



East Africa Civil Society for Sustainable
Energy and Climate Action (EASE-CA)

TANZANIA NATIONAL BASELINE STUDY

September 2019



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INFORSE-East AFRICA
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Abbreviations

BAU	Business-As-Usual
BEST	Biomass Energy Strategy
CCFAT	Clean Cook stoves and Fuels Alliance of Tanzania
CO ₂	Carbon Dioxide
DNA	Designated National Authority
DoE	Division of Environment
EASE & CA	East African Civil Society for Sustainable Energy & Climate Action Project
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG(s)	Greenhouse Gas (es)
GIZ	German Federal Enterprise for International Cooperation
ICS	Improved Cook Stove
IIED	International Institute of Environment and Development
INDC	Intended Nationally Determined contribution
INFORSE	International Network for Sustainable Energy
IPCC	Intergovernmental Panel on Climate Change
JEEP	Joint Energy and Environment Projects
LCDS	Low Carbon Development Strategies
LDCF	Least Developed Countries Fund
LECB	Low Emission Capacity Building
LEDS	Low Emission Development Strategies
LGAs	Local Government Authorities
LPG	Liquefied Petroleum Gas
MIE	Multilateral Implementing Entity
MKUKUTA	Mpango wa Kukuza Uchumi na Kuondoa Umaskini Tanzania (National Strategy for Growth and Reduction of Poverty)
MNRT	Ministry of Natural Resources and Tourism
MRV	Monitoring, Reporting and Verification
MtCO ₂ e	Million tons of carbon dioxide equivalents
NAMAs	Nationally Appropriate Mitigation Actions
NAPA	National Adaptation Programme of Action
NAPs	National Adaptation Plan(s)
NCCFP	National Climate Change Focal Point
NCCS	National Climate Change Strategy
NCCSC	National Climate Change Steering Committee
NCCTC	National Climate Change Technical Committee
NCMC	National Carbon Monitoring Centre
NDA	National Designated Authorities
NDCs	Nationally Determined Contributions
NEMA	National Environmental Management Act

NEMC	National Environment Management Council
NEP	National Environmental Policy
NFRE	Nordic Folkecenter for Renewable Energy
NGOs	Non- Governmental Organization(s)
NIE	National Implementing Entity
PIPA	Promoting Implementation of Paris Agreement in East Africa
PO-RALG	Presidents' Office-Regional Administration and Local Government
REA	Rural Energy Agency
REDD+	Reduced Emissions from Deforestation and forest Degradation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks
REF	Rural Energy Fund
RERE	Renewable Energy for Rural Electrification
SE4ALL	Sustainable Energy for All
SIDA	Swedish International Development Agency
SREP	Scaling up Renewable Energy Programme
SUA	Sokoine university of Agriculture
SusWatch Kenya	Sustainable Environmental Development Watch - Kenya
TAP	Technology Action Plan
TNA	Technology Needs Assessment
UCSD	Uganda Coalition for Sustainable Development
UNCDF	United Nations Capita Development Fund
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URT	United Republic of Tanzania
USAID	United States Agency for International Development
USD/ US \$	United State Dollar
VPO	Vice President's Office
WB	World Bank

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This EASE-CA National Baseline Study is part of a series of Baseline Studies made by the CSO cooperation Project: “East African Civil Society for Sustainable Energy & Climate Action (EASE &CA)” in 2019-22.

The Baseline Studies are based on the Studies of the CSO cooperation Project “Promoting the Implementation of the Paris Agreement in East Africa (PIPA) in 2017-18.

The series of the EASE-CA Baseline Studies are:-
- National Baseline Studies: Uganda, Kenya, and Tanzania
- East Africa Regional International Baseline Study.
- Baselines for three districts in Uganda.

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More on the EASE-CA Project: www.inforse.org/africa/EASE.htm

Executive Summary

This report is an update of the baseline study carried out in early 2017 during implementation of the project titled “Promoting Implementation of the Paris Agreement (PIPA) in East Africa”

East African Civil Society for Sustainable Energy & Climate Action (EASE&CA) is a three year project (July 2019-July 2022) implemented in Tanzania, Kenya and Uganda under the support of CISU. The main objective of the EASE&CA project is to increase access to sustainable energy and other climate solutions to local communities in Uganda, Kenya and Tanzania with both women’s and men’s full and effective participation and leadership for improved livelihoods and reduction of poverty. This will be realized by combining Civil Society Organization (CSO) activities at local, national and international levels in ways, where they reinforce each other. The project primarily works towards Sustainable Development Goal (SDG) 1 (poverty), SDG5 (gender), SDG7 (clean energy), SDG 13 (climate action), SDG 17 (partnerships).

In relation to TaTEDO, the EASE-CA project has 2 immediate objectives; a) to strengthen national CSO networking and advocacy for increased targets and financing of local, sustainable, pro-poor, and gender responsive climate and energy solutions in national development strategies and their implementation in Kenya, Tanzania, and Uganda. The strategies shall include Nationally Determined Contributions (NDCs) and Long-term low Emission Development Strategies (LEDS) to the Paris Agreement, as well as national activities to implement SDG7 (clean energy), including the Sustainable Energy for All strategies; and b) to strengthen networking and participation of East African CSOs for exchange of experiences and to give voice to East African CSOs to influence development of the international framework for the national strategies and for climate financing, including in the UN Climate Convention (UNFCCC).

Nationally Determined Contributions (NDCs) are essentially the backbone of the Paris Agreement. While securing a deal in Paris was a huge success, the real challenge will be actual progress in tackling climate change, i.e. countries following through on the commitments they made at UNFCCC COP21. This is where NDCs are so important, as they provide an action plan going forward.

SDG7 calls for “affordable, reliable, sustainable and modern energy for all” by 2030. Without access to clean, modern energy, it is impossible to achieve Sustainable Development Goals (SDGs) to reduce poverty, broaden education and improve public health.

The overall objective of the Baseline Study is to document the current status of sustainable energy and other climate actions at the national level to establish a bench mark against which achievement of EASE-CA will be measured. Further the study aim to identify opportunities for advocacy and lobbying for increased access to sustainable energy and other climate actions and to map out CSOs and SMEs in sustainable energy and other climate solutions. This study is based on

a desk review updating the PIPA Baseline Study conducted in 2017. The methodology of the study included a combination of literature review and stakeholder consultations.

Tanzania submitted an Intended Nationally Determined Contribution (INDC) to UNFCCC secretariat on September 2015 and ratified the Paris Agreement in May 2018. The Tanzania NDCs acknowledge that current climate vulnerability and future adverse impacts of climate change are significant to curtail Tanzania from achieving key economic growth, development and poverty reduction targets for reaching middle income developing country status. The NDCs is designed to align to the Tanzania Development Vision (2025) and the Tanzania Five Year Development Plan (2011/12-2015/16) and is anchored within the National Climate Change Strategy. Tanzania commits to reduce greenhouse gas emissions economy wide between 10-20% by 2030 relative to the BAU scenario of 138 - 153 Million tons of carbon dioxide equivalent (MtCO₂e) - gross emissions, depending on the baseline efficiency improvements, consistent with its sustainable development agenda.

So far, the Tanzania NDCs have been reviewed and the implementation plan has been prepared under the support of UNDP. At present it is going through endorsement procedures. The draft NDCs is being reviewed by the steering committee composed of representatives from relevant government ministries. It is planned that before October 2019, the permanent secretaries will meet to endorse the NDCs and the implementation plan. The implementation plan has included costs for adaptation and mitigation actions.

The Tanzania NDCs identify the Agriculture, Livestock, Coastal and Marine Environment, Fisheries, Water resources, Forestry, Health, Tourism, Human Settlement and Energy as adaptation priority sectors whereas energy, transport, forestry and waste management sectors are identified as the top contributors towards economic development in Tanzania and the priority sectors for mitigation actions. The energy has been considered in the NDCs as a priority sector in realization of mitigation and adaptation targets.

In 2017 the government under the support of UNDP prepared the draft framework for Low Emission Development Strategy (LEDS) which is not yet finalized. There also exist 100% renewable energy (RE) scenarios for Tanzania which was prepared by the Bread for the World in collaboration with Future World Council and CAN-Tanzania in 2017.

Tanzania with support from UNDP has also developed Nationally Appropriate Mitigation Actions (NAMAs) for transport sector. The overall objective of the NAMA is to promote fast, comfortable and cost-effective urban mobility for passengers.

In 2012 Tanzania opted-in and became one of the fourteen early movers for Africa for the global platform, Sustainable Energy for All (SE4ALL). Tanzania has completed the first three steps of the SE4ALL country process. The government has set target to reach 75% of the Tanzanian population with access to electricity and clean cooking solutions, 41% reduction of energy

intensity, more than 50% increase in renewable energy share in final power consumption and more than 10% increase in share of renewable energy for heat applications.

Tanzania will need around USD 500 million to USD 1 billion per year to meet its adaptation ambition each year and a total of USD 60 billion by 2030 for achieving its mitigation contributions. To-date in Tanzania three projects and USD 469.4m from GCF have been approved. One of the three is designed specific for Tanzania and the other two are global/regional scale projects. The projects have value of USD 1.2b. The study also revealed that Tanzania receives funds from a number of global environmental and climate change-related funds. These include the Green Climate Funds, Special Climate Change Fund, the Climate Investment Funds, the Least Developed Countries Fund, the Adaptation Fund, and the Global Environmental Facility. Tanzania is also supported from a diverse number of multilateral and bilateral funding sources, such as the European Union's, World Bank and SIDA.

The study also revealed that there exist opportunities for CSOs and other stakeholders to participate in NDCs review, development of SE4ALL and their implementation. Presence of NDCs implementation plan and SE4ALL regionalization implementation plan (2017 – 20250) open rooms for CSOs and other stakeholders to participate in their implementation especially on activities related to awareness raising, sensitization, demonstration and capacity building.

Also there is good number of NGOs, networks, forums and associations involved with climate policy in Tanzania which much of their activities focus on awareness and information sharing, policy analysis and advocacy. Also there are some CSOs and SMEs with interest and active on promotion and development of renewable energy and energy efficiency.

Since then it is well known that CSOs plays watchdog role. The main barriers to CSO involvement in climate change policy include shrinking space for them (threatened freedom of speech), poor coordination among CSOs/NGOs, low capacity to mobilize financial resources, weak sharing of best field experiences and in some cases technical capacity, limited knowledge and poor advocacy approaches and timing. Most of the CSO's engage in the process during the last time as a result most of their views are not reflected in the final policy documents.

The study recommends strengthening existing coalitions and establishment of strong and long lasting coordination for CSOs working in climate change sector. Also recommend to build capacity of CSOs on climate finance and its landscape (Multilateral and Bilateral) to tap the existing opportunities. Build capacity of CSOs on analytical skills to be able to design and undertake timely and appropriate advocacy.

