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# Assessment of Tanzanian and Regional Climate Change Related Policies Addressing Climate Change

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**Abstract:** The Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) revealed that climate change is real and is already happening at an unprecedented rate. This paper assessed how climate change and adaptation is mainstreamed into all relevant areas of public policies. This paper has been developed through a systematic review and analysis of Tanzanian and regional climate change related policies and strategies in order to understand the current status of climate change policies and strategies and how they influence adaptability and resilience by small scale farmers in the country. We found that even though most of the policies have touches to environmental related matters, only few policies have clear provisions on issues pertaining to climate change adaptation and mitigation. Despite all these potentials, there are however a number of constraints to the implementation of activities stipulated in the policy and development programmes to attain sustainability. In Tanzania, climate change has emerged as one of the critical environmental challenges likely to undermine country-level efforts to achieve sustainable development. Occurrences of severe droughts which have hit most parts of the country, prevalence of crop pests and diseases, which have been reported to be increasing and posing more challenge to agriculture, are evidently leading to food insecurity and water scarcity. Thus, integrating climate change risks into government policies requires more flexible, preventive and forward-looking approaches and will involve legal, institutional and policy changes. For example, climate change adaptation could be facilitated through greater use of market-based instruments such as efficient water pricing and water markets, and risk-based insurance for properties, floods and droughts.

**Keywords:** Climate Change, Vulnerability, Smallholder Farmers, Policies

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## 1. Introduction & Contextual Background

The government of Tanzania in partnership with donor agencies and international organizations has started to incorporate climate change issues into policies, planning processes and financing machineries. However, the mainstreaming is still in its infant stage. Nationally, the Government of Tanzania has made some progress with regard to climate change including establishment of a National Climate Change Steering Committee (NCCSC), Climate Change Focal Point at Vice President's Office (VPO),

Task Force for Reduced Emissions from Deforestation and Forest Degradation (REDD), National Adaptation Strategy and Action Plan (NAPA) and development of National Climate Change and REDD+ Strategies. Ongoing efforts include incorporation of climate change mitigation and adaptation into the reviewed National plans and strategies such as Strategy for Growth and Reduction of Poverty (MKUKUTA in Kiswahili) and thereafter into the sectoral policies and subsequent legislations. Climate change has already been incorporated in the agricultural policy but is yet to receive the same prominence in the energy, water,

community development, land, wild life, forestry, health and other policies.

This policy analysis work has been undertaken cognizant of the tremendous risks imposed by climate change and the urgent need for national policy response with a comprehensive long-term strategy. If ignored, climate change has the potential to undermine fundamentally even the finest development initiatives the country has unfolded. The policy review is therefore intended to provide relevant information to stakeholders in the policy-making process with two specific objectives:

- 1) Review of Tanzania and regional policies related to climate change
- 2) Identifying the gaps with regards to climate change.

This paper argues that there is still a need for the Tanzania government to focus more on effects of climate changes and its impact/implication to smallholders' producers. Based on the review it is important to put in place some policy measures which will specifically address and guide the smallholders to become more resilience to the effects of climate changes on agriculture. The remainder of the paper is organised as follows: section 2 gives an overview of the Tanzania Policy Program, section 3 describe methods and approaches used to review the documents, section 4 discusses the findings on two levels, (Regional and National), also it discusses the legal environment and implementation strategies of the policies. Section 5 gives the reflections and lessons learned.

## 2. Methods and Approaches Used

This paper has been developed through a systematic review and analysis of Tanzanian and regional climate change related policies and strategies in order to understand the current status of climate change policies and strategies and how they influence adaptability and resilience by small scale farmers in the country. The draft report was shared at validation stakeholder's workshop to buy in their inputs.

## 3. Findings

### 3.1. Policies and Strategies

#### 3.1.1. International Policies

##### *Multilateral Environmental Agreements and Protocols*

Tanzania is a party and signatory to a number of Multilateral Environmental Agreements (MEAs) and protocols that address various aspects of the environment table 1. The country has ratified various MEAs as an endeavour to join the international community efforts in addressing global environmental issues such as climate change, biodiversity, ozone depletion, desertification, and hazardous chemicals and wastes (URT, 2012a). These MEAs are important outcome of the 1992 United Nations Conference on Environment and Development (UNCED). Among the conventions which address climate change either directly or indirectly are UNFCCC, United Nations

Convention on Biological Diversity (CBD) and UNCCD. There are also some protocols which address climate change in one way or another. They include the Kyoto protocol to UNFCCC, Montreal Protocol on Substances that Deplete the Ozone Layer and Cartagena Protocol on Bio-safety to the CBD. While UNFCCC and the Kyoto Protocol are directly focusing on climate change, the rest do not focus on climate change alone, but more on environmental issues in general (URT, 2012a).

