



UNITED REPUBLIC OF TANZANIA  
VICE PRESIDENTS OFFICE

## National Strategy On Gender and Climate Change



DIVISION OF ENVIRONMENT  
2013



National Strategy for Mainstreaming Gender  
in Climate Change for the United Republic of Tanzania

*"The main challenge facing Tanzania at present is the need to balance accelerated economic growth with a more efficient management of the environment and the use of natural resources to ensure sustainability and address the issue of climate change."*

United Republic of Tanzania Vice President's Office 2007.  
National Adaptation Program of Action (NAPA)  
produced under the United Nations Framework Convention on Climate Change (UNFCCC).

Produced through a multi-stakeholder process funded by the Government of Finland and developed on behalf of Permanent Secretary of the Vice-President's Office.

The Gender Office, International Union for Conservation of Nature - IUCN

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## ACKNOWLEDGEMENTS

The National Strategy for Mainstreaming Gender in Climate Change in Tanzania is developed as part of the National Climate Change Strategy. The strategy recognizes the role of men and women as agents of change if they proportionately participate in climate change adaptation and mitigation measures. The process of developing the strategy involved a number of stakeholders including government policy makers, researchers and civil society organizations. The process culminated in a national workshop that involved various stakeholders.

The Vice President's Office would like to recognize the efforts and contributions of various institutions and individuals that participated in the development of the strategy. These include Gender Office of the International Union for Conservation of Nature (IUCN), the IUCN Office for Eastern and Southern Africa (ESARO) and its national country office in Tanzania. Others include Government Ministries and Departments as well as individuals who participated in interviews and their contribution during the workshop.

Special thanks to Hon Dr. Terezya L. Huvisa, Minister of State, Vice-President's Office – Environment, for her personal effort to initiate this process. I would also like to recognize the cross sectoral team that drafted the strategy for their exceptional commitment throughout the duration of developing the Strategy.

Furthermore, I would like to recognise the generous financial support from the Government of Finland that supported the development of this Strategy.



**Sazi B. Salula**

Permanent Secretary, Vice President's Office

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## FOREWORD

To achieve the national and global development goals, the Government of Tanzania has made significant efforts to improve people's standard of living. This has been possible through development of instruments including the National Strategy for Growth and Reduction of Poverty (NSGRP I & II), Five Year Development Management Plan as well as globally accepted instruments such as Millennium Development Goals (MDG). However, it has been accepted that climate change impacts constitute an area with major challenges to achieve the development goals.

The phenomena like frequent drought, floods and famine are one of the manifestations of the impact of Climate change. The impacts already exist in Tanzania, and the country is working hard through adaptation and mitigation measures to address them. Increasingly, evidences reveal that these impacts are not gender-neutral. Women and men experience climate change differently and their capacities to cope with them vary.

The United Nations Development Programme (UNDP) Human Development Report (2007) cautions that gender inequalities intersect with climate risks and vulnerabilities. It concludes that climate change impacts are likely to increase and hence; exacerbate the existing patterns of gender disadvantages. Such changes in the impacts may increase the women's historic disadvantages of having limited access and control to environmental and economic resources and on resource use decision-making and thus, make them more vulnerable to climate change.

Women are, however, powerful agents for change hence; their leadership in addressing climate change impacts is crucial. Based on the impacted ecosystem, women can enhance strategies related to integrate coastal management, forestry, agriculture, water, health and energy. Knowing the role of women, the Government enshrined the gender equality issue in the Constitution (1977 and its revision in 2001) and in the Bill of Rights (1984). Through this measure the Government reaffirms its commitment to enhance women's rights for national and world progress.

The Tanzania's National Adaptation Programme of Action (NAPA) inadequately incorporated the gender issues. The Vice President's Office (VPO) noted this as a shortcoming and has included gender as a crosscutting issue in the National Climate Change Strategy. This is further supplemented by National Strategy for Mainstreaming Gender in Climate Change as a tool for mainstreaming gender issues in national policy and implementation frameworks.

