



The mitigation potential for lighting MEPS will increase from 50 GgCO<sub>2</sub>eq in 2026 and peak in 2030 at 58 GgCO<sub>2</sub>eq before gradually decreasing to 50 GgCO<sub>2</sub>eq in 2035. In 2013 Zimbabwe replaced incandescent lamps with energy savers in the residential sector, free of charge, and saved up to 42 MW.

Biodegradable waste is a nuisance in most urban centres. Its conversion to biogas for use in generating electricity will result in reduced methane emissions in the waste sector, and emissions (especially carbon dioxide) at the power stations as part of the grid electricity will be replaced by that from the biogas power plants. About 9.3 GgCO<sub>2</sub>eq will be avoided each year till 2035. The historical grid emission factor increased from 0.55 kgCO<sub>2</sub>eq/ kWh in 2021 to 0.86 kgCO<sub>2</sub>eq in 2023. It is expected to plateau at 0.92 kgCO<sub>2</sub>eq / kWh during the period 2026-2030 and decrease to 0.87 in 2035.

Zimbabwe, with the Technical Assistance from the CTCN, carried out energy and water audits

in ten companies in 2017. The audits provided baselines of potential energy, cost and GHG emissions reductions in the industry sector which is one of the biggest consumers of energy. Industry (mining and manufacturing) consumes 50% of the electricity sold. The National Energy Efficiency Policy and the Energy Management Regulations that are expected to be launched and gazzeted in 2025 will promote energy efficiency improvement in the industry sector. The industrial energy efficiency improvement project is expected to start in 2027 and around 2,800 TJ of energy is expected to be saved annually in the sector. These energy-savings will result in reduction of emissions of around 50 GgCO<sub>2</sub>eq in 2027 and 443 GgCO<sub>2</sub>eq in 2035. The energy intensity of GDP was 8 MJ/ GDP in 2017, 3.7 MJ/GDP in 2023 and is projected to decrease gradually to 2.5 MJ/GDP in 2035, under the BAU scenario. With energy efficiency the 2035 intensity will be 2.3 MJ/GDP which is 8% below the BAU.

Table 6 Analysis of mitigation measures in the Energy sector

| ENERGY SECTOR MITIGATION MEASURE                 | ANNUAL AMOUNT AND PROPORTION OF GHG REMOVED FROM TOTAL SECTOR EMISSIONS BY SELECTED YEAR (GG CO2EQ.) |      |        |      |        |      |          |      |          |      |          |      |          |      |                 |    |   |    | LEAD AGENT |
|--|--|------|--------|------|--------|------|----------|------|----------|------|----------|------|----------|------|-----------------|----|---|----|------------|
|  | 2023   |      | 2024   |      | 2025   |      | 2026     |      | 2028     |      | 2030     |      | 2035     |      | %               | GG | % | GG |            |
|  | GG   | %    | GG     | %    | GG     | %    | GG       | %    | GG       | %    | GG       | %    | GG       | %    |                 |    |   |    |            |
| Transmission and distribution loss reduction     | 429.59   | 3.5  | 454.04 | 2.9  | 570.92 | 2.9  | 706.36   | 2.8  | 803.26   | 3.4  | 812.15   | 3.5  | 853.58   | 3.8  | ZETDC           |    |   |    |            |
| Expansion of grid-connected solar (300 MW added) | 6.55   | 0.05 | 6.55   | 0.04 | 72.78  | 0.4  | 109.16   | 0.4  | 181.94   | 0.8  | 254.72   | 1.1  | 436.66   | 1.9  | ZPC             |    |   |    |            |
| Biogas energy production (4.1 MW biogas plant)   | PS   | NA   | PS     | NA   | 9.31   | 0.05 | 9.31     | 0.04 | 9.31     | 0.04 | 9.31     | 0.04 | 9.31     | 0.04 | Local Authority |    |   |    |            |
| MEPS in domestic refrigeration (save 188 GWh)    | PS   | NA   | PS     | NA   | PS     | NA   | 78.54    | 0.3  | 101.12   | 0.4  | 123.71   | 0.5  | 163.87   | 0.7  | MoEPD&ZERA      |    |   |    |            |
| MEPS in distribution transformers (save 498 GWh) | PS   | NA   | PS     | NA   | PS     | NA   | 147.21   | 0.6  | 209.82   | 0.9  | 276.83   | 1.2  | 434.61   | 1.9  | MoEPD&ZETDC     |    |   |    |            |
| MEPS in room air conditioners (save 279 GWh)     | PS   | NA   | PS     | NA   | PS     | NA   | 101.00   | 0.4  | 137.18   | 0.6  | 172.28   | 0.7  | 243.08   | 1.1  | MoEPD&ZERA      |    |   |    |            |
| MEPS in lighting (save 57 GWh)                   | PS   | NA   | PS     | NA   | PS     | NA   | 50.00    | 0.2  | 55.43    | 0.2  | 58.08    | 0.3  | 49.66    | 0.2  | MoEPD&ZERA      |    |   |    |            |
| Wind power plant (add 500 MW)                    | PS   | NA   | PS     | NA   | PS     | NA   | PS       | NA   | 1,559.50 | 6.5  | 1,559.50 | 6.8  | 1,559.50 | 6.9  | MoEPD           |    |   |    |            |
| Expansion of microgrids (2 MW, solar)            | PS   | NA   | PS     | NA   | PS     | NA   | PS       | NA   | 3.27     | 0.01 | 3.27     | 0.01 | 3.27     | 0.01 | REF             |    |   |    |            |
| Repurposed Small Thermal (200 MW, solar)         | PS   | NA   | PS     | NA   | PS     | NA   | PS       | NA   | 291.11   | 1.2  | 291.11   | 1.3  | 291.11   | 1.3  | ZPC             |    |   |    |            |
| CCGT power plant (1000 MW)                       | PS   | NA   | PS     | NA   | PS     | NA   | PS       | NA   | PS       | NA   | 393.15   | 1.7  | 1,228.59 | 5.4  | ZETDC           |    |   |    |            |
| Industrial energy efficiency improvement         | PS   | NA   | PS     | NA   | PS     | NA   | PS       | NA   | 98.34    | 0.41 | 196.68   | 0.85 | 442.52   | 1.95 | ZERA            |    |   |    |            |
| Total  | 436.14   | 3.5  | 460.59 | 2.9  | 653.01 | 3.4  | 1,201.58 | 4.8  | 3,450.28 | 14.4 | 4,150.77 | 18.0 | 5,715.76 | 25.2 |                 |    |   |    |            |

