



United Republic of Tanzania

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REVIEW OF NDC's IN EAST AFRICA: TO WHAT EXTENT ARE LOCAL LEVEL
CLIMATE AND SUSTAINABLE ENERGY SOLUTIONS CONSIDERED



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PRESENTATION OUTLINES

- Tanzania NDC Development Process
- NDC Key Priority Sectors for Adatation, Ambition/Target and Contributions Considered for Local Level Climate and Sustainable Energy Solutions
- NDC Key Priority Sectors for Mitigation, Ambition and Contributions Considered for Local Level Climate and Sustainable Energy Solutions
- Mehodology for Development of Tanzania NDC
- The Extent at Which Tanzania NDC Considred Local Level Climate and Sustainable Energy Solutions
- Next Steps

Tanzania Nationally Determined Contribution Development Process

□ Rationale for NDC Development

- i. The United Republic of Tanzania is Party to the United Nations Framework Convention (UNFCCC) and the Paris Agreement (PA), which it ratified in 1996 and 2018, respectively.
- i. Tanzania is highly vulnerable to the adverse impacts of climate change and therefore needs to put in place adaptation actions in order to safeguard development gains and achieve its development targets.
- ii. Article 4 (2) of the PA requires each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

Tanzania NDC Development Process

- i. VPO is the focal point for Multilateral Environmental Agreements (MEAs) in Tanzania as per EMA, 2004
- ii. VPO coordinates environmental management issues in Tanzania
- iii. The URT through VPO after submission of INDC to UNFCCC in 2015 the VPO used similar National Technical Team comprising of MDAs, LGAs, development partners e.g. UNDP, academic and research e.g. Ardhi University, University of Dodoma, private sectors e.g. CRDB Bank PLC, CSOs e.g. CANTZ, FORUM CC and both from Tanzania Mainland and Zanzibar to initiate the process of refining the INDC to NDC.
- iv. The process was followed by **series of consultative stakeholders workshops in Tanzania Mainland (Zonal Workshops) and Zanzibar for soliciting more inputs.**
- v. In 2018 Tanzania put in place GHG inventory, MRV System and Maintenance Plan at NCMC-SUA Morogoro. The GHGs inventory report was an input to the preparation of the NDC in terms of setting the mitigation target for GHG emissions by sectors and by gases. It is an online portal for climate information database in Tanzania.
- vi. In 2019 Tanzania produced her first draft NDC.
- vii. In April 2021 Tanzania reviewed and updated her NDC to address other key issues including *aligning NDC with the national climate change response strategy 2021-2026, blue economy, WASH and NFYDPIII 2021/22-2025/26.*
- viii. In May, 2021 the second draft NDC was produced and submitted to Interministerial Technical Committee (IMTC) for approval before submission to UNFCCC Secretariat and in June was approved for submission to UNFCCC Secretariat
- ix. Tanzania NDC will be submitted to the UNFCCC Secretariat on 30th July 2021

Tanzania NDC Development Process...

Principles of Tanzania NDC

The implementation of Tanzania NDC is guided by the principles of the UNFCCC, particularly the *principle of equity and that of common but differentiated responsibilities and respective capabilities*.

NDC Key Priority Sectors for Adaptation and Ambition/Target

1. **Adaptation sectors/themes** agriculture, livestock, forestry, energy, coastal, marine environment and fisheries, water, sanitation and hygiene (WASH), tourism, land use and human settlements development, health, infrastructure, disasters and cross-cutting issues (gender, capacity building, research and systematic observation and technology development and transfer). These are priority sectors and are the most vulnerable to climate change impacts especially droughts, flooding and sea level rise.

2. **Adaptation Ambition/Target**

- *Access to clean and safe water for total population in urban and rural areas will be increased from 86% and 67.7% respectively in 2015 to 100% by 2030.*
- Based on a conservative and a worst-case scenario of 50cm and 1m sea-level rise by 2100, the contribution will verifiably reduce the impacts of sea level rise to the island and coastal communities, infrastructure and ecosystems including mangroves.
- To achieve these targets, the government will consider the impacts of climate change in development planning at all levels and will pursue adaptation measures/contributions as outlined in this NDC as follows:-

NDC Key Priority Sectors for Adaptation, Ambition and Contributions Considred for Local Level Climate and Sustainable Energy Solutions

Energy

a. Promoting climate resilient energy systems.

- Support installation and maintenance of energy infrastructure
- Support adoption of energy efficiency technologies

b. Exploring options for energy diversification

- Support exploitation and use of mixed energy sources
- Support inter-connection with neighbouring countries

c. Promoting climate-smart rural electrification.

- Support development and utilization of decentralized renewable energy (DRE) sources.
- Support development and investment in green power co-generation by key strategic industries.

NDC Key Priority Sectors for Mitigation, Ambition/Target and Contributions

1. Mitigation Sectors

Energy, transport, forest and wildlife (forestry) and waste management. These are priority sectors for mitigation which can contribute to sustainable development

2. Mitigation Ambition/Target

Tanzania will reduce greenhouse gas emissions economy-wide between 30-35% relative to the Business-As-Usual (BAU) scenario by 2030. The emissions reduction is subject to review after the First Biennial Update Report (BUR) and Updated GHG inventory in the country.

NDC Key Priority Sectors for Mitigation Contributions Considered for Local Level Climate and Sustainable Energy Solutions

Energy

- a. Exploring options for improved clean power interconnection with neighbouring countries.
- b. Promoting clean technologies for power generation and diverse renewable sources such as geothermal, wind, hydro, solar and bioenergy
- c. Expanding the use of natural gas for power production, cooking, transportation, and thermal services through improvement of natural gas supply systems throughout the country.
- d. Promoting climate-smart rural electrification, including development of micro and mini-grid renewable generation for improved rural electrification.
- e. Reducing the consumption of charcoal in urban and rural areas by promoting affordable alternative energy sources through a regulation policy for charcoal production and use.