The National Strategy for Mainstreaming Gender in Climate Change is outlined into six thematic areas each comprising sub-sections on women as agents for change. Other sub-sections include; a situation analysis and the state of gender, a set of recommendations and examples of actions for implementation. The strategy is expected to be a useful instrument in the national efforts of addressing the impacts of climate change. Users of this strategy will find it beneficial and apply in implementation frameworks to reduce the impacts of climate change.



**Hon. Dr. Terezya L. Huvisa (MP)**

MINISTER OF STATE, VICE PRESIDENT'S OFFICE – ENVIRONMENT

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## PREAMBLE

"I would like to assure you that, the Government will continue to support gender integration into various government efforts to address climate change and take the gender strategy that you will develop through this workshop as part and parcel of National Climate Change Strategy and Action Plan.

The document that will come out of this workshop is of utmost importance to our nation. It lays the foundation for agreeing on key actions and strategies to address climate change in the country and mainstream gender consideration to guarantee that women and men can participate in and benefit equally from climate change initiatives. I therefore urge you all to fully commit your time and most important your mind, in these three days and ensure that you come up with a sound document that reflects the national needs pertaining to climate change and gender".

*Speech by Mr. Sazi B. Salula, Permanent Secretary, Vice President's Office at the Opening of the National Stakeholders' Workshop on Developing a National Strategy Towards Mainstreaming of Gender in Climate Change Efforts in Tanzania, JB Belmont Hotel, Dar es Salaam. September 2011.*

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## ACRONYMS

<b>BWO</b>	Basin Water Offices
<b>CBO</b>	Community Based Organization
<b>CDM</b>	Clean Development Mechanism
<b>CEDAW</b>	Convention on the Elimination of All Forms of Discrimination Against Women
<b>CoP</b>	Conference of Parties
<b>CO<sub>2</sub></b>	Carbon Dioxide Equivalent
<b>CRMP</b>	Coastal Resources Management Program
<b>CSO</b>	Civil Society Organization
<b>DoE</b>	Division of Environment
<b>DRR</b>	Disaster Risk Reduction
<b>ENSO</b>	El Niño/Southern Oscillation
<b>FAO</b>	Food and Agriculture Organization
<b>FBD</b>	Forestry and Bee Keeping Division
<b>GTZ</b>	German Technical Cooperation
<b>GDP</b>	Gross Domestic Product
<b>GEF</b>	Global Environment Facility
<b>GHG</b>	Greenhouse Gas
<b>GIZ</b>	German Organization for International Cooperation and Development
<b>GIS</b>	Global Information System
<b>ICZM</b>	Integrated Coastal Zone Management
<b>ILO</b>	International Labor Organization
<b>INC</b>	Initial National Communication
<b>INGO</b>	International Non-Governmental Organization
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IUCN</b>	International Union for Conservation of Nature
<b>ITN</b>	Insecticide Treated Net
<b>LGA</b>	Local Government Authority
<b>MAFC</b>	Ministry of Agriculture Food Security and Cooperatives
<b>MCDGC</b>	Ministry of Community Development, Gender and Children
<b>MDA</b>	Ministries, Departments and Associations
<b>MDG</b>	Millennium Development Goals
<b>MEM</b>	Ministry of Energy and Minerals
<b>MET</b>	Meteorological Agency
<b>MIT</b>	Ministry of Industry and Trade
<b>MJCA</b>	Ministry of Justice and Constitutional Affairs
<b>MKUKUTA</b>	National Strategy for Growth and Reduction of Poverty (Kiswahili acronym)
<b>MLE</b>	Ministry of Labor and Employment
<b>MLFD</b>	Ministry of Livestock, Fisheries Development
<b>MNRT</b>	Ministry of Natural Resources and Tourism
<b>MOEVT</b>	Ministry of Education and Vocational Training