PS= Planning stage; NA = Not applicable; MEPS = Minimum Energy Performance Standard; CCGT = Combined Cycle Gas Turbine

### 3.5.2 Industrial Processes and Product Use (IPPU) Sector

Historical data shows that cement production has been the biggest source of greenhouse gas emissions in the IPPU sector. Operations at the iron and steel mine (Manhize) started in July 2024, and production will be ramped up from 600,000 t in 2024 to 5,000,000 t in 2027. The mitigation projects of the NDC2.0 were maintained in this NDC 3.0, with the HFC phasedown being 20% by 2035.

The phasedown of HFCs is crucial to protect the environment by replacing high global warming potential (GWP) refrigerants with low GWP refrigerants which are energy efficient under the Kigali Amendment of the Montreal Protocol. The Kigali Amendment has a target to cut down HFCs usage by more than more than 80% by 2050. In addition to capacity building conducted as part of the Cooling MEPS implementation, NOU conducted a workshop to refrigeration and air-conditioning (RAC) lecturers and RAC experts aimed at incorporating energy efficient issues in the training of RAC technicians at

tertiary institutions and to include energy efficient issues and implementation of MEPS in the Code of Conduct for the RAC sector. Currently NOU is developing outreach materials targeted at consumers and plans to conduct information session through exhibitions such as the Zimbabwe International Trade fair, Ozone Day, and the provincial and district level agricultural shows. NOU is promoting use of R600a refrigerant which has low GWP and zero ozone depletion potential (ODP). Further, an awareness raising workshop was organised in January 2025 for customes officers, clearing agents, importers, wholesalers and distributors of refrigeration and air-conditioning appliances to influence importation, use and purchasing behaviour of consumers towards purchasing highly energy efficient appliances. NOU plans to conduct more capapcity building sessions and to establish test centres at ports of entry and some laboratories such as at Standard Assoiation of Zimbabwe labs to test RAC appliances entering the countries as well as those manufactured locally to determine whether they conform with the Cooling MEPS.