1.0 Background Information

Tanzania is located in East Africa and it shares border with Kenya, Uganda, Rwanda, Zambia, Malawi, Mozambique, Burundi and the Democratic Republic of the Congo. With 947,300 square kilometers of land, Tanzania is the 23rd largest country in the world and the 13th largest in Africa. The estimated 2019 population of Tanzania is 58.01 million. Tanzania has sustained relatively high economic growth over the last decade, averaging 6–7% a year. The national poverty rate had declined from 34.4% in 2007 to 28.2% in 2012 and then to 26.8% in 2016¹. Despite lower poverty rates, the number of poor people has stagnated due to high population growth.

In the last 40 years, Tanzania has experienced severe and recurring droughts and floods with devastating effects to agricultural, livestock, wildlife, water and energy sectors, as well as on humans, property and infrastructure. Currently more than 70% of all natural disasters in Tanzania are hydro-meteorological, and are linked to droughts and floods (URT, 2015a). Climate change projection indicates that the frequency and severity of those extreme climatic events will increase and is expected to have long-term consequences for the environment and the production systems of Tanzania, threatening agricultural production, food security, energy, water availability and quality as well as economic and social activities. Climate change thus poses serious risks to the economy, to poverty reduction and to development. In Tanzania, the impacts of climate change are already evident in almost all sectors of the economy and throughout the country. Given that Tanzania's economic base is dependent on the climate sensitive natural resources, this makes the country's economy extremely vulnerable to the adverse impacts of climate change.

Tanzania has diversified energy resources for immediate and long-term needs including hydropower, natural gas, coal, biomass, solar, wind, and geothermal but these remain largely untapped. Lack of reliable, affordable and sustainable energy services continues to be a critical constraint to poverty alleviation and socio-economic development. Tanzania's energy situation is characterized by a low per capita consumption of commercial energy (petroleum, coal, and electricity) and a relatively large dependence on biomass (mainly firewood and charcoal) which accounts for 90% of the total energy demand while petroleum products accounts for 8% and electricity is only 2%. The domestic residential sector consumes about 73% of the total energy (industry 14.4%, agriculture 4.2%, transport 5.8%, other sectors 3.1%). This high residential proportion of the total energy is mainly due to the use of firewood and charcoal for cooking.

As of March 2017, the overall electricity access level was 67.5 % of the Tanzanian population, urban electricity access level 97.3 % and rural 49.5 %. About 32.8 % of the Tanzanian population is connected with electricity, where urban and rural electricity connection level is at 65.3 and 16.9 % respectively (NBS, 2017). The demand for affordable, reliable, sustainable and efficient energy services for all developmental sectors is increasing rapidly in Tanzania. Peak power demand is projected to increase rapidly from about 1,270 MW at present to about 3,600 MW by 2025 and 5,870 MW by 2030 (PSMP, 2016). The government plans to increase the connectivity level to 50 percent by 2025 and at least 75 percent by 2033. On average, demand for electricity is growing at 10-15 percent per annum. About one third of the electricity sector relies on

¹ <https://www.worldbank.org/en/country/tanzania/overview>

hydropower generation, which is becoming increasingly vulnerable to the effects of climate change, leading to significant strains on power generation in meeting the ever-increasing demand. To partly meet this increasing demand, fossil fuels are being relied on for commercial and residential power generation. This leads to increased carbon emissions and higher costs for the end user, which ultimately hampers the national development. Scarcity of energy is one of the underlying factors that hinder the successful implementation of the National Five Year Development Plan and the achievement of the Sustainable Development Goals (SDGs).

2015 was a historic year in which 196 Parties came together under the Paris Agreement to transform their development trajectories so that they set the world on a course towards sustainable development, aiming at limiting warming to 1.5 to 2 degrees C above pre-industrial levels. Through the Paris Agreement, Parties also agreed to a long-term goal for adaptation – to increase the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production. Additionally, they agreed to work towards making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of these long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive Nationally Determined Contributions (NDCs) that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

Sustainable Development Goal 7 (SDG7) aims to “ensure access to affordable, reliable, sustainable and modern energy for all,” and has targets to ensure universal access to affordable, reliable and modern energy services, increase substantially the share of renewable energy in the global energy mix, and double the global rate of improvement in energy efficiency, all by 2030. The goal of energy access is wide-ranging, covering not only electrical services but also thermal energy needs for cooking and heating.

Climate change which is SDG 13 is a crosscutting development issue that affects every aspect of sustainable development and the entire 2030 Agenda. The Paris Agreement on Climate Change, along with the 2030 Agenda, including the Sustainable Development Goals, forms the most comprehensive blueprint to date for eliminating extreme poverty, reducing inequality, and protecting the planet.

1.1 Introduction

The Tanzania Traditional Energy Development (TaTEDO) in partnership with Uganda Coalition for Sustainable Development (UCSD), Sustainable Environmental Development Watch Kenya (SusWatch Kenya), Joint Energy and Environment Projects (JEEP), International Network for Sustainable Energy (INFORSE) and Nordic Folkecenter for Renewable Energy (NFRE) are implementing a project named “East African Civil Society for Sustainable Energy & Climate Action (EASE&CA)”. It is a three year project (July 2019-July 2022) and is implemented in Tanzania, Kenya and Uganda under the support of CISU. The main objective of the EASE&CA project is to increase access to sustainable energy and other climate solutions to local communities in Uganda, Kenya and Tanzania with both women’s and men’s full and effective participation and leadership

for improved livelihoods and reduction of poverty. This will be realized by combining Civil Society Organization (CSO) activities at local, national and international levels in ways, where they reinforce each other. The project primarily works towards Sustainable Development Goal (SDG) 1 (poverty), SDG5 (gender), SDG7 (clean energy), SDG 13 (climate action), SDG 17 (partnerships). Among others the EASE-CA project immediate objectives include to 1) strengthen national CSO networking and advocacy for increased targets and financing of local, sustainable, pro-poor, and gender responsive climate and energy solutions in national development strategies and their implementation in Kenya, Tanzania, and Uganda. The strategies shall include Nationally Determined Contributions (NDCs) and Long-term low Emission Development Strategies (LEDS) to the Paris Agreement, as well as national activities to implement SDG7 (clean energy), including the Sustainable Energy for All strategies 2) strengthen networking and participation of East African CSOs for exchange of experiences and to give voice to East African CSOs to influence development of the international framework for the national strategies and for climate financing, including in the UN Climate Convention (UNFCCC).

This study report aims to provide current status on implementation of Tanzania's NDC and SE4ALL, map out CSOs and SMEs in the sector and points out opportunities for their participation in development and implementation of sustainable energy and climate change policies in Tanzania. It is also an update of the baseline study report prepared before implementation of the project titled "Promoting Implementation of the Paris Agreement (PIPA) in East Africa" carried out in early 2017. The outcome of the study will form basis for designing effective intervention including development of policy recommendation.

1.2 Objectives of the Baseline Study

The overall objective of the Baseline Study is to document current status of sustainable energy and other climate actions at the national level to establish a bench mark against which achievement of EASE-CA will be measured. Specific objectives of the study are:

- a) To assess the current situation of the sustainable energy and other climate actions, including how they are included in national legal and policy instruments.
- b) To identify opportunities for advocacy and lobbying for increased access to sustainable energy and other climate actions.
- c) To map out stakeholders (in particular CSOs and SMEs) in the sector and their involvement in implementation of the sustainable energy and other climate solutions.

1.3 Study Approach and Methodology

The methodology of the Baseline Study included a combination of desk review and stakeholder consultations. Written national and international information inform of reports, policy, strategies, plans, papers were reviewed and some key stakeholders in climate change and energy sector were consulted through emails and phone to update the baseline report prepared early 2017.

2.0 The Tanzania Nationally Determined Contributions (NDCs)

Tanzania submitted an Intended Nationally Determined Contribution (INDC) to UNFCCC secretariat on September 2015 and ratified the Paris Agreement in May 2018. The UNDP through Low Emission Capacity Building (LECB) Programme supported the refinement of Tanzania's Intended Nationally Determined Contributions (INDCs) into Nationally Determined Contributions (NDCs) for submission to the UNFCCC.

2.1 Summary of the NDCs

The Tanzania NDCs acknowledge that current climate vulnerability and future climate change adverse impacts are significant to curtail Tanzania from achieving key economic growth, development and poverty reduction targets for reaching middle income developing country status. Every annual event has economic costs in excess of 1% of GDP reducing long-term growth and affecting millions of people and their livelihoods. The net economic costs of addressing climate change impacts are anticipated to be equivalent to 1 to 2% of GDP per year by 2030. The NDCs is designed to align to the Tanzania Development Vision (2025) and the Tanzania Five Year Development Plan (2011/12-2015/16) and is anchored within the National Climate Change Strategy (NCCS)², mapping out how the country can mitigate climate change and its impacts, paving the way towards the Sustainable Development Goals. Tanzania commits to embark on a climate resilient development pathway. In doing so the adaptation contributions will reduce climate related disasters from 70% to 50%. Access to clean and safe water will be increased from 60% to 75% (URT, 2015a).

2.2 Main targets for greenhouse gas emissions and other mitigation-related targets

The NDCs state that Tanzania has negligible emissions of greenhouse gases (total and per capita), whereby per capita emissions are estimated at 0.2 tCO₂e. On the other hand, the country has a total of 88million hectares of land areas, of which 48.1 million are forested land with estimated total of 9.032 Trillion tons of carbon stock which implies that Tanzania is a net sink.

Tanzania commits to reduce greenhouse gas emissions economy wide between 10-20% by 2030 relative to the BAU scenario of 138 - 153 Million tons of carbon dioxide equivalent (MtCO₂e) - gross emissions, depending on the baseline efficiency improvements, consistent with its sustainable development agenda (URT, 2015a). The emissions reduction is subject to review after the first Biennial Update Report (BUR).

2.3 Main Policies and Measures Proposed to Realise Mitigation Targets

The Tanzania NDCs identify the Agriculture, Livestock, Coastal and Marine Environment, Fisheries, Water resources, Forestry, Health, Tourism, Human Settlement and Energy as adaptation priority sectors whereas energy, transport, forestry and waste management sectors are identified as the top contributors towards economic development in Tanzania and the priority sectors for mitigation actions. The energy has been considered in the NDCs as a priority sector in realization of mitigation and adaptation targets, see Table I.

Table I: Tanzania NDCs Priority Adaptation and Mitigation Actions in Energy Sector

No	Adaptation	Mitigation
a	Exploring and investing in energy diversification system.	Exploring and investing in the energy diversification system to ensure overall energy security for economic development through enhanced availability, affordability and reliability while contributing towards energy emissions intensity reduction over time.

² URT. (2012)

http://www.taccire.suanet.ac.tz/xmlui/bitstream/handle/123456789/141/CLIMATE_CHANGE_STRATEGY.pdf?sequence=1

b	Promoting use of energy efficient technologies and behaviour.	Promotion of clean technologies for power generation; and diverse renewable sources such as geothermal, wind, solar and renewable biomass.
c	Enhancing integrated basin catchment and upstream land management for hydro sources.	Expanding the use of natural gas for power production, cooking, transport and thermal services through improvement of natural gas supply systems throughout the country.
d	Enhancing the use of renewable energy potential across the country (hydro, solar, wind, biomass and geothermal).	Promoting energy efficient technologies for supply, transmission/transportation and demand side as well as behavioral change in energy use.
e		Promoting rural electrification.