In reviewing these documents one can note that UNFCC and Kyoto protocol focus mainly mitigation of climate change and adaptation to its impact. Emphasis is stabilization of greenhouse gases (CHGs) in the atmosphere, this aims at mitigating dangerous anthropogenic interference with climate change system. The Kyoto protocol also focuses on effects to reduce emissions. The Vienna Convention and Montreal Protocol also put emphasis on the protection of ozone layer which will lead to protection of human health- as a result of modification of the ozone layer from anthropogenic emissions. Convention on Biological Diversity (CBD) has put into emphasis promotion of biological diversity focus on sustainable use of its component and fair equitable sharing arising out of utilizing genetical resources. The convention tries to help nations develop their own national strategies for conservation and sustainable use of biological resources. United Nations Convention to Combat Desertification (UNCCD), aims to remedy the threat of deserts (for countries experience serious threats of droughts; it also provides for effective action plans to protect dry lands through innovative local programs.

**Table 1.** Some Multilateral Environmental Agreements and protocols on environment and climate change and their date of ratification in Tanzania.

S/N	Multilateral Environmental Agreement and Protocol	Date of Ratification
1	Convention on Biological Diversity (CBD)	June 1996
2	UN Convention to Combat Desertification (UNCCD)	June 1994
3	United Nations Framework Convention on Climate Change (UNFCCC)	April 1996
4	Kyoto Protocol to the UNFCCC	August 2002
5	The Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the Ramsar Convention)	2000
6	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1979
7	Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movements of Hazardous Wastes within Africa	April 1993
8	Vienna Convention for the Protection of the Ozone Layer	April 1993
9	Stockholm Convention on Persistent Organic Pollutants (POPs)	April 2004
10	Montreal Protocol on Substances that Deplete the Ozone Layer	April 1993
11	Cartagena Protocol on Bio-safety to the CBD	September 2003
12		

Source: URT, 2012

### 3.1.2. Regional Policies and Strategies

#### (i). SADC Climate Change Strategy on Water Sector

The strategy mainstreamed climate change issues within its framework with much attention on water issues. According to Chishakwe (2010), within Southern African Development Community (SADC) region, climate change adaptation is included within the SADC Water Sector Strategy. The policy and strategic framework for the Climate Change and Adaptation (CCA) strategy is based on principles laid out in the SADC Water Policy and Strategy. The Climate Change and Adaptation (CCA) strategy was approved by SADC Ministers Responsible for Water in September 2011. It is mainstreamed in the third phase of SADC Water Programme – a five year implementation plan of the SADC Water Strategy. The CCA strategy forms the water chapter of the overall SADC Climate Change Strategy (SADC, 2011). It recognises that the impact on water escalates to other water dependent sectors like energy, health, and agriculture, therefore adopts an integrated water resources management approach.

#### (ii). East African Community Climate Change Policy

In responding to climate change challenges Heads of State of the East African Community (EAC) agreed on the need for developing a climate change policy and strategies to address the adverse impacts of climate change in the region and harness any potential opportunities posed by climate change within the principle of sustainable development (EACCCP, 2011). The Policy provides an integrated, harmonized, multi-sectoral framework for responding to climate change through adaptation and mitigation in the EAC Partner States. On adaptation, the Policy aims at implementing urgent and immediate adaptation priorities identified in the National Adaptation Programmes of Action (NAPAs), National Adaptation Plans (NAPs) and climate change strategies. The question is how member countries and Tanzania in particular are prepared to adopt and implement the policy.