Figure 9 Mitigation potential of 4 selected measures in the IPPU sector

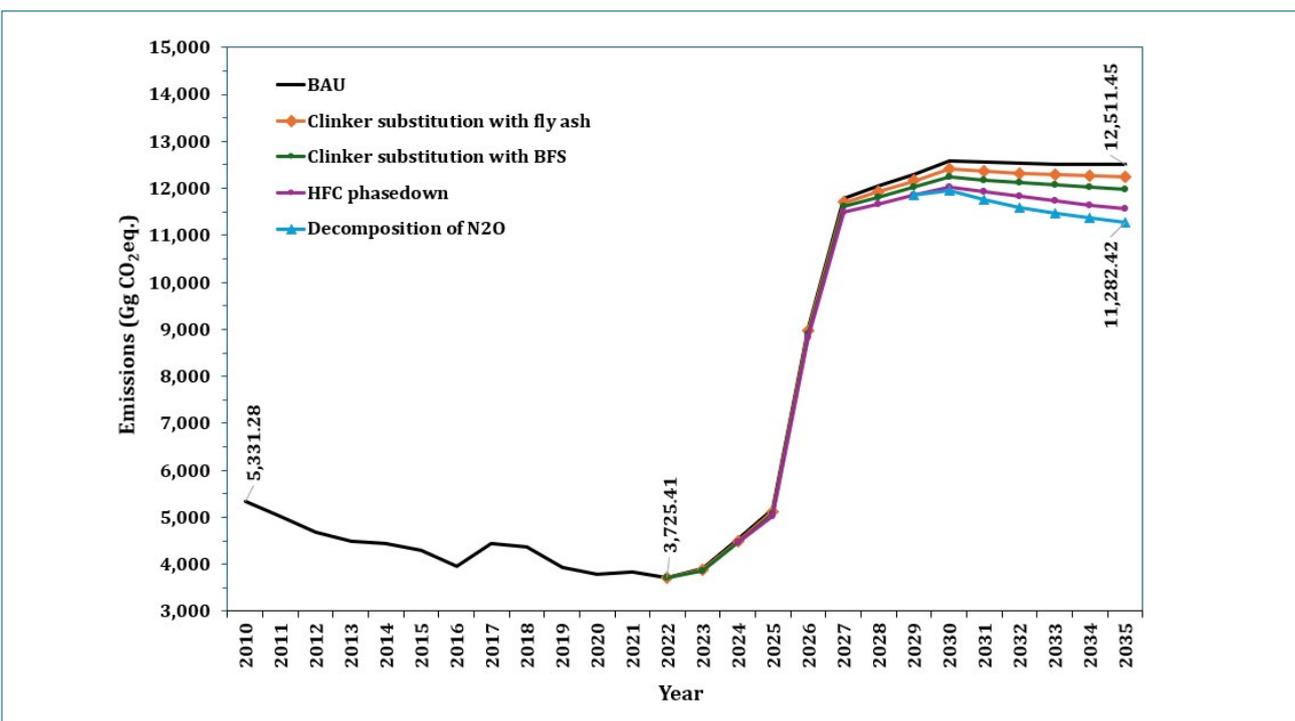


Table 7 Analysis of mitigation measures in the IPPU sector

| ENERGY SECTOR MITIGATION MEASURE  | ANNUAL AMOUNT AND PROPORTION OF GHG REMOVED FROM SECTOR EMISSIONS BY YEAR (GG CO2EQ.) |             |              |             |               |             |               |             |               |             |               |             |                 |             | LEAD AGENT      |
|-----------------------------------|---|-------------|--------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|-----------------|-------------|-----------------|
|                                   | 2023  |             | 2024         |             | 2025          |             | 2026          |             | 2028          |             | 2030          |             | 2035            |             |                 |
|                                   | GG  | %           | GG           | %           | GG            | %           | GG            | %           | GG            | %           | GG            | %           | GG              | %           |                 |
| Clinker substitution with fly ash | 22.46   | 0.57        | 36.39        | 0.80        | 52.40         | 1.01        | 70.75         | 1.37        | 115.52        | 2.23        | 171.11        | 1.36        | 267.13          | 2.14        | MIC             |
| Clinker substitution with BFS     | 22.46   | 0.57        | 36.39        | 0.80        | 52.40         | 1.01        | 70.75         | 1.37        | 115.52        | 2.23        | 171.11        | 1.36        | 267.13          | 2.14        | MIC             |
| HFC phasedown                     | 0.00  | 0.00        | 0.00         | 0.00        | 0.00          | 0.00        | 0.00          | 0.00        | 0.00          | 0.00        | 84.50         | 0.67        | 277.01          | 2.21        | MECW            |
| Decomposition of N2O              | 0.00  | 0.00        | 0.00         | 0.00        | 34.82         | 0.67        | 69.06         | 1.34        | 135.84        | 2.63        | 200.41        | 1.59        | 417.77          | 3.34        | Sable Chemicals |
| <b>Total</b>                      | <b>44.93</b>  | <b>1.15</b> | <b>72.78</b> | <b>1.60</b> | <b>139.63</b> | <b>2.70</b> | <b>210.55</b> | <b>4.07</b> | <b>366.89</b> | <b>7.10</b> | <b>627.13</b> | <b>4.99</b> | <b>1,229.03</b> | <b>9.82</b> |                 |

### 3.5.3 Agriculture Sector

The plight for transforming Zimbabwe's agro-based economy into an upper-middle income economy by 2030 through intensification and commercialization offer great opportunities for productivity improvement and GHG mitigation in key sources of agricultural GHG emissions, particularly livestock. This will be achieved by targeting productivity improvements in smallholder, agropastoral farmers who keep 90% of the national herd under low resource input and productivity levels. Currently cattle deaths are high with mortality rate of 15% largely due to diseases (83%) of which up to three-quarters of the mortalities by cattle diseases are caused ticks and tick-related diseases. In the country's current Livestock Growth Plan (2021-2025), the government is spearheading the implementation of various livestock development programmes on forage production and conservation animal health and genetic improvement which have direct impacts on productivity improvement and GHG emission mitigation.

Government seeks to continue promoting livestock health improvement programmes mainly through dipping and vaccination to enhance livestock production efficiency. The government will implement an integrated ticks and tick-borne disease control strategy which involves intensive dipping in 1 million households and vaccinations using tick-borne disease vaccines to reduce mortalities to below 6%. The government will vaccinate approximately 650 000 cattle twice annually with a foot-and-mouth disease vaccine. The government also aims to produce 2 000 tonnes of hay bales annually in high rainfall areas for distribution to the drier parts of the country, as supplementary feed to address cattle deaths from drought. The targeted forage conservation and supplementation interventions will improve feed availability and quality and production efficiency, and concomitantly reduce enteric methane emission per kilogram of feed consumed, meat or milk produced by cattle