Source: Tanzania INDCs

2.4 Review of NDCs

At the moment UNDP in collaboration with GIZ (German development agency) is assisting the Government in revising the NDCs. So far the draft of NDCs and the implementation plan have been finalized. The implementation plan has included costs of adaptation and mitigation actions. Meanwhile the draft NDCs is being reviewed by the steering committee composed of representatives from relevant government ministries. It is planned that before October 2019, the permanent secretaries will meet to endorse the NDCs and the implementation plan. Thereafter, submission to UNFCCC will follow. From the consultation made to Vice President's Office, it was informed that there are no much changes in the current NDCs from INDCs. The draft NDCs is not yet available to the public.

2.5 Main National Strategies and Policies that are Basis for the Tanzania NDC

Climate change as a policy issue is institutionally situated under the Division of Environment in the Vice President's Office (DoE-VPO), which is the national focal point for climate change under the United Nations Framework Convention on Climate Change (UNFCCC) and the Designated National Authority for climate change in Tanzania. The policy that oversees issues related to environment, including climate change mitigation and adaptation, is the National Environmental Policy (NEP) of 1997³, which is implemented in conjunction with the National Environmental Management Act (NEMA) of 2004⁴. The NEP of 1997 is still under revision/approval process. The draft NEP policy recognize climate change as one of the environmental challenges affecting all sectors including agriculture, fresh and marine water ecosystems, human health, energy, forestry, biodiversity, tourism, industry, livestock, fisheries, infrastructure, and human settlements. The main impacts arising from climate change include drought, floods, diseases and pests, coastal erosion, loss of biodiversity, change of rainfall regimes and patterns, disappearance of wildlife habitats, food insecurity and ecosystem shifts. The new NEP set the objective to promote climate change adaptation and mitigation measures by i) Strengthen the implementation of the National Climate Change Strategy and Action Plan; ii) Promote an integrated early warning and response systems for climate change; and iii) Promote appropriate technology transfer and capacity building for climate change adaptation and mitigation. .

³ <http://www.nemc.or.tz/uploads/publications/en1462437949-NEP%201997%20.pdf>

⁴ <http://parliament.go.tz/polis/uploads/bills/acts/1454069944-ActNo-20-2004.pdf>

The National Climate Change Strategy (2012) elaborates adaptation and mitigation actions. The strategy aim to, among others, enhance adaptive capacity to climate change thereby ensuring long term resilience; resilience of ecosystems to climate change; and enhanced participation in climate change mitigation activities to contribute to international efforts while ensuring sustainable development. The NCCS represents a significant milestone, but it needs to be strengthened to include the identification of priority programmes, their budgeted costs, and the expected sources of funding if implementation is to be secured (Yanda, *et al.*, 2013). Others include National Climate Change Communication Strategy (NCCCS) of 2012⁵, the National Communications (2003⁶ and 2015⁷); the National Adaptation Programme of Action (2007)⁸; the National Forestry Policy (1998), also under review; the National Environmental Action Plan (2012 – 2017)⁹; and the National REDD+ Strategy and Action Plan (2013).

3.0 Low Emission Development Strategies (LEDS) and long-term targets

3.1 Development of LEDS

The government of Tanzania has prepared the draft national LEDS framework under the support of UNDP. On 15th – 18th September 2016 the national stakeholder’s validation workshop for the draft LEDS framework was organized by the VPO. The validation workshop was a follow-up to the first one which was held in Morogoro from 27th – 30th January 2016. The second validation workshop was held on September 2017. From that validation workshop it was discovered that the economic analysis part of the LEDS framework was not thoroughly addressed and required major revision. On 6th to 9th June 2017, the VPO in collaboration with UNDP organized a strategic retreat meeting to strengthen and finalize the draft national Low Emission Development Strategy (LEDS) framework at National Carbon Monitoring Center (NCCMC), Morogoro. However, the document was not finalized and is not available to the public.

3.2 LEDS/LCDS available from academia, CSO or international institutions

“100% Renewable Energy (RE) for Tanzania – Access to renewable and affordable energy for all within one generation” is a report prepared by the Institute for Sustainable Futures (ISF) for Bread for the World, October 2017 in collaboration with the Future World Council and CAN-Tanzania. The report present long term energy access scenarios and detailed assessment of the Renewables scenarios for Tanzania. The study findings show that combining the projections on population development, GDP growth and energy intensity results in future development pathways for Tanzania’s final energy demand. Under the Reference scenario, total final energy demand increases by 40 per cent from the current 1000 PJ/a to 1400 PJ/a in 2050.

Under both RE scenarios, due to economic growth, increasing living standards and electrification of the transport sector, overall electricity demand is expected to increase despite efficiency gains in all sectors. The report concluded that 100 per cent renewable energy for all Tanzanians is technically and economically possible, and a realistic pathway for Tanzania to align with the Paris

⁵ https://www.undp-aap.org/sites/undp-aap.org/files/National_CC_Communication_Strategy_2012_2017.pdf

⁶ <http://unfccc.int/resource/docs/natc/tannc1.pdf>

⁷ https://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/tzanc2.pdf

⁸ <http://unfccc.int/resource/docs/napa/tza01.pdf> Retrieved on 29th March 2017

⁹ https://www.undp-aap.org/sites/undp-aap.org/files/National_Environmental_Action_Plan_2012_2017.pdf

Agreement and Sustainable Development Goals. Further the report find out that whilst Tanzania's CO₂ emissions will increase by a factor of 7, from 12 million tonnes to over 90 million tonnes, between 2015 and 2050 under the Reference scenario, the Renewables scenario will result in a moderate increase to 24.5 million tonnes with a population increase from 53 to 137 million people in the same period. As such, annual per capita emissions will remain at 0.2 tonnes. In spite of increasing power demand, CO₂ emissions will decrease in the electricity sector. In the long run, efficiency gains and the increased use of renewable electricity in vehicles will also dramatically reduce emissions in the transport sector. With a 98 percent share of CO₂, the transport sector will be the largest source of emissions in 2050 in the basic RE scenario. By 2050, Tanzania's CO₂ emissions will increase by 15 million tons on 2015 levels in the renewables scenario, while energy consumption is fully decarbonized in the advanced case.

3.3 Nationally Appropriate Mitigation Actions (NAMA)

UNDP has supported VPO-DoE to develop two NAMAs for Energy and Transport sector under facilitation of the consultant.

- “Promoting low emission transport systems through deployment of Mass Rapid Transport Systems” is highlighted in the Tanzania NDCs and a focus area for mitigation actions. To contribute to the NDC, UNDP¹⁰ through its LECB programme, and in close collaboration with the Government of Tanzania, facilitated development of a National Appropriate Mitigation Action (NAMA) to support and introduce bus rapid transit (BRT) systems in Tanzanian including other 5 cities, in addition to the DART in Dar es Salaam. The NAMA is expected to help the Government of Tanzania to reach its mitigation target formulated under the NDCs by promoting sustainable transport in Tanzania's cities. The overall objective of the BRT NAMA is to promote fast, comfortable and cost-effective urban mobility for passengers. In this context, the NAMA will support and enable the operation of private sector-based BRT fleets in Tanzania's large cities. NAMA will also support the establishment of the institutional systems needed for the coordination, implementation, and MRV of the NAMA in the form of a Coordinating and Implementing Entity (CIE). During preparation and review of NAMA for the transport sector, CSOs were involved.
- Also there is possibility for FAO¹¹ to support Tanzania to develop NAMA for the dairy sector. Recently FAO & New Zealand Agricultural Greenhouse Gas Research Centre (2019) conducted a study to evaluate the potential for improving milk production while reducing enteric methane emission intensity from dairy production in Tanzania. The overall objective of the study was to support Tanzania in identifying low-cost strategies to reduce enteric methane emissions while contributing to the country's short- to long-term social and economic development and increasing resilience to climate change.

3.4 Long-Term Targets on Climate and Energy

Tanzania's long-term development goal is set out in the National Vision 2025¹², which was launched in 1999. The Tanzania Vision 2025 aims at achieving a high quality livelihood for its people attain good governance through the rule of law and develop a strong and competitive

¹⁰ <http://www.tz.undp.org/content/tanzania/en/home/ourwork/environmentandenergy/successstories/UNDP-supports-the-development-of-a-Nationally-Appropriate-Mitigation-Action-NAMA-for-the-transport-sector.html>

¹¹ <http://www.fao.org/3/CA3215EN/ca3215en.pdf>

¹² <http://www.mof.go.tz/mofdocs/overarch/vision2025.htm>

economy. Specifically, the Tanzania Development Vision 2025 outlined the country's social, economic and political aspirations for the first quarter of the 21st century with an underlying drive to reaching the middle-income country status, with a per capita income of USD 3,000 (in nominal terms) by 2025¹³.

The Second Five Year Development Plan (FYDP II) 2016/17–2020/21 takes into account the integration of the Five Year Development Plan (FYDP) and the National Strategy for Growth and Reduction of Poverty (NSGRP/MKUKUTA) planning frameworks. The theme of FYDP II “Nurturing Industrialization for Economic Transformation and Human Development” incorporates the main focus of the two frameworks, namely growth and transformation (FYDP) and poverty reduction (MKUKUTA).

- The plan target to reduce charcoal consumption in urban areas from 90% in 2014/15 to 60% in 2020/2021 and 30% in 2025/2026.
- Propose increase in percentage of energy derived from renewable green energy from 36% to 50% in 2020/2021 and 70% in 2025/2026.

4.0 Tanzania’s Sustainable Energy for All (SE4ALL)

Tanzania opted-in and became one of the fourteen early movers for Africa in 2012 for the global platform, Sustainable Energy for All (SE4ALL). Tanzania has completed the first three steps of the SEforALL country process namely; (i) Joining the SE4ALL Initiative, (ii) Rapid Assessment and Gap Analysis, (iii) Development of its National SE4ALL Action Plan i.e. SE4ALL Action Agenda (AA) and the Investment Prospectus (IP) of 2014 that were developed based on the Rapid Assessment and Gap Analysis (RAGA) of 2013 with the following focus sectors i.e. grid expansion, sustainable charcoal production and usage, renewable energy based mini-grids and home systems, energy efficiency and clean cooking solutions. The Tanzania’s SE4ALL’s Action Agenda seeks to integrate the multi-tier efforts that the country is implementing towards providing universal access to energy, increased energy efficiency, and an increase in the use of renewable energy. The Government of Tanzania has embarked on an ambitious plan to meet a range of sustainable energy goals in SE4ALL Action Agenda (2015) that by 2030:-

- 75% of the Tanzanian population will have access to electricity access,
- 75% of the Tanzanian population will have access to clean cooking solutions,
- There will be a 41% in reduction of energy intensity (or -2.6% annual rate of improvement of energy efficiency),
- More than 50% increase in renewable energy share in final power consumption,
- More than 10% increase in share of renewable energy for heat applications.