NDC Key Priority Sectors for Mitigation Contributions Considered for Local Level Climate and Sustainable Energy Solutions

Waste Management

- a. Promoting environmentally sound waste management practices that support reuse, reduce and recycle.
- b. Promoting waste to energy technologies

Methodology and Assumptions in the development of Mitigation Scenarios for Tanzania's NDC

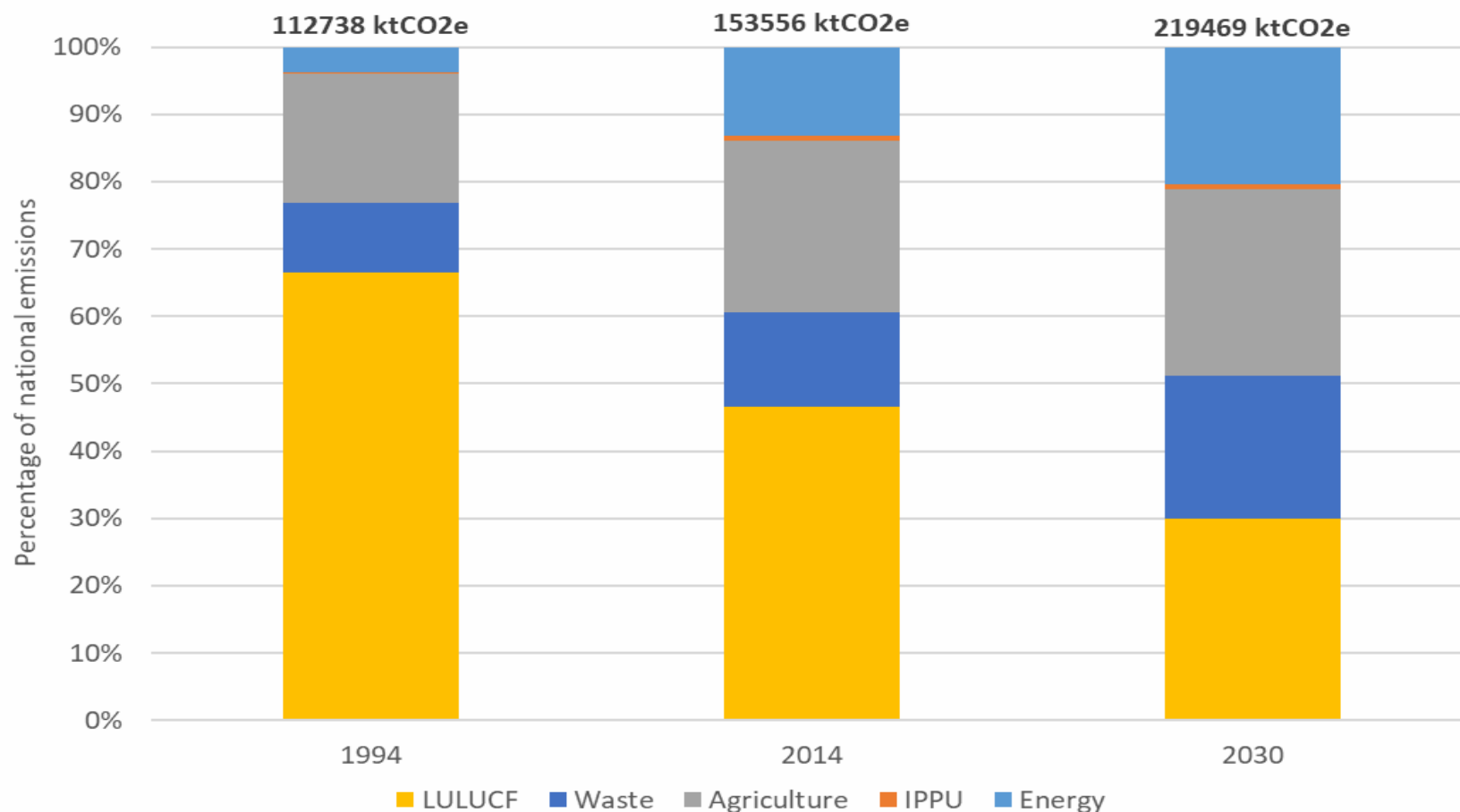
Methodology

- The mitigation target was developed based on the 2018 GHGs Inventory and MRV System Report under a project *"Develop a National Greenhouse Gases (GHGs) Inventory System at Sectoral Level for Sustainable Economic Growth in Tanzania"* supported by UNDP. The inventory considered also the previous years GHGs inventory reports
- i. The inventory was compiled in line with the **2006 IPCC Guidelines issued periodically by UNFCCC** using national data as far as possible supplemented with international data where available.
- ii. The estimates were calculated using the highest **Tier** of methodology possible considering the data available. Table 1 provides a summary of the *Tiers* used for every category in the national inventory.
- **Tier 1 (T1)** indicates that **the simplest methodology was used**;
- **Tier 2 (T2)** indicates that sufficient country-specific information is available to apply a more complex and country-specific methodology; and
- **Tier 3 (T3)** indicates that **highly complex models or facility-level emissions data are available to calculate estimates**

Methodology and Assumptions....

Relative Contribution of Sectors to National GHGs Emissions

Figure 1: Relative contribution of sectors to national GHG emissions, historic (1994, 2014) and projected (BAU, 2030). Note: Transport is included in the energy sector. IPPU is Industrial Processes and Product Use. LULUCF is Land Use, Land Use Change and Forestry. Livestock is included in the Agriculture sector. **Source:** NDC, 2021 in URT, 2018



Methodology and Assumptions....