<b>MOFEA</b>	Ministries of Finance and Economic Affairs
<b>MoH</b>	Ministry of Health
<b>MoW</b>	Ministry of Water
<b>NAPA</b>	National Adaptation Plan of Action
<b>NC</b>	National Communication
<b>NEMC</b>	National Environment Management Council
<b>NSGRP</b>	National Strategy for Growth and Reduction of Poverty
<b>NGO</b>	Non- Governmental Institution
<b>NWFP</b>	Non Wood Forest Products
<b>PPP</b>	Gross Domestic Product per capita Primer Minister Office-
<b>PO- RALG</b>	Regional Administration and Local Government
<b>PO-PSM</b>	President Office-Public Service Management
<b>REDD</b>	Reducing Emissions from Deforestation and Degradation
<b>SADC</b>	Southern African Development Community
<b>TaTEDO</b>	Tanzania Traditional Energy Development and Environment Organization
<b>TCMP</b>	Tanzania Coastal Management Partnership
<b>TDV</b>	Tanzania Development Vision
<b>THIS</b>	Tanzanian HIV/AIDS Indicator Survey
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Program
<b>UNEP</b>	United Nations Environmental Program
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>URT</b>	United Republic of Tanzania
<b>SIDO</b>	Small Industry Development organization
<b>USAID</b>	United States Agency for International Development
<b>TFS</b>	Tanzanian Forestry Services
<b>TGNP</b>	Tanzania Gender Networking Program
<b>VPO</b>	Vice President Office
<b>WHO</b>	World Health Organization

## EXECUTIVE SUMMARY

Climate change is one of the most urgent priorities on the global agenda. The impacts are already being felt, with every country in the world grappling with the challenges of mitigating the causes and adapting to its effects. Increasingly, the evidence reveals that the impacts of climate change are not gender-neutral. Women and men experience climate change differently and their capacity to cope with it varies.

The 2007 UNDP Human Development Report cautions that gender inequalities intersect with climate risks and vulnerabilities. Thus, women's historic disadvantages, their limited access and control over decision-making, environmental and economic resources, and their restricted rights, make them more vulnerable to climate change.

However, this disproportionate burden of climate change on women can be countered by their empowerment and recognition. Women are, however, **powerful agents of change** and not just helpless victims. Their leadership is critical. Women can enhance strategies related to integrated coastal management, forest, agriculture, water, health and energy, for example.

Today in Tanzania gender equality is enshrined in the Constitution (1977 and its revision in 2001) and the Bill of Rights (1984). Under these the Government recognizes that women's advancement and achievement of gender equality are a matter of human rights and a condition to social justice and reaffirms its commitment to enhancement of women's rights for national and world progress.

Despite these provisions, the Initial National Communication (INC) and the National Adaptation Plan of Action (NAPA) produced by the Government of Tanzania for the United Nations Framework Convention on Climate Change (UNFCCC), did not incorporate gender considerations. The Vice President's Office (VPO) is therefore presently addressing this shortcoming by including gender as a crosscutting topic in the development of its National Climate Strategy and Action Plan as well as in its Second Communication Report (SNC).

This National Strategy for Mainstreaming Gender in Climate Change in Tanzania is the result of collaboration between the Vice President's Office - Environment of the Government of Tanzania, Gender Office of IUCN, the IUCN - ESARO and its Tanzania Office; and other key national institutions in Tanzania.

The Strategy is the result of a series of inputs, including interviews with policy makers, stakeholder consultation and research, and a stakeholder workshop held from the 28 - 30 of September of 2011 in Dar es Salaam, United Republic of Tanzania (see annex list of participants, Annex 1), amongst others. It has been drafted on the basis of an analysis of the current national priorities concerning climate change.

Following the thematic outline of the draft National Climate Strategy and Action Plan and SNC, this Strategy elaborates on six (6) priority focus areas, each comprising sub-sections on women as agents of change, a situation analysis and the state of gender, a set of recommendations and examples of selected action on implementation in each of the following sectors:

- Priority Area 1: Agriculture
- Priority Area 2: Water
- Priority Area 3: Health
- Priority Area 4: Energy
- Priority Area 5: Forest/REDD+
- Priority Area 6: Integrated Coastal Management

Finally, the document concludes with a set of cross-cutting elements that are relevant to all sectors dealing with capacity building, awareness and policy.

## SECTION A: CONTEXT AND METHODOLOGY

### I. Overview

1. The United Republic of Tanzania is located in Eastern Africa, bordering the Indian Ocean, between Kenya and Mozambique. According to the 2012 census Tanzania has a population of 44,928,923 of which 21,869,990 are male and 23,058,933 are female. In size, Tanzania total surface area is 974,300 km<sup>2</sup> that includes the islands of Mafia, Pemba and Zanzibar. Of this total area, 885,800 km<sup>2</sup> comprises land surface, and 61,500 km<sup>2</sup> comprises water surface.