Achieving these goals and especially improving energy access is one of the keys to unlocking the economic and social potential of Tanzania, and reducing poverty and inequality. Given the size and nature of population and resource distribution in Tanzania, local action will be critical to achieving these goals. Local government authorities (LGAs) can provide the necessary impetus for investments in and help create a learning environment for residents, businesses, and energy enterprises in their jurisdictions, to invest in renewable energy and energy efficiency. Regionalisation as an implementation strategy has therefore been proposed as one of the means to accelerate the achievement of SE4ALL goals. The regionalisation of SE4ALL implementation

¹³ <http://tanzania.go.tz/home/pages/364>

entails that a range of operational functions would be undertaken at local level while maintaining strategic planning and major capital projects jointly undertaken at both central and local levels.

Tanzania has a series of development and sector policies and strategies, which support the country's progress towards the three SE4ALL goals: universal access, increasing the share of renewable energy and enhancing energy efficiency. These strategic documents and activities include the Tanzania's Development Vision (TDV) 2025 (1999), Energy and Water Utilities Authority Act 2001 and 2006, National Energy Policy of 2003 and 2015, Rural Energy Act 2005, Electricity Act 2008, Public Private Partnership Act No. 18 of 2010 and its Policy of 2009, Standardized Power Purchase Agreement & Tariffs (2008) (<10 MW), Scaling-up Renewable Energy Programme (SREP) – Investment Plan for Tanzania (May 2013).

The goal of the **SREP** is to build an efficient and responsive project development infrastructure, and demonstrate its effectiveness by supporting a time-slice of investments towards achieving the 2025 national rural electricity access goal in areas delineated for mini-grid and stand-alone electricity service in the Rural Electrification Master Plan. The SREP project objective is to bring electricity services using renewable energy to benefit about 400,000 households and other consumers (approximately 2 million rural off-grid electrification customers) using renewable energy mini-grids, micro-grids, and Sustainable Solar Market packages (SSMP) projects to benefit both women and men in rural areas (URT,2013b).

5.0 Climate Financing

Economic analyses of climate change in Tanzania shows that Tanzania need about USD 600 million per year to address climate change issues. In addition Tanzania's Nationally Determined Contributions (NDCs) states that the Tanzania will need around USD 500 million to USD 1 billion per year to meet its adaptation ambition each year and a total of USD 60 billion by 2030 for achieving its mitigation contributions (URT, 2015a). Meeting these ambitions will depend on how financial support can be accessed from different sources.

Tanzania being a non-Annex I Party to the UNFCCC, as well as a Kyoto Protocol Party and a Least Developed Country, Tanzania meets the eligibility requirements and receives funds from a number of global environmental and climate change-related funds. These include the Green Climate Funds, Special Climate Change Fund, the Climate Investment Funds, the Least Developed Countries Fund, the Adaptation Fund, and the Global Environmental Facility. Tanzania is also supported from a diverse number of multilateral and bilateral funding sources, such as the European Union's, Global Climate Change Alliance(GCCA), Norway's International Climate and Forest Initiative, Germany's International Climate Initiative, the UK's International Climate Fund, World Bank, Sida, and Japan's Fast Start Finance.

5.1 Status of GCF funding in the country

Permanent Secretary, Vice President's Office (PS-VPO) is a National Designated Authority (NDA) for Tanzania. PO-RALG is undergoing accreditation process for the GCF as National Implementing Entity (NIE). The Tanzania CRDB bank, the EQUITY Bank and the Ministry of Finance also showed interest to become NIE for GCF. The existing GCF - Multilateral Implementing Entity (MIE) in Tanzania include KfW-Deutsche Bank, UNDP, UNEP, FAO,

International Union for Conservation of Nature (IUCN), GIZ and International Fund for Agriculture Development (IFAD).

To-date in Tanzania, three projects and USD 469.4m from GCF¹⁴ have been approved. One of the three is designed specific for Tanzania and the other two are global/regional scale projects. The projects have the value of USD 1.2b in total. A total of 3.3m have been requested for readiness though none has been approved.

- The project on **“Transforming Financial Systems for Climate”** was approved in October 2018. The estimated implementation period is 7.0 years. The project focuses to provide loans and technical assistance in 17 developing countries across Africa and Latin America and the Caribbean to create self-sustaining markets in energy efficiency, renewable energy and climate resilience. Specifically the countries include Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Ecuador, Egypt, Kenya, Madagascar, Mauritius, Morocco, Namibia, Nigeria, Senegal, South Africa, United Republic of Tanzania, Togo and Uganda. The programme has an estimated lifespan of 20 years. Agence Française de Développement (AFD) is the Implementing Entity and Agencia Francesa de Desarrollo (AFD) the Executing Entity. Follow up will be made with respective agencies to find out possibility to benefit from loan and technical assistance in development of renewable energy mini-grids.
- The **“Universal Green Energy Access Programme”** was approved October 2016. The programme has estimated implementation period of 15.0 years. It focuses to contribute to universal access to electricity in Sub-Saharan Africa (in particular Benin, Kenya, Namibia, Nigeria, United Republic of Tanzania) by scaling up investments in renewable energy from local financial markets and the international private sector. Fossil fuel based energy production will be replaced with renewable, clean energy solutions that can meet increasing energy demand. USD 78.4M GCF financing in the form of equity will be provided for phase I of the programme. The grant element of USD 1.6M is subject to GCF Board approval. The project has an estimated lifespan of 15 years. The Deutsche Bank AktienGesellschaft (Deutsche Bank AG) is the Implementing Entity and the Universal Green Energy Access Program S.A.SIC-SICAV is the Executing Entity. The project has total investment cost of \$301.6m. Investments will target three types of projects. Off-grid renewable electricity energy in the form of solar home systems will be provided via an affordable payment plan. Green mini-grid projects will also be supported via companies that install, operate and maintain photovoltaic based mini-grids to sell energy services in rural communities. Finally, industrial renewable electrical energy and selected on-grid installations will be targeted, by investing in companies that provide modular, transportable, and often rented photovoltaic farms, offering SMEs and communities competitively-priced solar power. Around 50 investments will be made, totalling a volume of USD 500M over the course of five years, and via two phases. Follow up will be made with Deutsche Bank AG to find possibility to participate in project implementation.
- The programme on **“Simiyu Climate Resilient Development”** was approved April 2017 with estimated implementation period of 5.0 years. The programme focuses to safeguard water supply and farming conditions in the Simiyu Region of Tanzania. The project has an estimated lifespan of 5 years with total investment of \$163.0m. The Kreditanstalt für

¹⁴ <https://www.greenclimate.fund/countries/tanzania>

Wiederaufbau (KfW) is the Implementing Entity whereas the Ministry of Finance and Planning, United Republic of Tanzania is the Executing Entity.

5.2 Climate Financing (mitigation and adaptation) from other external sources

The following Table 2 shows some of the projects implemented in Tanzania with funds from other global environmental funds.

Table 2: Some of the projects receiving funds from global environmental initiatives

Project name	Source of funds	Description
Ecosystem-Based Adaptation ¹⁵ for Rural Resilience	Least Developed Countries Fund	To increase resilience to climate change in rural communities of Tanzania by strengthening ecosystem resilience and diversifying livelihoods. The United Nations Environment Programme is the implementing agency and VPO-DOE with Ministry of Agriculture are executing agencies
Promotion of Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania	GEF Trust Fund	The project focuses to promote ethanol as an alternative clean cooking fuel in Tanzania. The United Nations Industrial Development Organization (UNIDO), in collaboration with the Tanzanian Vice President's Office (Division of Environment), are the primary mobilisers for project implementation.
Umbrella Programme for Preparation of National Communications and Biennial Update Reports to the UNFCCC	GEF Trust Fund	Global programme to support eighteen (18) developing countries prepare and submit National Communications (NCs) and Biennial Update Reports (BURs) that comply with the UNFCCC reporting requirements while responding to national development goals. UNEP is the implementing agency will collaborate with 25 national governments, Tanzania and Uganda included
Strengthening Climate Information and Early Warning Systems in Tanzania to Support Climate Resilient Development and Adaptation to Climate Change	Least Developed Countries Fund	To strengthen the weather, climate and hydrological monitoring capabilities, early warning systems and available information for responding to extreme weather and planning adaptation to climate change in Malawi.
Decentralized Climate Finance Project (DCF) ¹⁶	UKAID, IIED and UNCDF	The objectives of the project are to provide technical and financial support to the Government to build its capacities to mainstream climate change into local government planning and financial systems and to prepare PO-RALG to be accredited as a National Implementing Entity (NIE) to the Green Climate Fund

¹⁵ <https://www.thegef.org/country/tanzania>

¹⁶ <http://www.dcfp.go.tz/>

		(GCF).
Lake Victoria Environmental Management Project (LVEMP II)	WB, GEF, SIDA, Government of Tanzania	The objectives of the Project are to contribute to: (i) the improvement of the collaborative management of the trans-boundary natural resources of the Lake Victoria Basin (LVB) among the Partner States;
Renewable Energy for Rural Electrification (RERE) Program	World Bank	A pilot rollout program funded under SREP, with one component for Geothermal and the other for renewable energy and rural electrification.

6.0 Implementation of National Climate Technology Development and Transfer

6.1 Technology Need Assessment (TNA)

The Coordination of Technology Need Assessment (TNA) is under VPO and the TNA team is the umbrella body. The National Steering Committee is composed of following members: Permanent Secretary Vice Presidents Office, Permanent Secretary Ministry of Water and Irrigation, Permanent Secretary Ministry of Energy and Minerals, Permanent Secretary Ministry Natural Resources and Tourism, Permanent Secretary Ministry of Agriculture, livestock and Fisheries, Director General, Commission for Science and Technology, Director, Institute of Natural Resource Assessment, University of Dar es Salaam. National TNA Committee has eight members from different sectors as follows: Energy, Water, Agriculture, Forest, Environment, University of Dar es Salaam, Commission for Science and Technology and The First Vice President Office – Zanzibar. The Steering Committee is responsible for guiding the National TNA team and providing political acceptance for the Technology Action Plan. The National TNA team comprises: National TNA Committee, National Consultants /experts, Workgroups, and TNA coordinator.

The Vice President Office (VPO), Division of Environment (DoE) spearheaded the TNA project in Tanzania with the support from UNEP DTU. The TNA Process began with a National Inception Workshop which was held on 29th – 30th September, 2015. A stakeholder consultation for prioritization of sectors was done on 20th November 2015 for Energy sector, 23rd November 2015 for Water and Agriculture sectors, 25th November 2015 for Forest sectors and 24th November 2015 for the Zanzibar Stakeholders. The final refinement of the prioritization was done on 3-4th March 2016. The Selection of Sectors for TNA was based on the extent of GHG emission as per existing studies. Land use changes and Forestry sector made the largest contribution i.e. 53%, followed by agriculture (33%) and energy (13%). Thus forestry and energy were selected for TNA for climate change mitigation (URT, 2016c)¹⁷. The technologies prioritized for energy sector include (i) Mini and Micro Hydro (ii) Sustainable use of biomass fuel (iii) Solar PV whereas for forest sector were (i) Sustainable Forest Management (ii) Agroforestry (iii) Mangrove Conservation Rehabilitation and Restoration.