Summary of national GHG emissions and estimates (1994-2014) by
Sectors and Gases

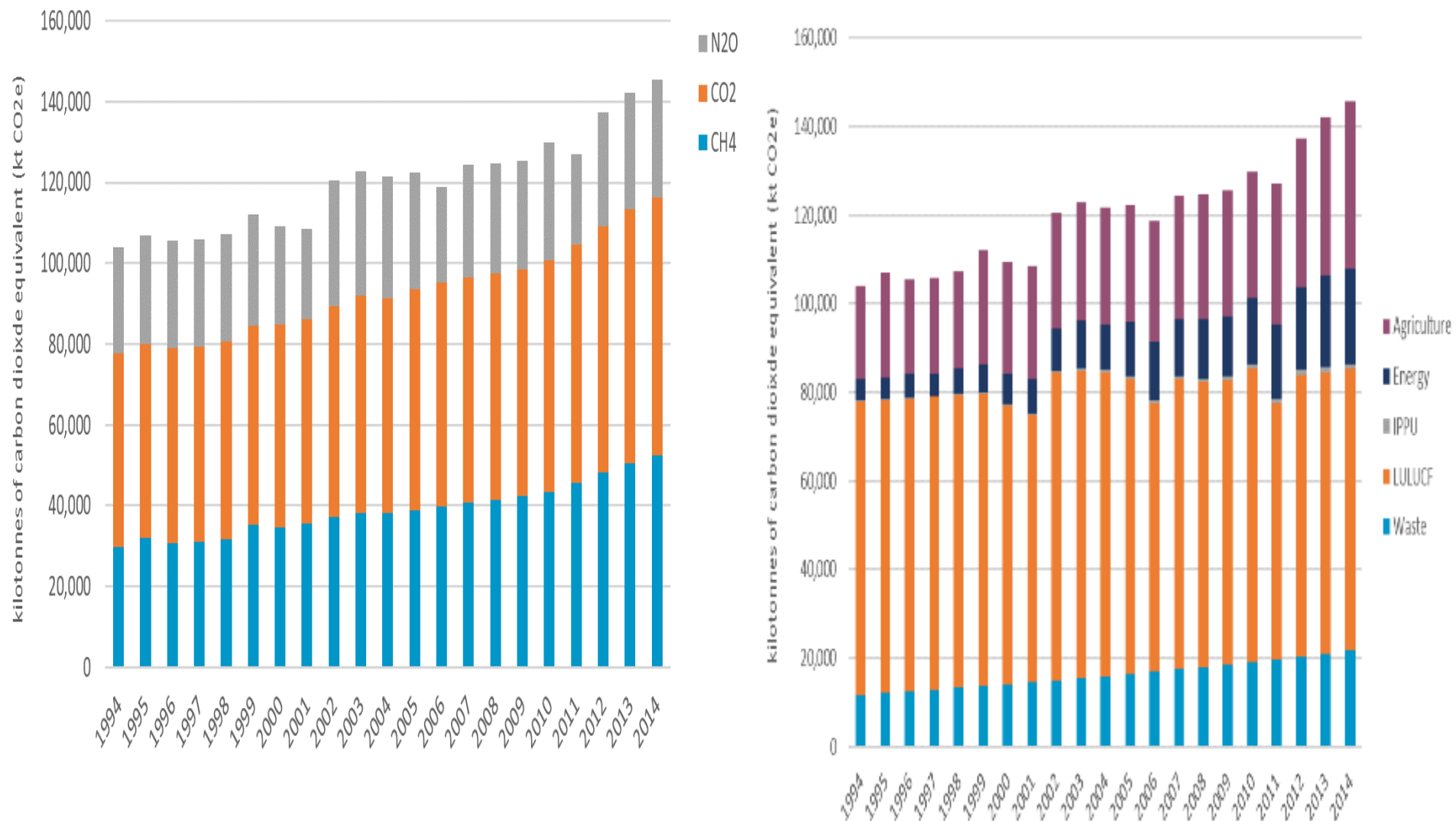
The National Inventory (1994-2014) is shown in Figure 2 and Figure 3

- In Figure 1 the most significant gas is carbon dioxide (CO₂) followed by **methane (CH₄) and then nitrous oxide (N₂O)**. Emissions from fluorinated gases were not estimated due to a lack of data. The overall trend shows a steady rise in emissions across the time series. This trend is primarily from methane emissions and, to a lesser degree, carbon dioxide emissions. Nitrous oxide emissions vary across the time series but do not show a definitive trend.

- In figure 2 the most significant sector is **land use, land use change and forestry (LULUCF) followed by agriculture, waste, energy and then industrial processes and product use (IPPU)**. All sectors show an increasing trend across the time series except for LULUCF, which has been comparatively flat across the time series.

Methodology and Assumptions....