### 3.1.3. National Legal Framework and Visions

Tanzania has had several pieces of legislation, which touch on some aspect of the environment. Some of these legislations include the constitution of the United Republic of Tanzania amended in 1984 to provide for the Bill of Rights (Bierwagen and Peter, 1992). Article 14 of the Bill of Rights stipulates that every person has a right to life and to the protection of life by society. This implies that every person is entitled to live in healthy environment. Moreover, the Tanzania Development Vision (TDV) 2025 and the Zanzibar Development Vision (ZDV) 2020 are the guiding frameworks for national development and an articulation of a desirable future condition. It is envisioned by 2025 Tanzanian society will be substantially developed with a high quality livelihood, and abject poverty will be history (URT, 2011b; RGoZ, 2010). Although climate change has effect on the objectives of the Visions 2020 and 2025 because the impact of weather vagaries on agricultural production, infrastructure, and energy (URT, 2011a), climate change issues have not been

adequately mainstreamed in the development visions. Therefore, in most reviewed pieces of legislation and nation visions, the issues of climate change has not been explicitly addresses although may be implied through management of natural resources and environment. This paper argues that, a notable development in Tanzania need to consider climate change impacts as an important issue which needs to be looked upon if the country is to achieve sustainable development.

### 3.2. National Policies

#### 3.2.1. Sector Specific Policies

The National Land Policy of 1995 provides incentives for efficient use of land and its resources. The policy provides protection for environmentally sensitive areas, including water catchments, rivers, and river basins and banks. Although the policy puts more emphasis on environmental protection, it does not explicitly address the issues of climate change. Since the policy is more than 15 years old, there is a need to review it to accommodate the current socio-economic and environmental issues including climate change.

The national water policy (2002) contributes to the national strategy for addressing threats from land degradation and climate change as well as addressing poverty and promoting social well being. The policy also urges to promote rainwater harvesting as an effort to ensure more water available to rural communities through rainwater harvesting technologies. Although the national water policy anticipates for Integrated Water Resource Management and establishes strategies for ensuring water quality and quantity, the severity of climate change impacts on water resources are not clearly addressed in the policy. This implied that there is a need to mainstream climate change issues in the water policy to meet national water demands under ever changing climate. On the other hand, the National Irrigation Policy (NIP) of 2010 was developed to facilitate proper management of water resources, in collaboration with the National Water Policy of 2002. The policy sets its focus on ensuring optimal availability of land and water resources for agricultural production and productivity to contribute effectively towards food security and poverty reduction as stipulated in the poverty reduction strategy. Unlike the national water policy, the NIP recognizes climate change and provides strategies for addressing climate change impacts on water and other related sectors. It addresses climate change issues through recognition that the increasing global warming and climate change, is having negative effects on the optimal availability of water resources for crop production worldwide including Tanzania (URT, 2010b).

The National Forest Policy (1998) seeks to ensure sustainable forest management, environmental protection and conservation of biodiversity. It aims at conservation of forest resources for the benefits of present and future generations. Addressing the drivers of deforestation and forest degradation by targeting global mitigation opportunities in the forestry sector will enhance the contribution of the forest sector to sustainable development and global GHGs

mitigation efforts. This policy does not stipulate clearly the strategies on how this important resource (forest) can be used to mitigate climate change. It doesn't even mention how other sectors can use forest resources to adapt to climate change impacts by using forests resources. However, it has been under review to take into consideration significant changes and climate change issues which have occurred since it was enacted in 1998.

While the national wildlife policy (2007) address climate related matters including climate change issues through fostering biodiversity conservation and management, wetlands management, conservation of wildlife resources through game reserves, controlled area and national parks. Its counterpart national tourism policy of 1999 does not explicitly mention climate change issues although climate change is indirectly implied through its effort to promote friendly and sustainable tourism. In this policy climate change issues need to be explicitly addressed as it may have some negative impact on tourism. This will result into the enhancement of climate change adaptation and mitigation measures by reducing ecosystem vulnerability and accelerating the improvement of local climatic characteristics.

The National fisheries Policy of 1998 emphasizes that the fisheries sector should be developed in a sustainable manner, by using appropriate fishing gear and processing methods. However, the policy is not explicitly addressing climate change issues, despite the fishing sector being ranked among the most vulnerable sectors by the National Adaptation Programme for Action in 2007.