There have been several studies in Tanzania focusing on climate change mitigation and technologies in the energy sector. These include: (i) Identification of technologies that are associated with GHG emissions (ii) Identification of the technical possibilities of minimizing GHG emissions (iii) Identification of the appropriate environmentally benign technologies available for Tanzania, including its specific reduction potential and associated costs (iv) Investigation of various options for GHG abatement including retrofitting of emissions reduction equipment (v)

¹⁷ www.tech-action.org/-/...Reports.../Africa.../Tanzania-TNA-report_aug2016-Mitigatio...

Exploration of the link between energy efficiency, mitigation of GHG emissions and associated costs (vi) Proposal of technological strategies and policy options to mitigate GHG emissions based on an abatement cost curve (vii) Recommendation of possible targets for GHG mitigation or stabilization particularly in the national energy policy, and (viii) Building an indigenous capacity in the assessment of climate issues (URT, 2016a). Tanzania's TNA contributes to the following Sustainable Development Goals: SDG6 (clean water and sanitation), SDG7 (clean energy), SDG12 (responsible consumption and production), SDG 13 (climate action) and SDG15 (life on land).

6.2 Technology Action Plan (TAP)

Table 3 provides summary of selected and prioritized technologies in agriculture, energy, water and forestry sector for action plan.

Table 3: Summary of selected and prioritized technologies for TAP

Sector	Technologies retained for TAP
Agriculture	Improved variety seeds
	System of Rice Intensification
	Drip irrigation
Water	Rain water Harvesting from roof tops
	Water Leakage reduction programme
Energy	Mini- and micro-hydropower
	Fluidized bed boilers
	Roof-top solar farms
Forestry	Sustainable forest management
	Agroforestry
	Mangrove conservation, rehabilitation and restoration

Source: <https://tech-action.unepdtu.org/country/tanzania/>

Still there is no much information available on TAP in Tanzania. The information below refers to the country action plan for clean cookstove and fuels which was prepared by the energy stakeholders.

Country Action Plan for Clean Cook Stoves and Fuels

Most rural households use the three stone fire place to cook their meals, whereas low quality charcoal cookstoves are used in urban and peri-urban households (SNV, et al. 2014)¹⁸. Needless to say the uptake of improved cookstoves and fuels is limited to a small percentage. Low use of clean cookstoves and fuels has numerous consequences, including deaths due to indoor air pollution, deforestation and environmental degradation, and economic burden. In 2012 stakeholders initiated the formation of organizations and task groups related to improved and clean cookstoves and fuels including the Clean Cookstoves and Fuels Alliance of Tanzania (CCFAT) and the Improved Cook Stove (ICS) Taskforce with the goals of mobilizing stakeholders, securing resources and championing the sector. Members to the two platforms are from public and private companies, NGOs, Government Institutions and individuals with interest to clean cookstoves and fuels. Stakeholders noted that while there are numerous interventions

¹⁸ <https://www.tarea-tz.org/storage/app/media/Blog/ICS%20Country%20Action%20Plan.pdf> retrieved 28th March 2017

required before the clean cookstoves and fuels sector can be considered to have reached a stage of maturity, they identified key interventions that need to be addressed immediately which serve as the corner stone, or foundation, of all future interventions which include:

- Supporting and lobbying government through the Ministry of Energy (MoE) for the development and implementation of the biomass energy policy & strategy through stakeholder involvement.
- Strengthening an agreed coordinating entity/ platform (chapter or working group) to enhance collaborative efforts among stakeholders thereby creating an enabling environment for market growth, and securing funding for its operations.
- Establish Standards working group with the Tanzania Bureau of Standards (TBS) through the abovementioned acceptable platform/ chapter or working group and, supporting TBS to develop clean cook stoves and fuels standards based on ISO standard.
- Advocating for policy frameworks that support tax relief and incentives for clean cookstoves and fuels producers in Tanzania.
- Conduct a baseline survey to support the call for intervention with facts.
- Carry out action research (value chain analysis) to identify existing stove producers, their products and their clientele with a focus to identify enterprises and gaps in the market and building linkages for the expansion of the clean cookstove market.
- Commission a study into the challenges and opportunities for women in the sector.
- Undertake a baseline market demand assessment study at district and regional levels. Special focus on usage and preference of women.
- Develop appropriate strategies, mediums, tools and messages for awareness rising.
- Establish M&E data collection systems.
- Support the expansion of the charcoal briquette and biomass briquettes and pellet industries.
- Support training for entrepreneurs on how to access funding programs.
- Support the development of clean cookstoves and fuels market networks.

7.0 Institutional Arrangement and Roles for the Response to Climate Change

Implementation of climate change actions in Tanzania is carried out within the context of the National Environmental Policy and the 2004 National Environmental Management Act (NEMA), as described in the previous chapter. The Act mandates the Vice President's Office (VPO) – Division of Environment (DoE) – to be the designated lead agency for environment and climate change-related activities in the country. The DoE is both the National Climate Change Focal Point (NCCFP) and the Designated National Authority (DNA) for the Clean Development Mechanism under the Kyoto Protocol and GCF.

The EMA also provides for the establishment of various committees at both national and local levels see Figure 1. With regard to responding to climate change, the lead coordination committee is intended to be the National Climate Change Steering Committee (NCCSC), chaired by the Permanent Secretary in the VPO. The NCCSC is an inter-ministerial committee comprised of the Permanent Secretaries from sector ministries responsible for Energy, Finance, Industry, Natural Resources, Justice and Constitutional Affairs, Land, Agriculture, Livestock Development, Foreign Affairs, and International Cooperation. This model developed from an earlier 12-member National Climate Change Committee that oversaw the 2003 Initial National Communication under the UNFCCC. The NCCSC has the role of providing policy guidance to

the NCCFP to ensure coordinated actions and participation within various sectors and institutions.

A National Climate Change Technical Committee (NCCTC) has also been created by the government, chaired by the Director of Environment (VPO), to provide technical advice to the NCCFP. The NCCTC is made up of Directors of the various Ministries comprising the NCCSC. Its function is to oversee all technical issues related to the implementation of climate change actions and to stimulate coordinated action and broaden participation to address climate change. Climate change issues are addressed using environmental management institutional framework, following the mandate provided by the EMA. At the sub-national level, the Prime-Minister's Office-Regional Administration and Local Government (PMO-RALG) is expected to work in collaboration with sector ministries to implement strategic interventions involving Local Government Authorities (LGAs).

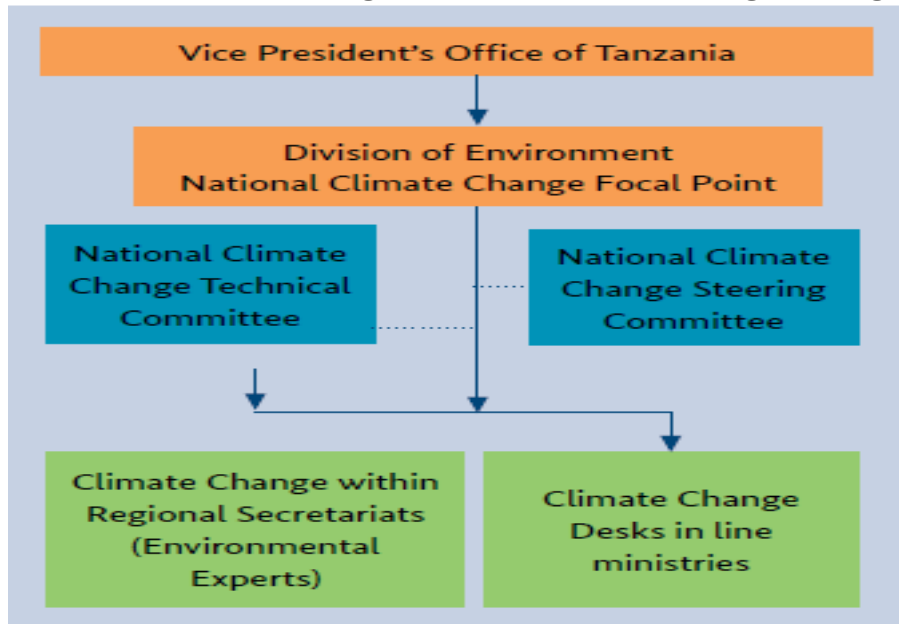
Another relevant national institution is the National Environmental Management Council (NEMC), which was created under the earlier National Environment Management Act of 1983. The NEMC was established to undertake environmental enforcement and compliance controls, and to review and monitor environmental impact statements, as well as carrying out research and awareness rising. The NEMC is therefore an important actor in the implementation of strategic actions as stipulated in the 2012 National Climate Change Strategy.

Civil Society Organizations (CSOs) are encouraged to cooperate with the Government in mobilizing resources and implementing climate change strategies through various projects and/or programmes. The private sector, either individually or in collaboration with the Government under Public-Private Partnership (PPP) arrangements, are also encouraged to implement innovative projects to address climate change related issues.

Development partners either bilaterally or through multilateral arrangements and are encouraged to support the government in implementing climate change initiatives by providing technical and financial support, as well as facilitating resource mobilization. They are also encouraged to provide capacity building and facilitate technology development and transfer to various stakeholders in implementing climate change strategies. In Tanzania the development partners have organized themselves into group named "Development Partners Group (DPG)". The DPG comprise of 17 bilateral and 5 multilateral (UN counted as one) development agencies providing assistance to Tanzania¹⁹. The group was established to promote principles of Aid Effectiveness in development assistance to Tanzania. This involves structured dialogue and engagement between Development Partners (DPs) and the government in high-level forums, through different sector and thematic groups and core reforms with a view of achieving harmonization, promoting coordinated policy dialogue and reducing transaction costs in the management and administration of aid to Tanzania. The DPG meets on a monthly basis to address policy as well as harmonization and alignment issues, and its work is supplemented by more technical dialogue at sector and thematic areas with relevant ministries. DPG is chaired by two Co-Facilitators; the UN Resident Coordinator /UNDP Representative hold a permanent seat, while the other Co-Facilitator is selected on an annual basis among the Bilateral Development Partners.

¹⁹ Development Partner group in Tanzania, accessed at <http://www.tzdp.org/tz/dpg-website/dpg-tanzania.html#uid1110>, Retrieved 27th March 2017

Figure 1: Institutional Arrangement for Climate Change Management



Source: GIZ, 2014

The **National Carbon Monitoring Centre (NMC)** based at Sokoine University of Agriculture (SUA), Morogoro, was established to provide technical services on measuring, reporting and verification of REDD+ activities across the country. It will be a depository of all data and information concerning REDD+, including the NCCS. According to the draft national LEDS framework of 2016, the centre is envisaged to be semi-autonomous, overseen jointly by the ministries responsible for forests and environment - climate change, and could, with support become a broad based MRV for the NCCS. Since GCF will provide result-based financing, monitoring, reporting and verification (MRV) arrangements will be a key condition for fund allocation. Tanzania will have to develop and maintain the expertise and data sources in this area. Tanzania submitted its Forest Reference Emission Level (FREL) on 27th December 2016 to the UNFCCC for technical assessment²⁰ This was possible through the technical support provided by the National Carbon Monitoring Centre (NMC).