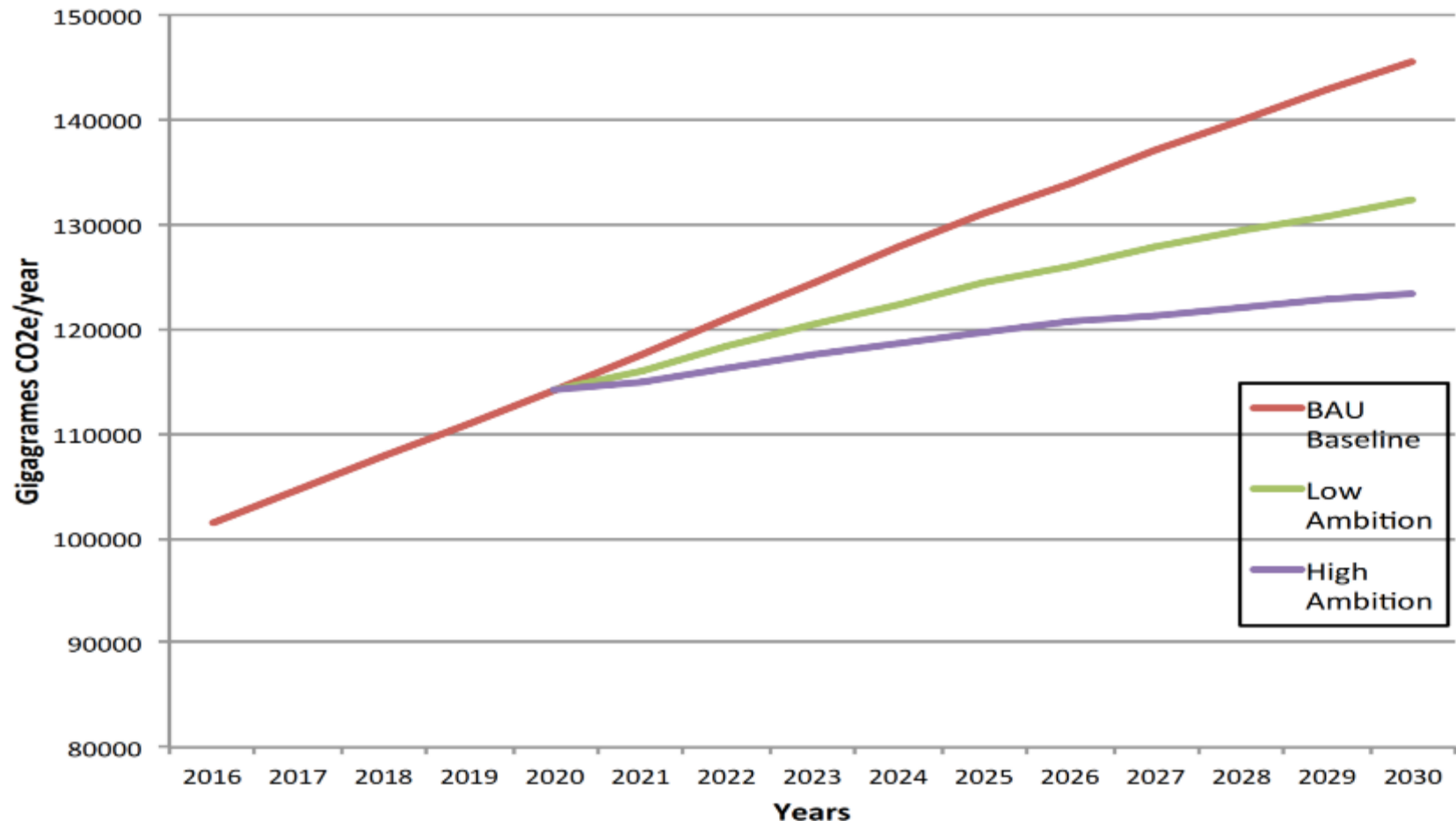
Figure 2&3: Summary of national GHG Emissions (1994-2014) by Sectors and Gases. **Source:** URT, 2018



Methodology and Assumptions

Projected Emission Reductions from BAU, Low and High Ambition

Figure 4: Projected emission reductions from BAU with low and high ambition scenarios by 2030. **Source:** INDC, 2015

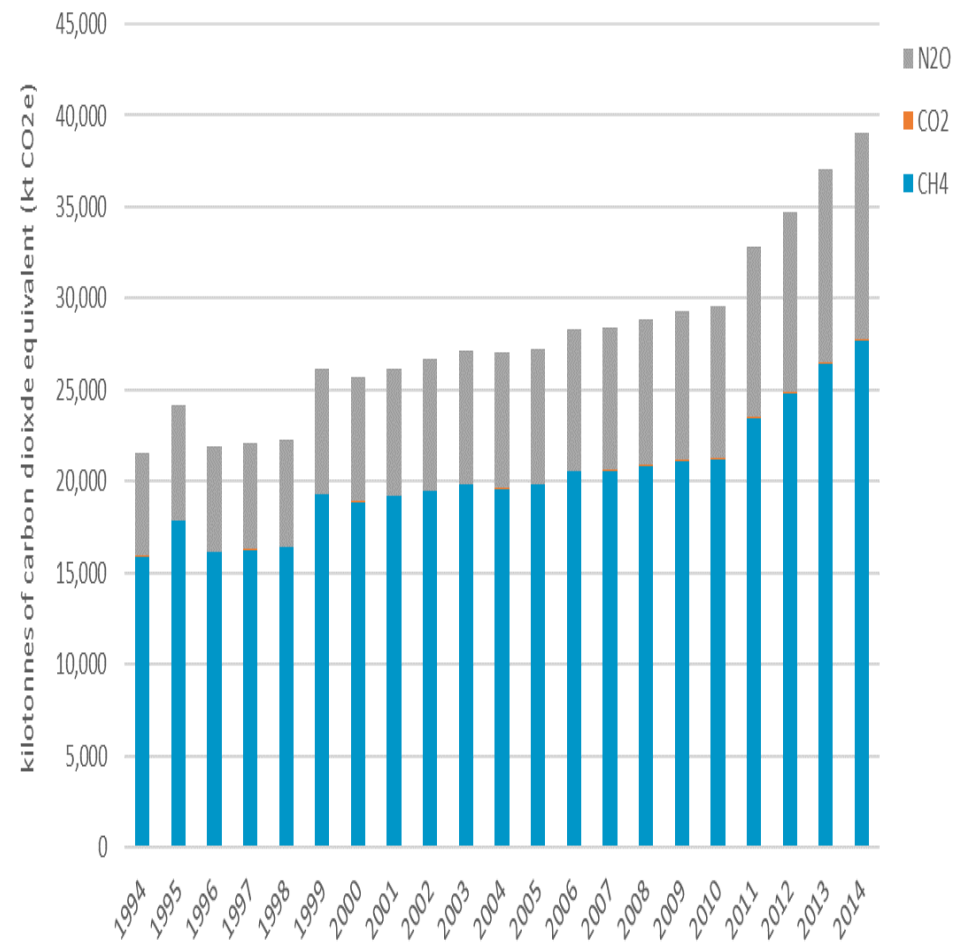


Methodology and Assumptions

Sectoral Emissions: **Agriculture Emission by Gas.**

Figure 5: Agriculture Emission by Gas. Source: URT, 2018

- The most significant gas is methane (CH₄) followed by nitrous oxide (N₂O). The overall trend shows a rise in emissions across the time series, but more significantly in the last four years of the time series. This trend is primarily from methane emissions and, to a lesser degree, nitrous oxide emissions.