Figure 10 Mitigation potential of 2 selected measures in the agriculture sector

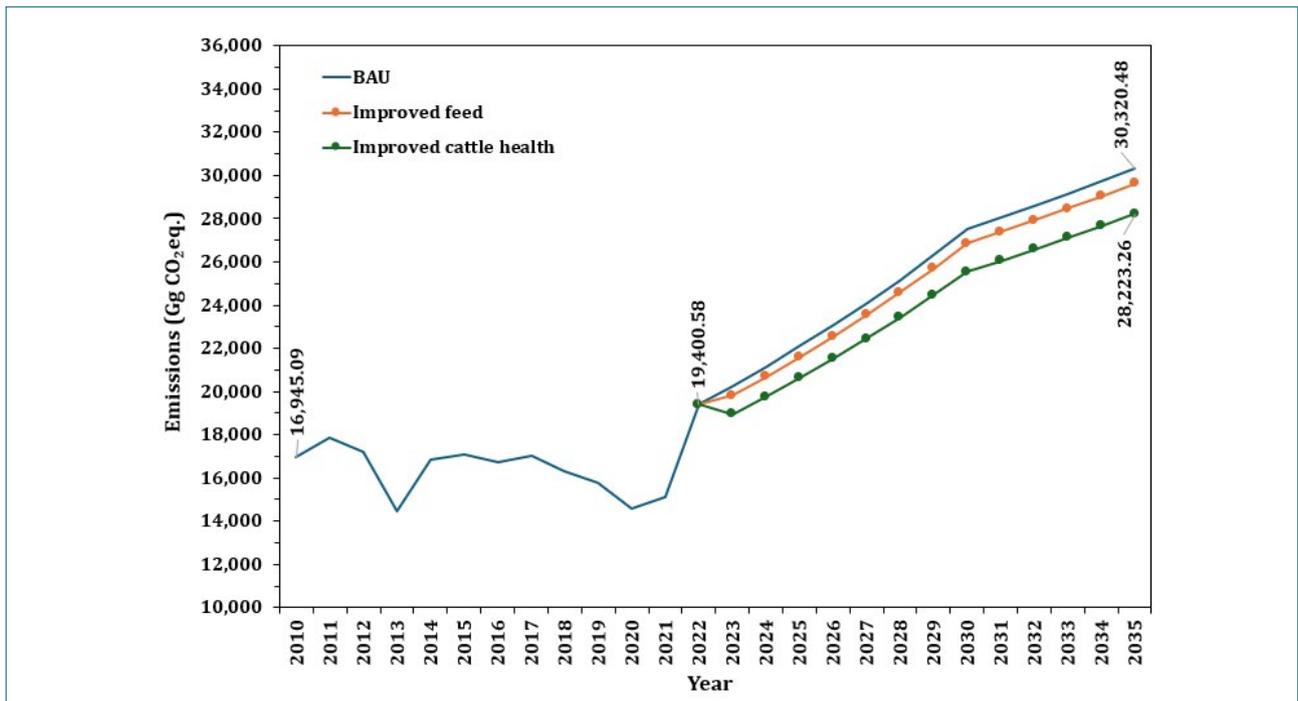


Table 8 Analysis of mitigation measures in the Agriculture Sector

| YEAR       | AMOUNT (AND PERCENTAGE) OF GHG AVOIDED FROM TOTAL AGRICULTURE EMISSIONS BY MITIGATION MEASURE (GG CO2EQ.) |                        |                 |
|------------|---|------------------------|-----------------|
|            | IMPROVED FEED   | IMPROVED CATTLE HEALTH | TOTAL           |
| 2023       | 429.78 (2.12)   | 859.56 (4.25)          | 1,289.33 (6.37) |
| 2024       | 456.64 (2.16)   | 913.28 (4.32)          | 1,369.92 (6.48) |
| 2025       | 485.18 (2.20)   | 970.36 (4.40)          | 1,455.54 (6.60) |
| 2026       | 515.50 (2.24)   | 1,031.01 (4.47)        | 1,643.17 (6.82) |
| 2028       | 581.95 (2.31)   | 1,163.91 (4.63)        | 1,854.98 (7.05) |
| 2030       | 656.97 (2.39)   | 1,313.94 (4.78)        | 1,970.92 (7.16) |
| 2035       | 699.07 (2.31)   | 1,398.15 (4.61)        | 2,097.22 (7.16) |
| Lead agent | MLAFWRD   | MLAFWRD                |                 |

### 3.6.4 Land Use, Land Use Change and Forestry (LULUCF) Sector

The country is dedicated to protecting its forests, recognizing their crucial role in climate change mitigation and adaptation. Forests are integral to the country's vision of achieving a middle-class economy by 2030, with concrete measures to ensure sustainable forest management practices are incorporated into development plans. Zimbabwe will prioritise sustainable forest management and utilisation, ensuring protected areas are maintained and biodiversity is preserved.

Forests hold significant potential for emissions reduction through development of carbon projects. The country developed its first Forest Reference Emission Level with an intention to participate in results-based payment schemes. Plans are in place to develop a jurisdictional REDD+ programme which will aid in emission reductions.

The Climate Plan aims to reduce deforestation by curbing illegal practices and compensating for legal vegetation suppression, involving strengthened measures and economic incentives. Forest restoration will be crucial for greenhouse gas removal from the atmosphere.

The government aims to enhance forest monitoring systems and increase public awareness about forest conservation. Collaborative efforts between local communities, NGOs, and international partners will be crucial in implementing sustainable forestry practices. Zimbabwe plans to invest in research to explore innovative approaches to forest management and climate change mitigation.

Deforestation and veld fires are primary drivers of emissions; thus, reducing forest loss and degradation is crucial. Agricultural expansion, settlement growth, illegal mining, veld fires and tobacco curing contribute to forest loss. To address deforestation in tobacco growing, the tobacco industry yearly plants fast growing exotic trees for tobacco curing, thereby preserving indigenous species.

The most impactful policies for land restoration include the national forest policy and the tobacco wood energy policy, which mandates farmers to plant 0.3 hectares of fast-growing trees per hectare of tobacco.

To combat veld fires, national annual initiatives such as hay baling, awareness campaigns, and law enforcement shall continue to be promoted to reduce area burned. To enhance these efforts, the government plans to implement a comprehensive monitoring system to track forest cover changes and fire occurrences in real-time. This system will

utilize satellite imagery and ground-based sensors to provide accurate and timely data for decision-making. Additionally, community-based forest management programs will be expanded, empowering local populations to actively participate in conservation efforts and sustainable resource utilization.