8.0 Opportunities for CSO's Participation in National Energy & Climate Plan Development and Implementation

8.1 Opportunities for participation in NDC improvements

Tanzania commits to reduce greenhouse gas emissions economy wide between 10-20% by 2030 relative to the BAU scenario. Emissions reduction is subject to review after the first Biennial Update Report (BUR) expected on 2020. Parties to UNFCCC are supposed to produce the National Communications (NCs) reports every four years and Biennial Update Reports (BURs) every two years. The last 2nd Tanzania National Communication report was prepared in 2015, therefore the 3rd report is supposed to be produced in year 2019.

²⁰ (<http://redd.unfccc.int/submissions.html?country=tza>).

8.2 Opportunities for participation in SE4All plans

- According to Tanzania SE4ALL Regionalization and Implementation Plan of 2017 – 2025 (draft) preliminary assessment of energy planning at local government revealed the following barriers to implementing SE4ALL initiatives:-
 - Communities and local government do not fully understand and have not internalised the role of energy in their development plans. As such energy is often left out in the planning process at all levels except at national planning level. This contributes to low access to modern energy services.
 - There are no nationally uniform tools and methodology for Local Government Authorities (LGAs) to undertake energy planning in a consistent manner across them, and in a manner that is consistent with the MoE strategic planning, SE4ALL targets or with the national midterm planning (MTP) so the energy planning at local level remains isolated.
 - The central Regional Administration and Local Government (PO-RALG) office has historically not had any in-house capacity to plan for and implement energy activities. This contributes to energy activities, if they are addressed at all at local level, being handled in a non-standardised and ad-hoc manner, often on a project-by-project basis with no effective means for ensuring sustainability or lesson learning
 - The lack of technical, in-house capacity on energy within LGAs also means there have only been weak systematic linkages between local government and MoE which has made local-level energy planning almost non-existent and energy planning has largely been centralised
 - In the face of increasing decentralised energy investments such as mini-grids, LGAs lack the capacity to facilitate and effectively engage with investors whether on matters pertaining to access to resources such as land, their operations, or to engage as equity partners and develop new revenue streams.

In view of the identified barriers, this provides an opportunity to stakeholders of sustainable energy including TaTEDO to continue building capacity at local level on how to plan and implement sustainable energy interventions.

8.3 Opportunities for participation in NDC implementation

Possibilities exist for CSOs to participate in implementation of the recent developed draft of national NDCs implementation plan especially on awareness raising and sensitization of communities on importance of local climate actions including sustainable energy interventions.

8.4 Opportunities for participation in SE4All implementation (participation in working groups etc. consultations etc)

- In 2018, the Minister for Natural Resources and Tourism formed a National Task Force (TF) (TaTEDO is part of the TF) to assess options that could address challenges in charcoal production, trade, and use and that support the sustainable management of forest resources in Tanzania. Specifically, the TF was tasked to: 1) Evaluate the sustainability of existing charcoal production and use models within Tanzania, and beyond, and their potential application along the value chain in the Country; 2) Identify barriers and gaps that hinder the sustainability of the charcoal sub-sector in Tanzania; 3) Identify and engage relevant stakeholders and draw lessons for the improved development of the charcoal sub-sector in the country; and 4) Recommend policy applications towards improving the sustainability of the charcoal sub-sector in Tanzania.

The Task force recommended revision and harmonization of policies including the National Forest Policy of 1998, National Energy Policy 2015, National Environmental Policy 1997, National Agriculture Policy of 2013 and National Land Policy of 1997 in addition to the policy framework on decentralization. The need for having a common vision²¹ for the charcoal sub-sector should be emphasized during the revision process. The policies should explicitly support the principle of sustainability of the charcoal sub-sector in the country. With this regard it is expected that the environmental and forest policy which are currently under review will provide opportunities to stakeholders including CSOs to further provide inputs to incorporate recommendations from the charcoal task force.

- According to the Tracking SDG7, The Energy Progress Report (2019) the world is not currently on track to meet Sustainable Development Goal 7 (SDG 7), sustainable energy for all. While there is progress, it is not at the speed and scale needed to achieve the goal by 2030, and for some targets of the goal, progress has stalled or is slipping backwards. Understanding what is working, where and why, and focusing closely on where and why we are failing elsewhere, has been a driving force for SEforALL. Recently a staff from TaTEDO participated in **SE4ALL Charrettes** convened from 18th to 20th June 2019 in Amsterdam, Netherlands. The charrettes was organized by SE4ALL and were guided by four questions:-
 - Charrette #1: While there is progress in securing energy access, some countries which account for the majority of the 1 billion people without access risk being left behind. How do we improve the data and evidence on who and where they are, what they need, and what is working and why in order to improve decision-making and speed progress?
 - Charrette #2: What is required to bridge the gap between supply and demand for appropriate finance for electricity access in high impact countries (HICs) to meet SDG 7?
 - Charrette #3: What changes are necessary within the finance sectors (including development finance) to increase the risk appetite to fund market-based last mile electricity access?
 - Charrette #4: What is required to create a sustainable, investable private sector-led market for fuels for clean cooking?

Each charrette identified a critical pathway forward and specific actions, partners and timelines for results to be achieved. The outcome of the charrettes will be an input and momentum for the UN Secretary-General's Climate Summit in September 2019, and for the High-level sessions on SDGs and Financing for Development at the UN General Assembly to be held at the same time. SEforALL is still following up with participants to provide more inputs to refine the documents time after time.

8.5 Opportunities for participation in other national climate and energy plan developments (participation on working groups etc. consultations etc.)

- Tanzania is preparing the twelve-year **Rural Energy Master Plan 2018 – 2030 (REMP)**²² which involves preparation of a Rural Energy Supply Strategy and Programme. Multi-consult in partnership with TaTEDO, IED have been commissioned by REA to facilitate preparation of the REMP which is expected to be finalized in 2020. The Rural Energy Master Plan's main topics are electricity and cooking energy. It provides a plan for expansion of electricity

²¹ 'To ensure that Tanzania and its people benefit from sustainable charcoal production, marketing and utilization for sustainable development'.

²² <https://www.rea-remp.org/about/>

provision through grid extensions, mini-grid development, and stand-alone solutions (for example Solar Home Systems, and an action plan to ensure increased use of improved solutions for cooking. The REMP includes an implementation strategy which may guide the activities of the Rural Energy Agency (REA) and other key stakeholders and actors in rural energy access. The Rural Energy Master Plan's Cooking Energy Action Plan will address challenges related to a range of factors including but not limited to awareness creation and education, private sector development, ICS production capacity, regulatory factors related to standardization and control of forest activities, coordination of stakeholders, continued electrification progress and financial mobilization. Table 4 shows REMP targets for the cooking energy. The Inception report was submitted to REA on 5 July 2017. Due to unavoidable circumstances the project completion was delayed, other deliverables will be submitted thereafter.

Table 4: Targets for the Rural Energy Master Plan - Cooking energy

Parameter	REMP Target by 2030
Biomass fuels	Reduce the amount of people who use firewood or charcoal as primary cooking energy to half of the population
Improved cook stoves (ICS)	Increase the use of ICS to 40% of the population using biomass fuels for cooking
Liquid Petroleum Gas (LPG)	Ensure availability of LPG in all towns and district centre and increase use of LPG for cooking to a fourth of the population
→ % of population with improved cooking	Ensure that at least two-thirds of the population use a form of improved cooking solution
→ Wood fuel demand	Overall reduction compared to 2016 consumption

Source: Draft Interim Report 2018, options and approaches for improved cooking in rural Tanzania

- **NAPs development in Tanzania**

The Tanzania National Adaptation Programme of Action (NAPA) provided entry points for the government to plan the development of a National Adaptation Plan (NAP). The NAP process was officially established in July 2015 when a national training for ministers resulted in a surge in government support for adaptation action. Then, a three-year NAP Roadmap identified the priority actions needed to establish a NAP. In 2016, a national NAP Team was established to oversee implementation of the NAP process. In 2018 the Ministry of Health supported by the NAP Team finalized Tanzania's Health NAP, but Tanzania's water and agricultural ministries also have institutional adaptation plans. In 2019, supported by GIZ, Tanzania developed a Draft NAP Stocktaking Report. This builds on current information and synthesizes climate change impacts, vulnerabilities and risks. Stakeholders consulted for the Stocktaking Report included government officials from 185 local councils as well as from ministries and technical agencies in mainland and Zanzibar. Tanzania is aiming to develop and launch its first NAP document during the period 2019-2021. This process will build on the findings of the 2019 Stocktaking Report. Institutional capacity will be strengthened during the development process across levels of governance and in priority sectors. International and

national research institutions have supported Tanzania's adaptation efforts by developing climate risk and vulnerability studies for different sectors. CSO being key stakeholder in the sector, their involvement is expected to continue.

- The Ministry of Energy (MoE) along with the support of EU, developed draft **Biomass Energy Strategy (BEST)**²³ in 2014 that was never approved or implemented. The strategy identified the means of ensuring a sustainable supply of biomass energy; increasing the efficiency with which the biomass energy is produced and utilized; promoting access to alternative energy sources wherever appropriate and affordable; and ensuring an enabling institutional environment for implementation. Recently the MoE has indicated interest to review and finalize the BEST. Review will involve a more detailed action plan which largely follows the options presented in the 2014 version and also includes biomass for electricity generation and gender mainstreaming. The strategy will also include indicative budgets for the different interventions which were not considered earlier. Review process open opportunities for CSOs and other stakeholders to participate further in the process.

8.6 Opportunities for participation in NDC implementation (involvement in implementation of activities on the ground in various ways)

There are CSOs and SMEs (see list in Table 5) already involved in promoting sustainable forest management, use of renewable energy and efficient energy technologies including solar technologies, efficient cook stoves, efficient electric appliances, efficient charcoal production methods, briquettes production from waste, etc. Most of the initiatives are complimenting government efforts to achieve clean cooking solutions and rural electrification through development of renewable energy mini-grid and solar home systems.

The National REDD+ Strategy and Action Plan (2013)²⁴: The National REDD+ Strategy presents a comprehensive strategy for climate change mitigation in the forest sector and proposes the establishment of robust baseline scenarios and MRV systems, along with governance and coordination systems embedded in the existing climate change structure, and suggests capacity building and social awareness in relation to forests (URT, 2013a). Tanzania has attempted to address some of the drivers of deforestation, mainly due to agricultural expansion, overgrazing and charcoal production, and forest degradation, through the adoption of legal frameworks, including the promotion of Participatory Forest Management approaches. However, with only 12.8% (4.1 million ha) of Tanzania's forests under participatory management, the National REDD+ Strategy recognizes the need for innovative financing mechanisms such as REDD+ payments to support and accelerate processes to reverse degradation and deforestation. It also proposes the establishment of a national REDD+ fund (URT, 2013a; p. 43). The national REDD+ strategy and action plan provide room for CSOs and other stakeholders to participate in implementation of proposed activities.