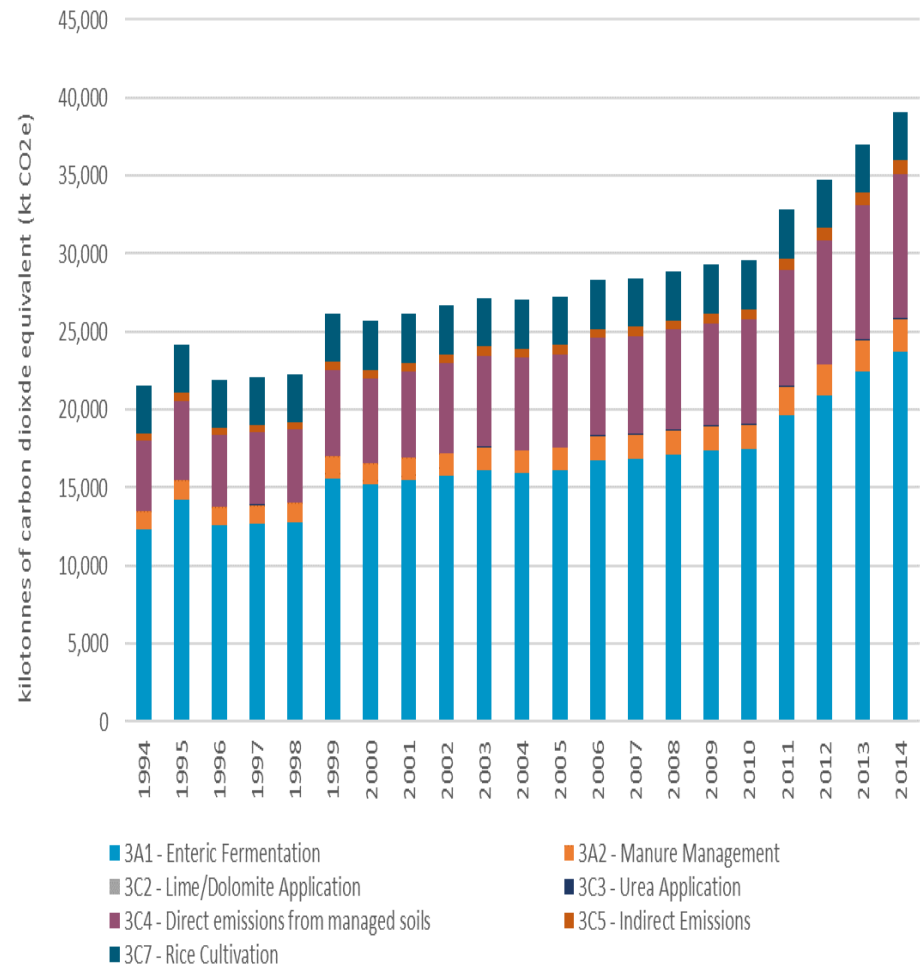


Methodology and Assumptions

Sectoral Emissions: Agriculture Emission by Category.

Figure 6: Agriculture Emission by Category. Source: URT, 2018

- The most significant category is enteric fermentation (IPCC category 3A1) followed by direct emissions from managed soils (IPCC category 3C4). Enteric fermentation showed significant growth in the last four years of the time series. This trend also evident in the other categories.

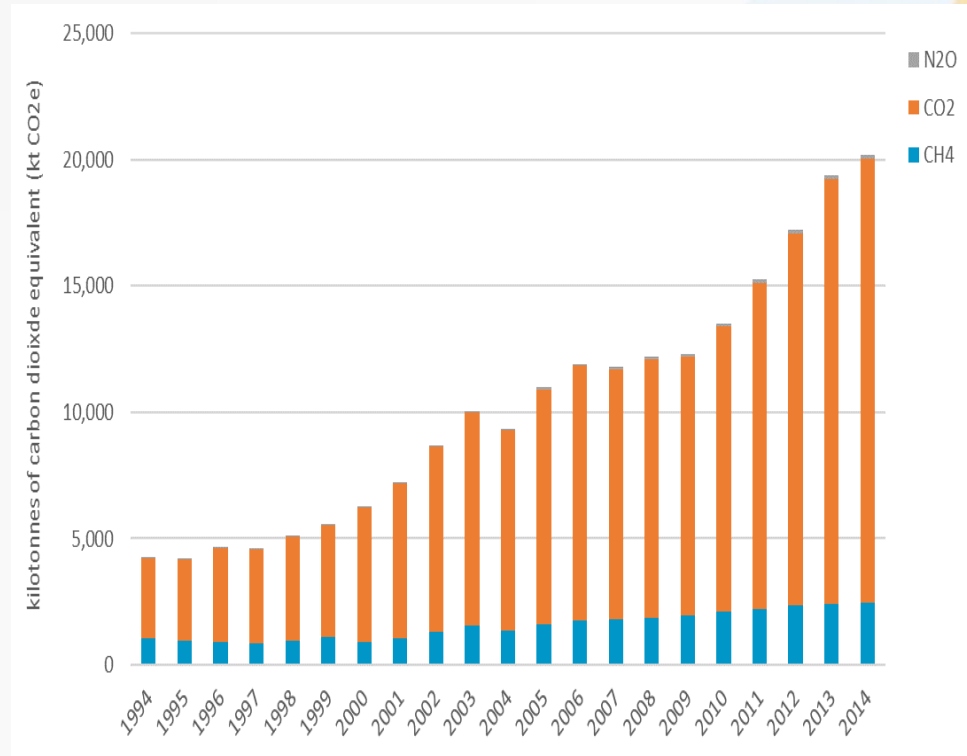


Methodology and Assumptions....