Figure 11 Mitigation potential of seven selected measures in the LULUCF sector

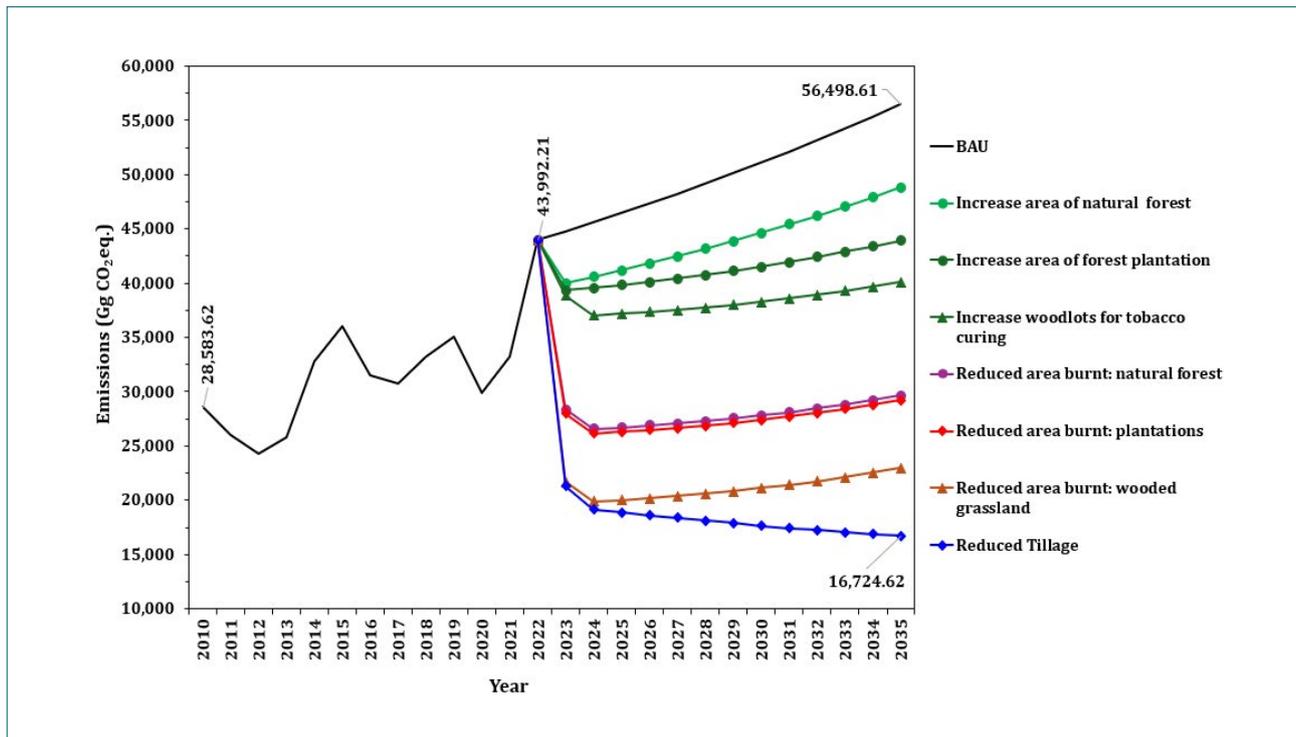


Table 9 Analysis of mitigation measures in the LULUCF sector

| LULUCF SECTOR<br>MITIGATION<br>MEASURE      | AMOUNT (AND PERCENTAGE) OF GHG REMOVAL FROM TOTAL LULUCF EMISSIONS BY MITIGATION MEASURE (GG CO2EQ.) |       |           |       |           |       |           |       |           |       |           |       | LEAD AGENT |       |  |
|---|--|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|------------|-------|--|
|   | 2023   |       | 2024      |       | 2025      |       | 2026      |       | 2028      |       | 2030      |       |            | 2035  |  |
|   | GG   | %     | GG        | %     | GG        | %     | GG        | %     | GG        | %     | GG        | %     |            | GG    | %  |
| Increase area of natural forest             | 4,799.35   | 10.71 | 5,039.32  | 11.05 | 5,279.29  | 11.36 | 5,519.26  | 11.66 | 5,999.20  | 12.20 | 6,479.14  | 12.68 | 7,678.99   | 13.59 | Forestry Commission  |
| Increase area of forest plantation          | 671.91   | 1.50  | 1,022.15  | 2.24  | 1,372.40  | 2.95  | 1,722.64  | 3.64  | 2,423.13  | 4.93  | 3,123.62  | 6.11  | 4,874.85   | 8.63  | Allied Timbers, Border Timbers, Wattle Company                 |
| Increase woodlots for tobacco curing        | 479.94   | 1.07  | 2,519.66  | 5.52  | 2,639.65  | 5.68  | 2,759.63  | 5.83  | 2,999.60  | 6.10  | 3,239.57  | 6.34  | 3,839.50   | 6.80  | Forestry Commission, Sustainable Afforestation Association     |
| Reduced area burnt, natural forest          | 10,462.50  | 23.36 | 10,462.50 | 22.94 | 10,462.50 | 22.52 | 10,462.50 | 22.10 | 10,462.50 | 21.28 | 10,462.50 | 20.47 | 10,462.50  | 18.52 | Environmental Management Agency, Forestry Commission, ZIMParks |
| Reduced area burnt, area burnt, plantations | 418.50   | 0.93  | 418.50    | 0.92  | 418.50    | 0.90  | 418.50    | 0.88  | 418.50    | 0.85  | 418.50    | 0.82  | 418.50     | 0.74  | Allied Timbers, Border Timbers, Wattle Company                 |
| Reduced area burnt, wooded grassland        | 6,277.53   | 14.01 | 6,277.53  | 13.76 | 6,277.53  | 13.51 | 6,277.53  | 13.26 | 6,277.53  | 12.77 | 6,277.53  | 12.28 | 6,277.53   | 11.11 | Environmental Management Agency, Forestry Commission, ZIMParks |
| Reduced Tillage                             | 381.23   | 0.85  | 750.86    | 1.65  | 1,141.49  | 2.46  | 1,557.47  | 3.29  | 2,462.02  | 5.01  | 3,451.75  | 6.75  | 6,222.13   | 11.01 | MLAFWRD  |
| Total                                       | 23,490.96  | 52.44 | 26,490.53 | 58.07 | 27,591.35 | 59.38 | 28,717.54 | 60.66 | 31,042.48 | 63.13 | 33,452.62 | 65.45 | 39,774.00  | 70.40 |  |