²³ <http://www.euei-pdf.org/en/seads/policy-regulation-and-strategy/biomass-energy-strategy-best-tanzania>

²⁴ <http://theredddesk.org/countries/plans/national-strategy-reduced-emissions-deforestation-and-forest-degradation-redd>

8.7 Opportunities for participation in SE4All implementation (involvement in implementation activities on the ground in various ways)

- Ministry of Energy under the support of European Union through European Union Sustainable Energy for All (EU SE4ALL) Technical Assistance Facility (TAF) developed Energy efficiency Strategy as one of the tools for implementation of the National Energy Policy of 2015 and other related plans and strategies. The **Tanzania Energy Efficiency Strategy for 20 years (TEES20)** from 2019 to 2039 was developed within the EU Technical Assistance Facility for the "Sustainable Energy for All" Initiative (SE4ALL) - Eastern and Southern Africa. The scope of the TEES20 covers energy efficiency (EE) in all energy demand sectors: industry and utilities, transport, households and buildings, with quantifiable energy efficiency targets for households, industry and water supply sectors. The TEES20 mission is to support the implementation of the strategic goals set by the Tanzania National Development Vision (TDV) 2025 and its vision is to make energy efficiency one of the backbones of the economic and social development of Tanzania. The TEES20 indicates five strategic objectives, namely:
 - Increasing the energy efficiency of firewood and charcoal consumption in households as the main energy consumers in the country
 - Raising energy efficiency in industry and utilities
 - Raising energy efficiency in the transport sector
 - Raising energy efficiency in buildings
 - Implementing cross-cutting measures promoting EE in order to sustain the momentum created by the TEES20.

Each strategic objective has a list of targets to achieve the respective strategic objective and a set of measures to be implemented to reach a particular target. The TEES20 places particular emphasis on resolving the problem of inefficient use of wood and charcoal making up 82% of the country's total primary energy supply by improving energy efficiency in cooking and water heating for domestic needs. Large-scale introduction of locally manufactured improved cooking stoves (ICS) will result not only in substantial energy savings, but also significantly contribute towards the mitigation of deforestation and forest degradation and considerably improve indoor air quality. Implementation of ICS is targeted at saving 105-130 million m³ of air-dried wood over the span of the TEES20. Presence of TEES20 and implementation plan is a step towards implementation of national Energy policy of 2015 and provides opportunities for CSOs and other stakeholders involved with promotion of efficient cook stove and clean fuels to participate in its implementation and contribute to SE4ALL goals.

- **Up scaling Modern Cooking & Fuels in Tanzania** is a programme which will be implemented under the support of EU Technical Assistance Facility for the "Sustainable Energy for All" Initiative (SE4ALL) - Eastern and Southern Africa. The overall objective of the action is to improve living conditions of urban and peri urban communities in the Dar es Salam, Dodoma and Morogoro through sustainable biomass energy utilization and access to modern cooking solutions. The action contributes towards the SE4ALL objective to increase the share of the population in Tanzania with access to sustainable and modern clean cooking solutions to 75% by 2030. The action will in particular focus on the large (peri) urban populations in the Dar es Salaam, Morogoro and Dodoma areas. The Action also fits well with the EU target to provide access for an additional 500 million people to modern clean cooking solutions by 2030. The Action will address the specific objectives of the programme through; creating and enabling environment for sustainable biomass energy, increased

production of sustainable charcoal and increased access to clean cooking solutions and awareness on cooking dynamics. It is envisaged that the programme will be managed by the United Nations Capital Development Fund (UNCDF), the UN agencies operating in Tanzania and other Least Developed Countries. The UNCDF has been endorsed by the Ministry of Energy to manage the programme. Currently negotiation is going on between UNCDF and EU. Existence of this programme is an open window for CSOs and energy SMEs to participate in implementation of SE4ALL activities.

- **Tanzania’s Sustainable Energy for All** is a five-year (2017-2022) full-fledged project which seeks to integrate the multi-tier efforts of the country towards providing universal access to energy, increasing the energy efficiency and renewable energy aspects. The programme is designed to, *inter alia*, support the GoT attain its desired development goals, among other things, through enhancement of institutional capacity in RE; increased share of RE power generation; facilitating investment in renewable energy generation; making use of the country’s renewable energy resources and reduced GHG emissions with the aim of supporting the socio-economic development of the country. The project is implemented by the MoE in close cooperation with UNDP and other development partners. The project steering committee consists of members from the MoE, UNDP, TANESCO, Tanzania Bureau of Standards, MNRT and Rural Energy Agency (REA). The SE4ALL Secretariat has been established at MoE and already started operation. Up-coming activities that will be implemented include the development of the Tanzania Renewable Energy Information Management System. The project budget is USD 10,000,000. MoE will be informed on the local solution database to be developed under EASE-CA project that could be an input to the information system.

8.8 Opportunities for participation in other national climate and energy plan developments

- **Rural Electrification Expansion Project**

The development objectives of Rural Electrification Expansion Project for Tanzania are: (a) to increase access to electricity in rural areas; and (b) to scale-up the supply of renewable energy in rural areas while strengthening sector institutional capacity. The Rural Energy Agency (REA) and the private sector are implementing the National Rural Electrification Program (NREP), the government program, during 2013–2022, as outlined in the Prospectus. The Government of Tanzania plans to achieve about 1.3 million connections in rural areas (including public facilities), increasing the average access rate to electricity (both urban and rural) from the current 24 percent to 35 percent by 2022. This Program-for-Results (PforR) aims to support three of the electrification avenues of the NREP identified in the Prospectus: (i) grid extension; (ii) off-grid electrification; and (iii) within the category of off grid electrification, renewable technologies, including solar photovoltaic (PV). This program is strategically relevant and fully aligned with Tanzania Development Vision 2025. Implementation of this project is mostly undertaken by private sector, REA is just coordinating the project. SESCO is partnering with Mufindi Power to develop electricity distribution grid System for more than 200 villages including connections to different electricity users under this rural electrification programme.

8.9 Opportunities for participation in Green Climate Fund (GCF) projects

Follow up will be made with Deutsche Bank AG and Agence Française de Développement to find possibility to participate in implementation of “Transforming Financial Systems for Climate” and “Universal Green Energy Access Programme” which are the GCF funded projects.

8.10 Opportunities for participation in other climate mitigation projects with state involvement

The Vice President’s Office of the United Republic of Tanzania has developed an historical and projected GHG inventory and a sustainable national inventory system. The greenhouse gas inventory system covers the main contributing sectors to GHG emission and sinks, including energy, transportation, agriculture, land use, land use change and forestry (LULUCF), manufacturing, chemical use and waste. The system covers GHG inventory for the years 1994-2025²⁵. The GHG inventory will be a crucial source of data for the Government when preparing developing scenarios for the NDCs, when preparing National Communications (NCs) reports every four years and Biennial Update Reports (BURs) every two years.

The MRV Portal forms the basis of a comprehensive and transparent MRV system tool for Tanzania, retaining information and processes for use in future years. It marks the beginning of an enhanced institutional memory for the GHG inventory compilation process in the United Republic of Tanzania, providing the basis for Tanzania to meet its international commitments for years to come. Following the ratification of the Paris Agreement by the Government of Tanzania, the GHG inventory will be a crucial source of data for the Government when developing scenarios for the NDCs such as baseline and future projections of emissions. The national MRV portal will be one of the potential sources of information and data on emission which will be useful to CSOs as reference material while designing interventions and also will provide opportunity to stakeholders including CSOs to feed in date and information as well.

9.0 Potential Collaborators in EASE-CA Project

Table 5 shows the list of CSOs and SMEs involved in climate, energy and forestry related sectors in Tanzania who could be interested to participate in implementation of EASE-CA project. This list is updated from the list of coalition members of PIPA project.

Table 5: Some of CSOs and SMEs in Energy and Climate Change Sector

No	Name	Membership	Media address
Civil Society Organizations (CSOs)			
1	National Gender and Sustainable Energy Network (NGSEN)	-26 Members, TaTEDO is a founder member working closely in sustainable energy interventions. -They focus to integrate gender issues in energy policies, legislations and plans through lobbying and advocacy	http://www.ngsen.org
2	The Energy Change Lab	-Is a program of Hivos and the International Institute for Environment and Development (IIED). The Lab works with pioneers and change-makers to create an energy system that is sustainable and people-	https://energychan gelab.org/

²⁵ <https://www.aether-uk.com/Case-studies/Tanzania-GHG-Inventory-MRV-System.>

		<p>centered. They do it by developing leaders, incubating prototypes, building evidence, connecting people and sharing ideas.</p> <p>-The Tanzania Energy Change Lab's Productive Use of Energy (PUE) programme has the objective is to enable pioneers in and outside the energy sector to design, test and learn about interventions that promote PUE.</p>	@HivosEnergy
3	Solar Sisters	<p>-Solar Sister believes women are a key part of the solution to the clean energy challenge.</p> <p>-Empower women and to reach those who aren't reached by business-as-usual energy models.</p>	@solar_sisters
4	Tanzania Sustainable Development Platform	<p>-Self-organizing, coordinating and documenting civil society organizations' contributions towards the implementation, follow up and monitoring of Sustainable development in Tanzania.</p> <p>-Lobbying and hold accountable the central government, local government authorities, national parliament, and private sector for their commitments, policy, institutional arrangements, and resources allocation towards the implementation, follow-up and monitoring of the 2030 Agenda and Agenda 2063 through the Five Years Development Plan II (FYDP II).</p>	@SDGsTanzania
5	Tanzania Civil Society Forum on Climate Change (FORUM CC)	<p>-Has 70 members all over the country including Pan Africa Climate Justice Network, NGO AF Network, CAN International, 350.org, Tanzania Sustainable Development Platform. TaTEDO do collaborates with FORUM CC especial in climate change related advocacy issues</p> <p>-Have been organizing CSOs pre-COP meetings</p> <p>-Involved with study on climate financing governance and accountability</p> <p>-Have advocacy projects on renewable energy</p> <p>-Have experience on participating in COPs</p>	<p>http://www.forumcc.org</p> <p>@Forumcctz</p>
6	Tanzania Forest Conservation Group (TFCG)	<p>-Non-government organization and a founder of MJUMITA.</p> <p>-Most of their activities focusing on sustainable management of forest.</p> <p>-One of the CSOs piloted REDD+ project</p> <p>-Have projects with climate change components</p> <p>-TFCG and TaTEDO are working in partnership in Sustainable Charcoal project.</p> <p>-Have experience on lobbying and advocacy activities</p>	<p>http://www.tfcg.org</p> <p>@TFCGtz</p>
7	Tanzania Renewable Energy Association (TAREA)	<p>Is an association with focus on renewable energy with members all over the country, TaTEDO is a founder member</p> <p>-Lobby and advocate for conducive policy</p>	https://www.tarea-tz.org