Figure 7: Sectoral Emissions: Energy Sector Emission by Gas.

Source: URT, 2018

- The national inventory for the Energy Sector (1994-2014) is as indicated in Figure 1. The most significant gas is **carbon dioxide (CO₂)**. The overall trend shows a rise in emissions across the time series. This trend is primarily from carbon dioxide emissions and, to a lesser degree, methane emissions.

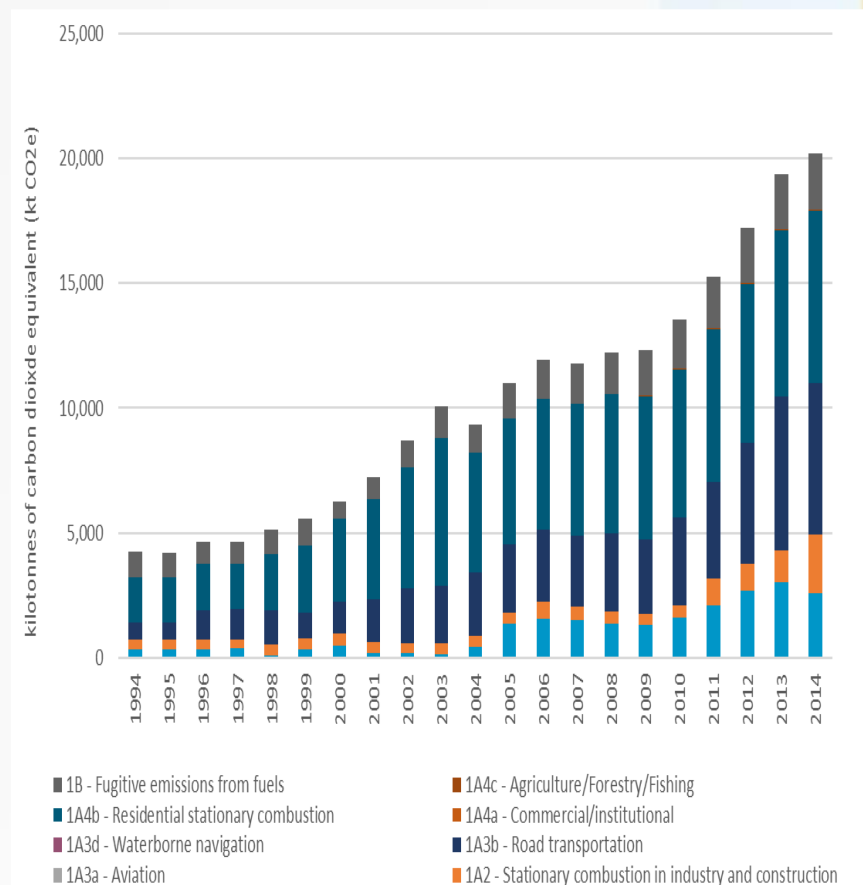


Methodology and Assumptions....

Figure 8: Sectoral Emissions: Energy Sector Emission by Category.

Source: URT, 2018

- The most significant category is **residential combustion** (IPCC category 1A4b) followed by road transportation (IPCC category 1A3b). These two categories have shown significant growth across the time series. This trend is also the case for other categories in the Energy Sector.



LINKAGE WITH OTHER POLICIES, STRATEGIES AND PLANS

Tanzania NDC is inline with national, regional and international policies, strategies and Plans including the following:

National

- National Climate Change Response Strategy 2021-2026
- Third National Five-Year Development Plan 2021/22 - 2025/26
- Chama cha Mapinduzi Manifesto 2015
- Tanzania Development Vision 2025
- National Environmental Policy 1997

Regional

- The East African Community Climate Change Policy 2015
- The SADC Climate Change Strategy and Action Plan 2015
- Agenda 2063 on the New Africa We Want 2015