The LULUCF sector has seven key mitigation measures that can significantly contribute to emission reduction. These measures were identified through stakeholder consultations, are mostly under implementation, and are largely funded with domestic resources. With external funding, targets can be surpassed and upscaled. Clear institutional roles exist for each mitigation measure. However, there is a need for a sector coordination strategy and a strengthened monitoring and data archiving system. Notably, increasing natural forest and

reducing burnt areas in wooded grasslands have the highest potential to reduce greenhouse gas emissions.

### 3.6.5 Waste Sector

Measures from the waste sector will address CH<sub>4</sub> emissions from solid waste disposal (Figure 12). Solid waste disposal sites are the fourth leading source of CH<sub>4</sub> after enteric fermentation, biomass burning and fuel combustion. The measures will reduce total waste emissions by about 35% (Table 9).

Figure 12 Mitigation potential of 2 selected measures in the Waste sector

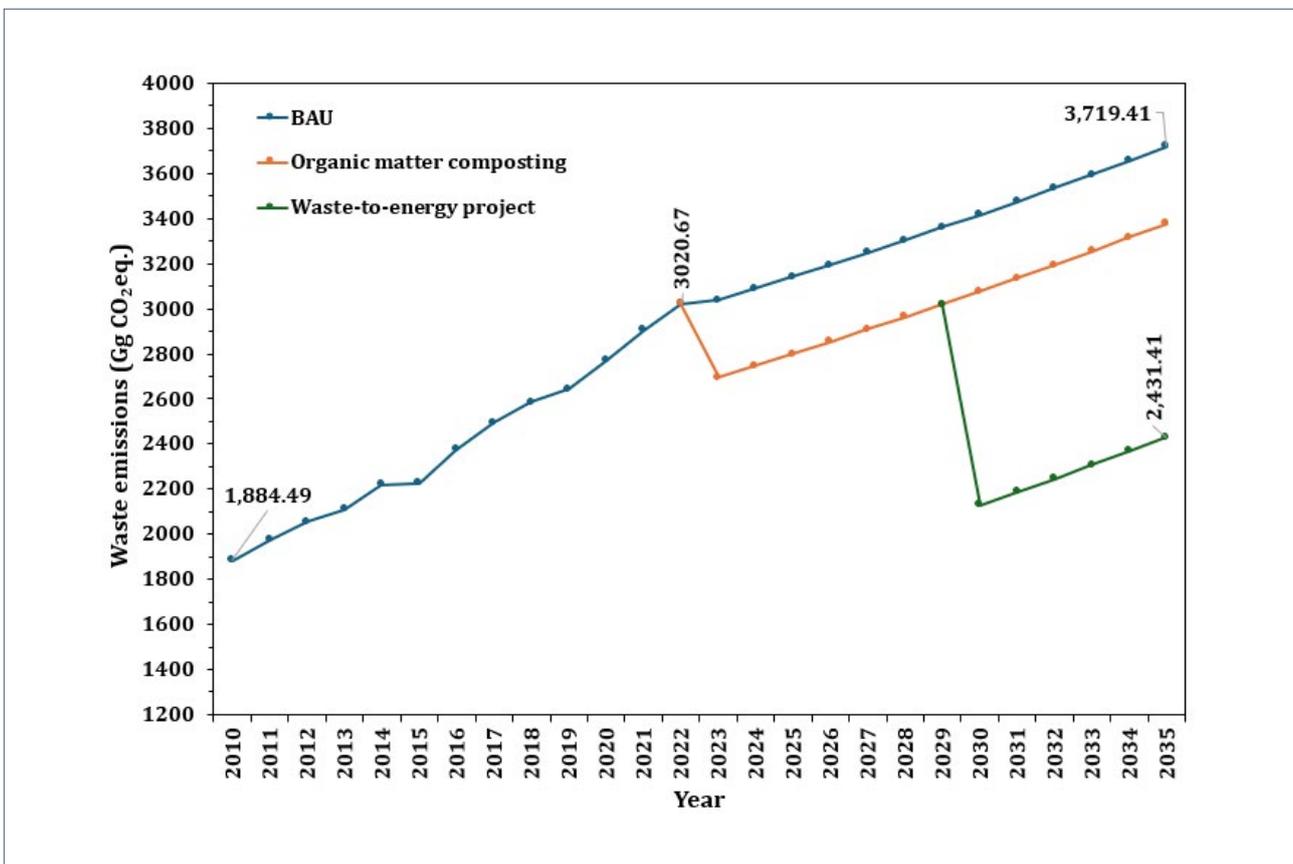


Table 10 Analysis of mitigation measures in the Waste Sector

| YEAR       | AMOUNT (AND PERCENTAGE) OF GHG AVOIDED FROM TOTAL WASTE EMISSIONS BY MITIGATION MEASURE (GG CO2EQ.) |                         |                  |
|------------|---|-------------------------|------------------|
|            | ORGANIC MATTER COMPOSTING   | WASTE-TO-ENERGY PROJECT | TOTAL            |
| 2023       | 341.00 (11.23)  | PS (NA)                 | 341.00 (11.23)   |
| 2024       | 341.00 (11.04)  | PS (NA)                 | 341.00 (11.04)   |
| 2025       | 341.00 (10.86)  | PS (NA)                 | 341.00 (10.86)   |
| 2026       | 341.00 (10.50)  | PS (NA)                 | 341.00 (10.50)   |
| 2028       | 341.00 (10.15)  | PS (NA)                 | 341.00 (10.15)   |
| 2030       | 341.00 (9.98)   | 947.00 (27.71)          | 1,288.00 (37.69) |
| 2035       | 341.00 (9.17)   | 947.00 (25.46)          | 1,288.00 (34.63) |
| Lead agent | EMA   | Local Authority         |                  |

PS= Planning stage; NA = Not applicable;



## PACKAGE OF POLICIES AND STRATEGIES

The Constitution of the Zimbabwe (GoZ, 2013) is the highest level of legal reference in the country and contains various key elements that provides an enabling framework for Zimbabwe's climate action. The constitution of Zimbabwe provides for environmental rights under Section 73 which states that every Zimbabwean has a

right to a clean, safe and healthy environment. Table 11 shows the polices, strategies, actions and plans related to climate change mitigation. Some of the provisions looks at the climate issues holistically and cover multiple sectors while others are specific to either an economic sector or to an environmental compartment.

Table 11 Policies, strategies, actions and plans related to climate change mitigation

| NAME   | DESCRIPTION   | OBJECTIVES   | TYPE OF INSTRUMENT   | STATUS      | IPCC SECTOR | GASES  | START YEAR | IMPLEMENTING ENTITY |
|--|---|--|----------------------|-------------|-------------|--|------------|---------------------|
| National Renewable Energy Policy (2020-2030) | The policy is there to increase access to clean and affordable energy   | <ul style="list-style-type: none"> <li>Establishing an institutional and regulatory framework for promoting uptake of Renewable Energy</li> <li>Improving electrification levels in a sustainable way and establishing a robust financing mechanism for funding capital intensive RE projects</li> </ul> | Regulatory           | Implemented | Energy      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2020       | MoEPD, ZERA         |