The objective of the energy policy is to develop an energy system that can readily produce, procure, transport, and distribute energy to end-users in an environmentally friendly and gender sensitive manner. It is anticipated that the occupants of the proposed facilities will be sensitized about the use of appropriate and efficient energy sources in order to maintain the quality of the environment. The policy promotes the use of natural gas and electricity instead of fuel wood (charcoal and firewood). Climate change issues are indirectly implied through efforts to promote appropriate and efficient energy sources and environmental conservation.

### **3.2.2. General/Crosscutting Policies**

Sustainable Industrial Policy 1996 provides that industries shall be planned in a manner that minimizes adverse effects on the environment at all stages and that industrial emissions shall be controlled. However, the policy is silent on climate change impact and adaptation as well as mitigation strategies in the sector. This entails the needs to mainstream climate change in the policy as well as in its strategic plan.

The national health policy 2003 emphasizes to reduce the burden of disease, maternal and infant mortality and increase life expectancy through the provision of adequate and equitable maternal and child health services. Climate change is a significant and emerging threat to public health (URT, 2011). Enhancing resilience and climate change adaptation will reduce the proliferation of infectious diseases and occupational health risks thereby ensure a healthier nation,

which is particularly important for sustainable development. However, the policy is silent on climate change impact and adaptation strategies in the sector. This entails the needs to mainstream climate change in the policy as well as in its strategic plan.

### **3.2.3. Climate Specific Policy**

The National environment policy (NEP) (1997) was developed to address environmental problems identified by the National Environmental Action Plan (NEAP) of 1994. These environmental challenges include land degradation; lack of accessible, good quality water for both urban and rural inhabitants; pollution; loss of wildlife habitats; deterioration of marine and freshwater systems; and deforestation. The NEP recognizes that development is sustainable if it takes place within nature's tolerance limits, both in the short and in the longer-term perspective (URT, 1997). It calls for a coherent policy where priorities can be defined for the promotion of long-term economic growth, creating incentives for sustainable utilization of natural resources, disincentives for environmental pollution and degradation, and effective management of the overall environment (URT, 1997). Even though NEP does not stipulate clearly the term climate change, its primary focus on ensuring sustainable management of environment and natural resources such forestry brings in climate change mitigation and adaptation. In particular, the NEP recognizes the importance of integrating environmental management in several sectoral programs and policies, and places forestry in the cross-sectoral issues (URT, 1997). However, this policy needs to be reviewed for incorporating new environmental challenges including climate change issues.

### **3.2.4. Legal Environment/Framework**

Tanzania has several pieces of legislation on natural resources which touched on some issues of environment, social and economic (URT, 2012a). Most of these pieces of legislation are aimed at regulating use and management of natural resources and have evolved along sector lines governing specific environmental media.

Environmental Management Act No. 20 of 2004; Tanzania's overarching environmental legislation is the Environmental Management Act (EMA) of 2004 which provides a framework for sustainable management of the environment and repeals all earlier laws and provisions that are inconsistent with it on environmental matters. Climate change issues are mainstreamed in this act. For example, section 75 of EMA addresses climate change issues through giving the Minister of Environment in consultation with relevant sector ministries the mandate to take measures to address climate change, particularly impacts of climate change and adaptation measures and issue guidelines periodically to ministries and any other institutions in order to address climate change and its impacts as a result of global warming. However, the implementation of this legal framework has been such slow ending having less contribution to addressing climate change issues in the country.

The Land Act No. 4 and Village Land Act No. 5 of 1999

both acts seek to control land use and clarify controversial issues pertaining to ownership of land and land-based resources, transactions on land, and land administration. Climate change issues have not been adequately addressed in these two acts. This is also the same with the land use planning Act No. 6 of 2007 that provides for the procedures for preparation, administration and enforcement of land use plans; to repeal the National Land Use Planning Commission and to provide for related matters. Clearly the Act stipulates measures to ensure that Government policies, including those for development and conservation of land, are in harmony. It also takes adequate account of the effects of policies on land use. The Act encourages the development of technology to prevent or minimize adverse effects that endanger people's health and welfare. Climate change mitigation and adaptation are not mentioned in this important act.

The forest Act No. 14 of 2002 is an Act to provide for the management, governance of protection, conservation, management and utilization of forests and forest products in Tanzania. The Act also defines restrictions and prohibitions relevant to forest reserves and reserved (threatened) trees. Climate change issues are neither mentioned nor given priority in this Act.