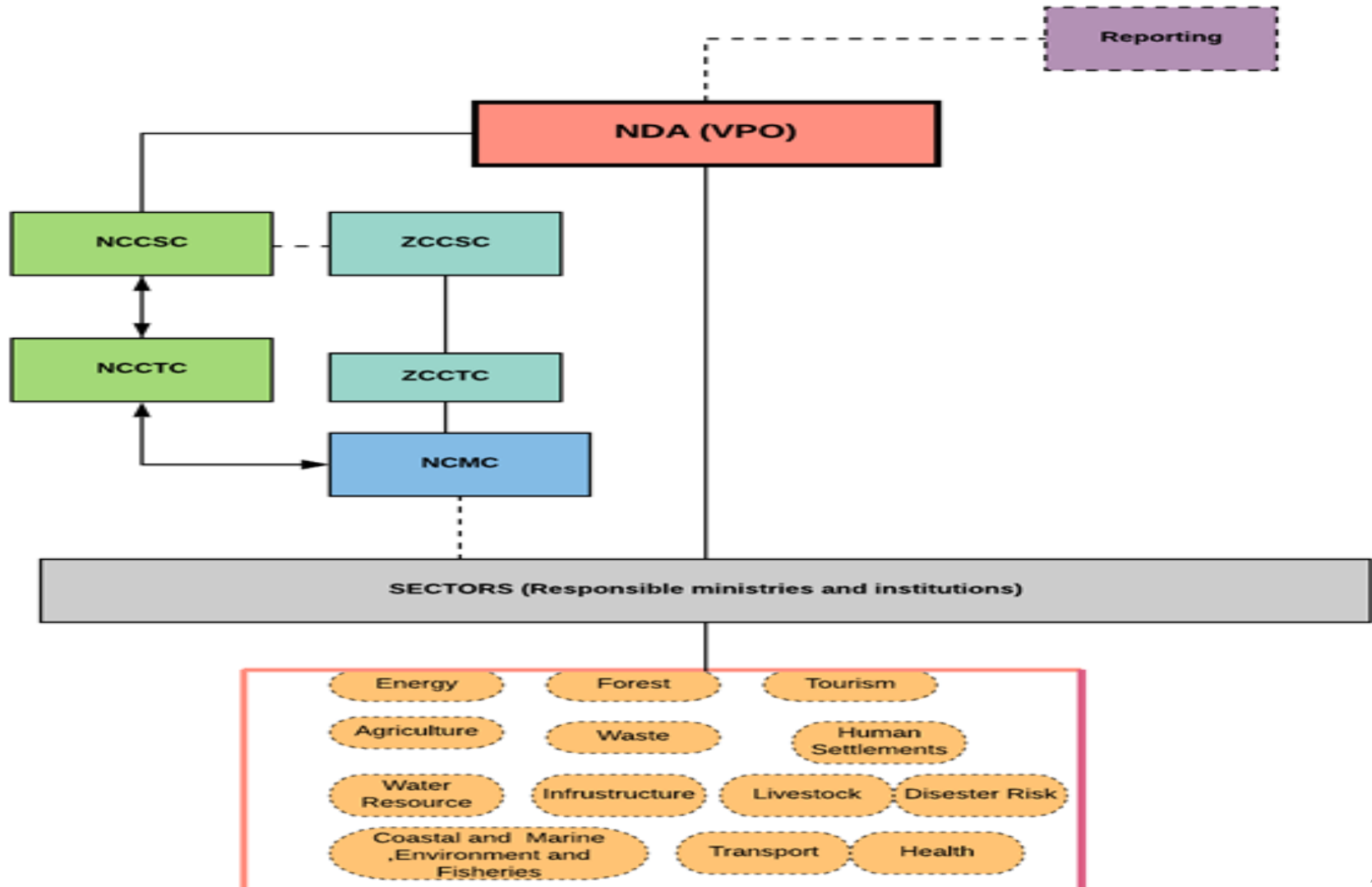
International

- IPCC Report (2018) on Global Warming of 1.5°C
- The Draft New Urban Agenda 2016
- The Sendai Framework on Disaster Risk Reduction 2015 - 2030
- The Paris Agreement 2015
- The UN 2030 Agenda on Sustainable Development Goals 2015
- The UNFCCC 1992

These policies promote resilient, safety, sustainable and equitable climate systems

INSTITUTIONAL ARRANGEMENT FOR NDC IMPLEMENTATION

Figure 7: Implementation Arrangement for the Implementation of Tanzania NDC. **Source:** URT, 2021



M&E OF THE IMPLEMENTATION OF THE NDC

■ **Climate Change Adaptation Actions**

Tracking the progress of implementation of the adaptation actions across sectors regular vulnerability assessment will be conducted to allow assessment of the set adaptation measures in the NDC whether have reduced vulnerability of sectors to climate change impacts. This will be linked with existing national monitoring and evaluation frameworks including the guidelines for monitoring and evaluation framework for climate change adaptation (2012).

■ **Climate Change Mitigation Actions**

To track progress of implementation of mitigation actions the government has put in place a GHG inventory and MRV system at NCMC-SUA that will be updated regularly to allowing assessment of the impact of mitigation actions set in the NDC whether have reduced GHG emissions and contribution to sustainable development