| National Energy Efficiency Policy            | Provides for improved energy efficiency in all sectors of the economy   | <ul style="list-style-type: none"> <li>Reduce energy losses in energy supply and demand</li> </ul>   | Regulatory           | Planned     | Energy      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2025       | MoEPD, ZERA         |
| System development plan (ZETDC, 2017)        | Provides for the development and expansion of power generation  | <ul style="list-style-type: none"> <li>Power supply expansion</li> </ul>   | Other, sectoral plan | Implemented | Energy      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2017       | MoEPD, ZERA, ZETDC  |
| Electricity Act (Chapter 13:19)              | Provides for the establishment of the Zimbabwe Electricity Regulatory Commission and for its functions and management | <ul style="list-style-type: none"> <li>Create, promote, and preserve efficient industry and market structures for the provision of electricity services</li> </ul>   | Regulatory           | Implemented | Energy      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2003       | MoEPD, ZERA, ZETDC  |

| NAME   | DESCRIPTION  | OBJECTIVES   | TYPE OF INSTRUMENT | STATUS      | IPCC SECTOR | GASES  | START YEAR                           | IMPLEMENTING ENTITY                                  |
|--|--|--|--------------------|-------------|-------------|--|--------------------------------------|--|
| Rural Electrification Fund Act (Chapter 13:20)                               | Act for rural electrification, collection of the levy to provide for the allocation and disbursement of money from the Rural Electrification Fund. | <ul style="list-style-type: none"> <li>Establish the Rural Electrification Fund and to provide for its objects, management and control</li> <li>Extension of the main grid</li> <li>Establishment of Mini grid in rural areas</li> </ul> | Economic           | Implemented | Energy      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O                       | 2002                                 | MoEPD, REA   |
| Long-term Low GHG Emissions Development Strategy (LEDS) 2020-2050            | Identifies the sources of Zimbabwe's GHG emissions and prioritises options for their mitigation in the long-term                                   | <ul style="list-style-type: none"> <li>Sets the course for reducing emissions, while at the same time ensuring sustainable socio-economic development for the country.</li> </ul>  | Other, strategy    | Implemented | IPPU        |  | 2020                                 | Ministry of Environment, Climate and Wildlife        |
| Environmental Management Regulations, 2023 (Statutory Instrument 49 of 2023) | Act for controlling the importation, exportation, production and consumption of ODPs and appliances using greenhouse gases                         | <ul style="list-style-type: none"> <li>Prohibition and control of ODPs, GHGs and GHG dependent equipment</li> </ul>  | Regulatory         | Implemented | IPPU        | HFCs, mixtures of HFCs controlled by and listed under the Kigali Amendment | 2023                                 | Ministry of Environment, Climate and Wildlife, ZIMRA |
| Agriculture Recovery Plan [2021-25]  | Promotes sustainable agriculture practices<br>Promotes dam construction to support irrigation development projects and creation of green belts     | <ul style="list-style-type: none"> <li>Promotes sustainable agriculture practices</li> <li>Promotes dam construction to support irrigation development projects and creation of green belts</li> </ul>                                   | Regulatory         | Implemented | Agriculture | 2021   | Ministry responsible for Agriculture | Agriculture Recovery Plan [2021-25]                  |