The fisheries Act No. 22 of 2003 is an Act to repeal and replace the Fisheries Act, 1970, to make provision for sustainable development, protection, conservation, aquaculture development, regulation and control of fish matters. Although, climate change has already affected negatively the fisheries sector, the Act is silent on both adaptation and mitigation strategies. Like in the wildlife policy, the Wildlife Conservation Act No. 5 of 2009, climate change issues are not adequately addressed in the Wildlife Conservation Act No. 5 of 2009 although in part IV and VI climate issues are indirectly implied. This is the same with the tourism Act No. 29 of 2008. Given the impact of climate change on wildlife resources, fisheries industry and tourism sector, mainstreaming climate change issues into the Wildlife Conservation Act is paramount.

The 2009 Water Resources Management Act is a new legislation that has repealed the Water Utilization (Control and Regulation) Act of 1974. The Act provides for institutional and legal framework for sustainable management and development of water resources; outlines principles for water resources management, for prevention and control of water pollution. In relation to that, there is the Water Supply and Sanitation Authority Act No. 12 of 2009 for sustainable management and adequate operation and transparent regulation of water supply and sanitation services with a view to give effect to the National Water Policy, 2002. Both acts are silent on climate change adaptation and mitigations.

The mining Act No. 14 of 2010 gives provisions that regulate the law relating to prospecting for minerals, mining, processing and dealing in minerals, to granting, renewal and termination of mineral rights, payment of royalties, fees and other charges and any other environmental relevant matters. The contribution of mining sector on GHG emissions cannot

be undermined. However, the act is silent on the how the mining sector is going to help in climate change mitigation and adaptation.

#### 4. Climate Change Strategy, Policy and Legal Linkages

The climate change initiatives undertaken in Tanzania are implemented in line with several other initiatives. For instance, national climate change strategy and action plan are part of the broader national policies and efforts to reduce poverty and support sustainable development at national, local and individual level. It is part of the National Environmental Policy 1997, Environmental Management Act No. 20 of 2004, the Tanzania Vision 2025; the Millennium Development Goals (MDGs); the National Strategy for Growth and Reduction of Poverty II (MKUKUTA II); Tanzania Five Years Plan (2011-2015). It has also harmonized with various sector policies (URT, 2011). This will enable Tanzania to build resilience on adaptation and achieve sustainable development (URT, 2011). However, the challenge is on what institutional arrangement will be appropriate to make that possible. The current institutional arrangement (including policy/regulatory frameworks, institutional capacity, etc.), does not adequate support and achieve that intention. Therefore, there is a need for a clear climate change policy and regulatory institutional framework that can provide an environment for addressing long term climate change adaptation, resilience building and achieving sustainable development (URT, 2011).

#### 5. Implementation Strategies

Tanzania has a number of implementing strategies including the National Strategy for Economic Growth and Reduction of Poverty, popularly known by its Swahili (*Mkakati wa Kukuza Uchumi na Kupunguza Umasikini Tanzania*) and Zanzibar Strategy for Growth and Reduction of Poverty (ZSGRP) known as *Mkakati wa Kukuza Uchumi na Kupunguza Umasikini Zanzibar (MKUZA)*. These are an organizing frameworks putting poverty reduction high on the country's development agenda (URT, 2012). The strategies are informed by the aspirations of Tanzania's Development Vision 2025 for high and shared growth, high quality livelihood, peace, stability and unity, good governance, high quality education and international competitiveness (URT, 2011b).

The *MKUKUTA II* gives some weight to the issues related to climate change. For instance, both *MKUKUTA II* and *MKUZA II* advocate for "ensuring food security and climate change adaptation and mitigation" and the operational target is on having measures pursued and implemented to mitigate and adapt to climate change (URT, 2010a). The *MKUKUTA II* also provides some cluster strategies, such as strengthening research to enable the introduction and adoption of crop varieties able to withstand conditions brought by climate

change and improve monitoring of crops and livestock health and management. However, the implementation of these strategies has remained far from the reality.