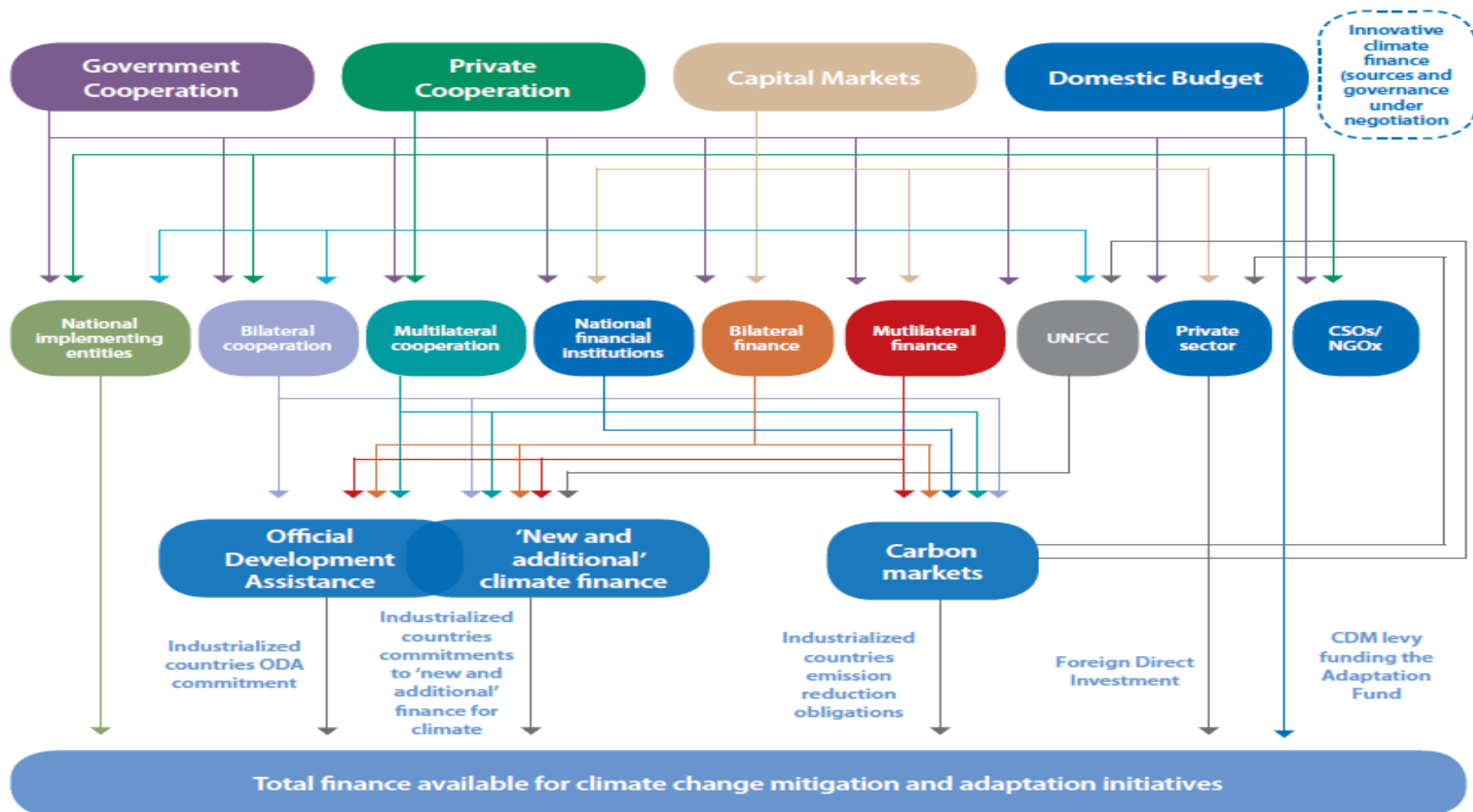
TANZANIA NDC IMPLEMENTATION PROCESS

The implementation Tanzania NDC will be guided by the PA Work Programme adopted at 24th Session of the Conference of the Parties (COP24) focusing on the following actions:-

- i. Contributing to *reductions in climate vulnerability* and enhance long-term resilience to the adverse impacts of climate change;
- i. Contributing to *greenhouse gas emissions reduction* efforts to meet the ultimate objective of the Convention, while achieving sustainable development consistent with the national development agenda and priorities;
- i. Implementing the *NDC in a transparent and participatory manner* in accordance with the provisions of the Paris Agreement; and
- i. Implementing the NDC as Tanzania's *incremental contribution beyond the current efforts and upon availability of adequate and predictable financial and technological support from the international community*.

Tanzania NDC Implementation Process: Climate Financing for NDC Implementation

- i. Multilateral Funds
- ii. Private investors
- iii. Non-governmental, philanthropic, and social investors
- iv. Bilateral funds and programmes as indicated in Figure 3 below



Tanzania NDC Implementation Process: Estimated Financial Resources for Tanzania NDC Implementation

- Tanzania NDC is estimated at a total budget of USD 19,232,170,000 Billion for its implementation for both Mainland and Zanzibar. These funds will be obtained from various funding arrangements including GEF, GCF and Adaptation Funds

□ Tanzania NDC Implementation Process

- i. Development of NDC Implementation Plan
 - In the course of Tanzania NDC development, an implementation plan was developed for implementation of the NDC
- i. Development of a National Roadmap for Implementation of the NDC
- ii. The NDC implementation Plan estimates to cost USD 19,232,170,000 Billion for adaptation and mitigation contributions
- iii. Development of concept notes and proposals for supporting the implementation of the NDC in collaboration with development partners, private sectors and CSOs
- iv. Development of NDC's M&E Framework for Tracking the Implementation Across Sectors

The Extent at Which Tanzania NDC Considered Local Level Climate and Sustainable Energy Solutions

- Key Stakeholders for Local Level Climate and Sustainable Energy Solutions from government ministries (MDAs&LGAs), Development Partners, Private Sectors and Civil Society Organisations were involved in the NDC development process. This ensured local level climate and sustainable energy solutions mainstreamed in the NDC
- Key NDC Priority Sectors for Adaptation and Mitigation Contributions Considered for Local Level Climate Sustainable Energy Solutions were
- Key Priority Sectors for Adaptation for Local Level Climate Sustainable Energy Solutions considered were energy, forestry and water
- Key NDC Priority Sectors for Mitigation Considered for Local Level Climate and Sustainable Energy Solutions is energy and waste management

NEXT STEPS

- i. Submission of NDC to the UNFCCC Secretariat by 30th July 2021
- ii. Development of a National Roadmap for Implementation of the NDC
- iii. Climate Financing for Implementation of NDC
- iv. Develop NDC's M&E Framework for Tracking the Implementation Across Sectors
- v. Development of concept notes and proposals for supporting the implementation of the NDC in collaboration with development partners, private sectors and CSOs
- vi. Awareness raising on the NDC and NDC Implementation Plan to the relevant MDAs, LGAs and CSOs
- vii. Develop NDC's sectoral policy briefs to guide and inform MDAs, LGAs and other stakeholders
- viii. Undertake NDC gender analysis to identify gaps and develop measures to advance gender equality and women empowerment in the NDC's implementation
- ix. Training to relevant stakeholders on data collection, analysis and reporting for systematic tracking of NDC implementation progress

NEXT STEPS.....

- x. Develop and facilitate operationalization of the Tanzania's NDC Finance Portal
- xi. Develop NDC's Resource Mobilization Framework to facilitate accessibility to key financial resources from various channels
- xii. Develop detailed sectoral budgets and investment options to fast-track implementation of the NDC Implementation Plan
- xiii. Undertake NDC gender analysis to identify gaps and develop measures to advance gender equality and women empowerment in the NDC's implementation
- xiv. Align NAP process with the NDC to ensure complementarity and maximization of resources and impacts
- xv. Conduct training on the SDG Climate Action Nexus tool (SCAN-tool) to assess alignment of NDC in the national development visions and plans