		environment in renewable energy sector - Collaborated in preparation of Country Action Plan for Clean Cook Stoves and Fuels	@TAREATZ
8	Clean Cookstoves and Fuels Alliance of Tanzania (CCFAT)	An alliance aiming to strengthen local actors and stakeholders working in the cookstove and fuels sector to influence the government to facilitate the increased innovation in designing, producing, marketing and use of clean cook stoves and fuel through better government policies, information sharing, training and campaigning. TaTEDO a founder member	
9	WWF-Tanzania	-International NGO, focusing to conserve forestry, wildlife, marine and to promote sustainable energy -TaTEDO is a member of Mazingira Network (MANET) and Sustainable Energy Forum (SEF) both facilitated by WWF to establish. -Partnering in implementation of the project on "leading the change, civil societies rights and environment"	http://wwf.panda.org/wwf_offices/tanzania/ @WWFTANZANIA
10	Mtandao wa Jamii wa Usimamizi wa Misituta Tanzania (MJUMITA)	-A network of thousands of community members from over 400 villages across Tanzania providing technical assistance regarding forest management, governance and advocacy to members, Also working together to implement a project on Leading the change which is coordinated by WWF	https://mjumita.org/
11	Climate Action Network Tanzania (CAN-TZ)	Has more than 100 members - CSOs working on climate related activities in different parts of the country. TaTEDO also a member. -Developed 100% RE scenarios for Tanzania -Have experience on participating in COPs	http://www.climateneetwork.org @CANTZ28
12	Lawyer's Environmental Action Team (LEAT)	LEAT collaborates with organizations based in Tanzania Mainland such as Journalists Environmental Association of Tanzania (JET), Tanzania Natural Resources Forum (TNRFF), Legal and Human Rights Centre (LHRC), AGENDA, HAKIARDHI, ENVIROCARE, Policy Forum, HAKIMADINI, Coalition for Human Right Defenders (CHRD), FORDIA and other organizations. -Provide lawyer services on natural resources	http://www.lead.or.tz @InfoLeat
13	Women Research Development Group (WRDG)	A group of women committed to support local community through undertaking of social and environmental research.	
14	The Guardian	-The group, a leader in the private sector with dignified presence in the print media as well as radio and television broadcasting. Guardian publishes two daily newspapers, The Guardian and Nipashe, and four weeklies. The Guardian on Sunday and Nipashe Jumapili are Sunday publications, while Taifa Letu is published on Fridays and Sema Usikike on Mondays.	@TheGuardiantz
15	AGENDA for	Non-governmental, non-profit sharing organization	

	Environment and Responsible Development	promoting environmentally responsible, transparent and accountable business practices in the country.	
16	Tanzania Environmental Friendly Association (TEFA)	Non-profitable organization with the mission to conserve the environment through research, policy analysis, advocacy and capacitate the community to collectively participate to address their critical environment problems.	http://www.tefatz.org
17	Eastern and Southern African University Research Programme (ESAURP)	Carry out research in human resources development and usage within the 15 countries in the Eastern and Southern African region.	@Esaurporg
18	Tanzania Youth Environmental network (TAYEN)	-Non-profit youth led organization that connects children and youth to participate in environmental conservation activities in Tanzania. TAYEN was registered on 25th August 2008. -Through a network of established Youth Environmental Clubs, TAYEN conducts Environmental Education and Conservation Programs through trainings, workshops, seminars, campaigns, and programs implementation in communities for youth to learn and address environmental problems -there is opportunity to collaborate on EASE activity 1.9.7 student volunteers	http://tayen.or.tz/index.html
19	Tanzania Youth Vision Association (TYVA)	Tanzania Youth Vision Association [TYVA] is a youth led organization with non-partisan and non-governmental [NGO] founded in the year 2000. It aims at capacity building of youth and youth organizations in civic and social-economic spheres, focusing on bringing about self-realization, empowerment, Participation and involvement of young people in Tanzania. -there is opportunity to collaborate on EASE activity 1.9.7 student volunteers	https://tyvavijana.or.tz/ @TYVAvijana
20	The Green Icon	The Green Icon is non-profit organization working on Sustainable Development Goals (SDGs) particularly Goal 7 (Clean Energy), Goal 11 (Resilient Cities and Communities), Goal 13 (Climate Action), Goal 14 (Life under Water) and Goal 15 (Life on Land).	@thegreenicon
21	YouthCAN	Youth led movement in Tanzania focusing on climate change issues	
22	Foundation for Energy, Climate and Environment	An institution undertaking research focusing on energy, climate and environment	
23	CSADO	Non-governmental organization focusing on climate change, environment and livelihood at catalyst for social action and development	
24	Tanzania Natural Resources Forum (TNRF)	Is a collective civil society-based initiative that aims to improve natural resource management in Tanzania by addressing fundamental issues of natural resource	https://www.tnrf.org

		governance. TNRF aims to improve accountability, transparency and local empowerment in natural resource management by bringing together a diverse range of stakeholders and interests to share information, build collaboration and pool resources towards common goals. - Good experience on advocacy and lobbying for policy changes -Accredited to COPs	@tnrforum
Small and Medium Enterprises			
25	Sustainable Energy Services Company Limited (SESCOM)	-Company undertaking renewable energy business activities in off-grid areas of Tanzania -Currently partnering with Mufindi Power Services Company to develop a electricity distribution grid System for more than 200 villages including connections to different electricity users under REA III rural electrification programme	sescomtanzania@gmail.com
26	E -LINK CONSULT LIMITED	A consultancy firm, registered in Tanzania comprised of professional and technical experts in natural resources assessment and management, socioeconomic analysis, forestry Assessment; agriculture, food security, livelihoods analysis, climate change adaptation and mitigation; project development and management; entrepreneurship skills and information and knowledge management.	
27	ENSOL (T) Limited	Established in 2001, Ensol supplies, install and maintain solar pv, back up and water heating equipment and systems. Ensol is a registered Class I solar energy contractor in Tanzania. Ensol develops, construct and operate solar PV and small hydro microgrids in Tanzania.	https://ensol.co.tz/
28	REX energy/REX Inv.	Rex Investment Limited is a solar specialist contractor rated class one and an electrical contractor rated class five by Contractors Registration Board of Tanzania (CRB).	@RexEnergy
29	PowerGen Renewable Energy	Founded in 2011 to address the challenges of renewable energy and energy access in Africa. Experts in integrating solar, battery storage, and diesel generators along with smart metering and control systems to create sustainable, cost-effective energy solutions for all scenarios. TaTEDO expect to collaborate with PowerGen to promote efficient cooking appliances in their project sites in Tanzania.	@PGAFRICA
30	KAKUTE	Social enterprise Limited Guarantee without profit, registered in Tanzania. KAKUTE implements activities to facilitate market improvements aimed at increasing demand and improving supply. We undertake pilot projects, conduct market research, and test interventions for a range of clients	
31	ENVOTEC Service	Producers of Improved Cook Stoves of various types	envotec@gmail.co

	Ltd	for low and medium income households, as well as for Institutions and Restaurants, Designing, Researching to achieve efficiency, Manufacturing, Promoting, Marketing.	m
32	HUSK Power Systems	Husk currently designs, builds, owns and operates one of the world's lowest-cost hybrid power plant and distribution network in India and Tanzania. Currently partnering with TaTEDO to operate the Kibindu solar-biomass hybrid mini-grid.	@HuskPowerSystem
33	Appropriate Rural Technology Institute (ARTI), Tanzania	Is an organization promoting appropriate renewable energy technologies in Tanzania, TaTEDO do collaborates with ARTI on promotion of clean cook stove and fuels	

The organizations and networks presented in the Table 5 have been earmarked and will be informed on EASE-CA project and the opportunity to partner in its implementation. Most of the CSOs identified participated in Promoting the Implementation of the Paris Agreement in East Africa (PIPA) in 2017-18, and some were involved in a previous project named “Promoting pro poor Low Carbon Development Strategies” which was concluded in March 2016.

9.1 Main Barriers for CSO Involvement in National Climate Policy

- Poor coordination among CSOs/NGOs involved in Climate change area, working in isolation. Lack of a strong and long-lasting platform to bring CSOs together and actively participate in policy development.
- Limited knowledge on climate change policies related issues among CSOs/NGOs. Insufficient information by CSOs to support voices calling for climate change policy
- Financial constraints, government and CSOs/NGOs overdependence on donor/grants to implement climate change interventions. Lack of enough resources to bring CSOs to come together.
- Weak sharing of best field experiences and in some cases low technical capacity, limited knowledge and poor advocacy approaches. Poor Timing- Most CSO's are engaged in the process during the last time as the results most of their views are not reflected in the final policies. There is a need to find the best way to push/lobby the government to consider CSO's comments in the final policy documents
- Unclear focus and priority of government towards climate change policies. Low political to prioritize climate change issues
- Poor communication strategy, e.g. few members can access their emails regularly.
- Fear of the NGOs to be critical of the government (threatened freedom of speech)
- Low commitment among CSOs, less focus on climate change (very few CSOs have climate change agenda in their plans)
- Low awareness on Climate change in general at different levels.
- There is poor coordination and cooperation among various government sectors on issues related to climate.
- High cost in consultation of various stakeholders in policy development is a barrier for poor stakeholders' engagement.
- Poor enhancement of multi-stakeholder participation in the process.

- Some CSOs cannot enable the public to follow the negotiations by translating science into simple language.

9.2 Recommendations to increase CSO-involvement in climate policies

The following recommendations were generated through discussions with CSOs during PIPA project, most of them still relevant to date.

- Undertake researches for evidence based advocacy works. Build capacity of CSOs to be able to design and undertake appropriate advocacy work (communication approaches, timing, target, authority).
- Analytical skills in support of pro-poor development in general. Analytical information about a concept of “Pro-poor” in bases of the activities undertaken by the poor. For instance, if we promote pro-poor low emission in implementing the PA, then what should be done on sectors like agriculture where the poor depends for income and livelihood, etc.
- Research and development on climate change policy development in forest, agriculture and renewable energy sectors. Apply pro-poor approach, establish link between climate change and livelihoods.
- Enhance advocacy capacity of CSOs to amplifying community views and voices
- Establish clear mechanism for the government to involve CSOs in policy issues.
- Strengthen existing coalitions and establish strong coordination for CSOs working in climate change sector.
- Build alliances, coalitions, networks at local and global level where CSOs could share and exchange knowledge and come up with solutions to influence climate change policies.
- Build capacity of CSOs on climate finance and its landscape (Multilateral and Bilateral) to tap the existing opportunities.
- Capacity Building of CSOs on climate change technical related matters and the associated opportunities for the country.
- Enhance technical capacity of CSOs to be able to identify gap in national policies and priorities in relation to global agreements e.g. SDGs, Paris Agreement
- Enhance capacity of CSOs to push for harmonization of policies and legal instruments.
- Articulation of climate change into plans, projects and programs of the partners/CSOs
- Build the capacity of Youth and Women on climate change policy related issues.
- Enhance capacity of CSOs to develop technical project proposals and reports
- Empower CSOs to undertake Result Based Monitoring and Evaluation.

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