The National Adaptation Programme of Action (NAPA) is part of the United Nations initiatives to help developing countries identify priority activities that respond to their urgent and immediate needs to adapt to climate change (URT, 2007). The Tanzania NAPA was developed from the recognition of the enormous climate change impacts and the need to proactively adapt and mitigate the impacts. Despite the Tanzania NAPA being in line with the international obligations on climate change matters, it aligns with the national policies, strategies, programmes and plans. Increasingly, the NAPA sets priorities for mainstreaming adaptation activities into national and sectoral development policies and strategies, and ranks sectors in order of their priority for adaptation activities. Despite the set priorities in Tanzanian NAPA for about 7 years the challenges have remained publicizing the document and implementing the priorities at grassroots level.

The National Climate Change Strategy is among the recent strategies which offer an opportunity for Tanzania to address climate change adaptation and participate in the global efforts to reduce green house gases (GHGs) emissions in the context of sustainable development (URT, 2013a). The strategy has been developed in response to the growing concern of the negative impacts of climate change and climate variability on the country's social, economic and physical environment (URT, 2012a). The strategy covers adaptation, mitigation and cross-cutting interventions that will enable Tanzania to benefit from the opportunities available to developing countries in their efforts to tackle climate change impacts (URT, 2013a). The strategy articulates that climate change is likely to severely affect the economic growth of Tanzania, especially climate sensitive sectors such as agriculture, livestock, forestry, water, tourism, transport, energy and health (URT, 2012a). However, it is now more than a year since its inauguration, at community and government institutions and especially local government authority, this document is not known, indicating that there is no even budget for its implementation.

Another important strategy is the National Strategy for Reduced Emissions from Deforestation and Forest Degradation (REDD+) and its action plan, 2013. The strategy and its action plan are based on the National Framework for REDD+ developed in 2009 and is linked to current national growth and development strategies such as MKUKUTA and the TDV 2025. Effective implementation of REDD+ activities will enable Tanzania to contribute to the global efforts of reduction of greenhouse gas emissions and help the world become more resilient to climate change impacts (URT, 2013c). However, the successful implementation of this strategy is the subject of how community were involved in the development of the strategy and initiatives to simply language into local context.

The Agricultural Sector Development Strategy (ASDS) approved by the Government of Tanzania in 2001, and rural

development strategy 2002 address constraints to the agricultural contribution to both the growth and poverty reduction objectives of the MKUKUTA and the TDV 2025 (URT, 2001a). These strategies are important for addressing sustainable natural resources management including land resources which holds agricultural production, climate change adaptation and mitigation adaptation. However, issues related to climate change are not adequately addressed in the ASDP. Poor integration of climate change adaptation and mitigation in the planning and implementation of ASDP interventions was also revealed in the ASDP review conducted in 2008 (URT, 2008).

National Forest Programme (NFP) (2001-2010) and National Beekeeping Programme (NBP) (2001-2010). These are the ten-year strategic plans for implementing the National Forest Policy developed to address the challenging responsibilities of the forest sector in the near future and to increase the forest sector's contribution to the national economy and more so in poverty reduction (URT, 2001). They aim to contribute towards national poverty reduction goals and increase economic growth by managing forests sustainably without compromising environmental and cultural values. However, the forest programme and beekeeping programme do not provide a clear framework on how climate change matters would be harmonized with other sectoral policies and framework for its operation. Even though the National REDD+ strategy amplifies the need to learn from NFP and NBP for effective REDD+ implementation, there is a need to put clear framework for harmonization of the NFP and NBP with other sectoral policies, and revise both NFP and NBP to include climate change matters (URT, 2013).

The National Biodiversity Strategy and Action Plan (NBSAP) provide the overall framework for national implementation of the objectives of the CBD, through action for the conservation and sustainable use of biodiversity and the equitable sharing of benefits arising from the utilization of genetic resources (URT, 2001). The strategy and action plan recognizes Tanzania as one of the fourteen biodiversity hotspots country in the world. Although climate change issues are inadequately addressed in the NBSAP, they are indirectly fulfilled through its fostering of sustainable biodiversity conservation as promoting ecological resilience necessary for adaptation and mitigation of climate change impacts.