| NAME  | DESCRIPTION   | OBJECTIVES   | TYPE OF INSTRUMENT | STATUS      | IPCC SECTOR | GASES  | START YEAR                           | IMPLEMENTING ENTITY                           |
|---|---|--|--------------------|-------------|-------------|--|--------------------------------------|---|
| Livestock Recovery and Growth Plan [2021-25]                              | The plan addresses climate change impacts that affect livestock production  | <ul style="list-style-type: none"> <li>The plan addresses climate change impacts that affect livestock production</li> </ul>                 | Regulatory         | Implemented | Agriculture | 2021   | Ministry responsible for Agriculture | Livestock Recovery and Growth Plan [2021-25]  |
| The Forest Act [Chapter 19:05] and the Forest Amendment Act No 4 of 2021. | Recognizes the role of forests and trees in climate change and highlights their unique ability to contribute to both climate change adaptation and mitigation.  | <ul style="list-style-type: none"> <li>Sustainable management of forestry resources</li> </ul>   | Regulatory         | Implemented | LULUCF      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2021                                 | Forestry Commission                           |
| National Forest Policy of 2024  | Outlines strategies for sustainable forest management, conservation, and utilization of forest resources in Zimbabwe.   | <ul style="list-style-type: none"> <li>Ensure sustainable Conservation and utilisation of forest resources</li> </ul>                        | Regulatory         | Implemented | LULUCF      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2024                                 | Forestry Commission                           |
| Carbon Trading Framework  | Establishes a framework for trading carbon credits generated from emission reduction projects, potentially providing financial incentives for forest conservation and carbon sequestration initiatives. | <ul style="list-style-type: none"> <li>Provide an enabling environment that supports development of high integrity carbon credits</li> </ul> | Regulatory         | Implemented | All         | CO <sub>2</sub>                                      | 2023                                 | Ministry of Environment, Climate and Wildlife |

| NAME   | DESCRIPTION   | OBJECTIVES   | TYPE OF INSTRUMENT | STATUS      | IPCC SECTOR | GASES  | START YEAR | IMPLEMENTING ENTITY                        |
|--|---|--|--------------------|-------------|-------------|--|------------|--|
| Fruit Trees Planting (Horticulture scheme)                                       | The government is implementing a programme country wide that targets planting of a minimum of 10 fruit trees per household  | <ul style="list-style-type: none"> <li>• Improve household food security</li> <li>• Reduce forest degradation</li> </ul>   | Measure            | Implemented | LULUCF      | CO <sub>2</sub>                                      | 2018       | Ministry responsible for Agriculture       |
| Reforestation/ Afforestation (Tobacco wood energy project) wood Energy Programme | There are various programmes and projects that are being implemented at sub national level with an aim to increase forest area and restored degraded forests. Some of the projects included GEF funded projects | <ul style="list-style-type: none"> <li>• Restoration of degraded areas and increasing forest areas</li> <li>• Provide energy for tobacco curing</li> </ul>   | Measure            | Implemented | LULUCF      | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2018       | Forestry Commission and Other stakeholders |
| Urban Councils Act Chapter 29:15   | Empowers urban councils to establish and enforce by-laws for proper waste management and disposal.  | <ul style="list-style-type: none"> <li>• Councils are responsible for sewage, drainage, and waste treatment systems to prevent pollution</li> <li>• Align with public health standards and minimize pollution, promoting sustainable urban living</li> </ul> | Regulatory         | Implemented | Waste       | CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O | 2005       | Local Authorities                          |



# CROSS-CUTTING ISSUES AND ENABLERS

## 5.1 GENDER, YOUTH, CHILDREN AND INCLUSIVITY

The implementation of the mitigation and adaptation actions outlined in this NDC will take into consideration the differentiated impacts of climate change on children, women, the elderly, youths and other social groups. In addition, implementation will consider the roles that different social groups have to contribute to emission reductions the associated sustainable development benefits. Adaptation and applicable mitigation actions will prioritize marginalized groups, geographical zones and provision of resources to communities with the greatest need and with a view of reducing poverty and enhancing sustainable development.

## 5.2 CAPACITY BUILDING, EDUCATION, TRAINING AND AWARENESS

The cross-cutting nature of the climate actions outlined in this NDC require continuous capacity building of adaptation and mitigation experts as well as training of technicians in the various sectors. The enhanced integration of climate change into the basic and higher levels of education will assist in the raising broad societal awareness, provide for inclusivity and set the base for specialized climate change capacity building and innovation. In addition, the education sector can assist in reducing the gender disparities in climate change information and actions.

## 5.3 FINANCE, INNOVATION, TECHNOLOGY DEVELOPMENT AND TRANSFER

International assistance in relation to climate finance and technology will be pivotal to the successful implementation of this NDC. Zimbabwe requires appropriate technology to implement its adaptation and mitigation actions. Research and innovation are required to ensure that adaptation actions are aligned to the needs of local communities, climatic conditions and social and economic circumstances of the country. Technology development and transfer will be key in accelerating the implementation of low emissions development strategies and actions.







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