The National Water Sector Development Strategy 2004 and its programme 2006 are the blueprint for prioritized timely and appropriate interventions to address the Water Sector challenges in the process of achieving all the targets narrated in the National Strategy for Growth and Reduction of Poverty by 2010, the Millennium Development Goals by 2015, and contribute towards achieving the Tanzania Development Vision Targets by 2025 (URT, 2004). Climate change issues are well stipulated in the National Water Sector Development Strategy as the document outline that the poor are particularly vulnerable to floods and droughts since they often live in areas such as floodplains or steep slopes. It

further emphasizes that people's vulnerability to climate and resource degradation would be reduced by investing in strategies that limit and control floods and provide water storage for droughts. Up to know the challenges have remained its implementation on the ground due to limited financial resources and technical capacity.

## 6. Reflections and Lessons Earned

The climate change initiatives undertaken in Tanzania are implemented in line with several other initiatives. For instance, national climate change strategy and action plan are part of the broader national policies and efforts to reduce poverty and support sustainable development at national, local and individual level. It is part of the National Environmental Policy 1997, Environmental Management Act No. 20 of 2004, the Tanzania Vision 2025; the Millennium Development Goals (MDGs); the National Strategy for Growth and Reduction of Poverty II (MKUKUTA II); Tanzania Five Years Plan (2011-2015). It has also harmonized with various sector policies (URT, 2011). This will enable Tanzania to build resilience on adaptation and achieve sustainable development (URT, 2011). However, the challenge is on what institutional arrangement will be appropriate to make that possible. The current institutional arrangement (including policy/regulatory frameworks, institutional capacity, etc.), does not adequate support and achieve that intention. Therefore, there is a need for a clear climate change policy and regulatory institutional framework that can provide an environment for addressing long term climate change adaptation, resilience building and achieving sustainable development (URT, 2011).

## 7. Conclusion and Policy Recommendation

Generally, policies and development programmes and strategies in Tanzania articulate sustainable environmental management and climate change matters. This is partly due to the fact that most of the policies in Tanzania were developed after the Brundtland report (1987) and the Rio conference 1992; and they have been developed in the context of promoting sustainable environmental and natural resources management and sustainable development. Most of the policies and development strategies envisage promoting sustainable environmental and natural resources management which, if effectively implemented, will enhance improve community livelihoods, promote sustainable development, and contribute to climate change adaptation and mitigation measures. Despite all these potentials, there are however a number of constraints to the implementation of activities stipulated in the policy and development programmes to attain sustainability. Even though most of the policies have touches to environmental related matters, only few policies have clear provisions on issues pertaining to climate change adaptation and mitigation.

The general policy recommendations are elucidated hereunder:

1. Most of the policies and strategies such as TDV (2025), NSGRP, ASDP, WSDP, NFP, and others, especially those produced prior to 2000s and before the production of NAPA do not directly link to climate change matters. Even though they articulate matters that may contribute to climate change adaptation and mitigation, they need to be reviewed or implemented in the context of the changing climate which has significant implications for sustainable natural resources management, sustainable development and community livelihoods. This is largely attributed to the fact that climate change is an evolving and cross-sectoral concern, which requires proactive and collective response among interrelated sectors.
2. Climate change has not so far been adequately mainstreamed or integrated in sector specific plans and strategies. Where efforts have been initiated as in the water, agriculture and livestock sectors, there are still remaining implementation gaps. This drawback is also revealed in the newly established strategies such as climate change and REDD+ strategies and action plan which fosters climate change adaptation and mitigation. This is also attributed to the inadequate financial resources and heavy dependence on donor support for implementing climate change activities, especially those stipulated under climate change and REDD+ strategies
3. Tanzania does not have in place a designated climate change policy and/or legislation. There is therefore a need to develop climate change policy and legislation in Tanzania, which will promote establishment of an institutional framework for mainstreaming climate change matters in sectoral plans and programmes.
4. Inadequate institutional coordination on climate change issues due to low capacity of the Division of Environment based at Vice President Office (VPO) to coordinate all environmental and climate change activities in Tanzania among other factors. Therefore, many institutions are involved in issues related to climate change without coordination thereby contributing to overlaps and duplications of efforts.
5. Lack of a coordinated climate change unit, monitoring and evaluation framework for climate change related strategies reduce the capacity of key sectors to address climate change matters pertaining to their sectoral policies, strategies, plans and programmes. This also has implications on coordination capacity of the Division of Environment in overseeing climate change matters in the country.
6. Issues related to integration of indigenous and modern technologies in addressing impacts of climate change are not clearly addressed in climate change related policies.

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