### 2.0 Climatic Zones

The country can be roughly divided into four main climatic/topological zones<sup>1</sup>.

#### 2.1 *The Lowland Coastal Zone*

The Lowland Coastal Zone can further be divided into three sub-zones: the wet sub-zone, between 0 to 500 meters of elevation and with 1,800 millimeters of annual rainfall on average; humid sub-zone, elevation ranging from 500 meters to 1000 meters with an annual rainfall of between 1000 and 1,800 millimeters; and the drier zone, about 1,000 meters in altitude, with less than 1,000 millimeters of rainfall per annum.

#### 2.2 *The Highlands Zone*

This zone comprises of the Northeastern Highlands, which include the Usambara Mountains, Mt. Kilimanjaro and Mt. Meru; the Southern Highlands, which include Mt. Rungwe, Livingstone ranges, and Mt. Mbeya. As catchment areas, these are generally areas of high precipitation.

#### 2.3 *The Plateau Zone*

Found around Lake Victoria and much of western Tanzania, this zone is occupied by what are generally referred to as Miombo woodlands. These are, in the main, dry areas with an average rainfall of up to 1,000 millimeters.

#### 2.4 *The Arid and Semi-Arid Zone*

Mainly found in central and North Eastern Tanzania around Dodoma, Shinyanga, Arusha, Mwanza and Mara. The zone has a rainfall of less than 600 millimeters per annum.

In terms of elevation, the lowest point is at the Indian Ocean, and the highest is Mount Kilimanjaro, soaring to 5,895m above sea level and one of the country's most distinctive landmarks.

### 3.0 Environment:

For the purpose of this strategy the country's environmental issues are described as follows

- 3.1 Tanzania's climate varies from tropical along the coast, to temperate in the highlands. 27.7% of the terrestrial area of the country is considered protected.

<sup>1</sup> Government of the United Republic of Tanzania. 2003. Initial National Communication under the United Nations Framework Convention on Climate Change (UNFCCC) Retrieved from the World Wide Web: <http://unfccc.int/resource/docs/natc/tannnc1.pdf>

- 3.2 The country has signed and ratified several Multilateral Environmental Agreements, including Biodiversity, Climate Change, Climate Change Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection and Wetlands.
- 3.3 Current environmental issues comprise soil degradation, environmental pollution, deforestation, desertification, destruction of coral reefs threatening marine habitats, recent droughts affecting marginal agriculture, lack of accessible good quality water for both urban and rural inhabitants, and wildlife threatened by illegal hunting and trade (especially ivory)<sup>2</sup>.

#### 4.0 Population:

- 4.1 The total population Tanzania is estimated at 44,928,923, (2012). The average national population density is 51 people per km<sup>2</sup>. The average household size is 4.8 people. The sex ration is 95 male per 100 female. The proportion of the population aged below 15 years was about 47 percent in 2008, while those aged 65 years and above was 4 percent, indicating that Tanzania has a young population. This youthful age structure entails a larger population growth in future, as the young people move into their reproductive life irrespective of whether fertility declines or not<sup>3</sup>.
- 4.2 As is the case with many Southern African countries, Tanzania suffers of excess mortality due to AIDS (resulting in lower life expectancy, higher infant mortality, higher death rates, lower population growth rates, and changes in the distribution of population by age and sex than would otherwise be expected), and this has been taken into account accordingly within this estimation. In 2009, 86,000 deaths per year were attributed to AIDS, the 4th highest in the world following South Africa (310,000), Nigeria (220,000) and India (170,000).
- 4.3 Net migration (according to the 2011 estimate) comprised -0.53 migrant(s)/1,000 populations, ranking it globally at 139th position out of 220.
- 4.4 According to the United Nations Human Development Report 2011<sup>4</sup>, current life expectancy at birth is 56.9 years. Other indicators provided by the report are an adult literacy rate for both sexes combined of 73.2<sup>5</sup>. Internet usage (per 100 people) is low at 1.2%, and expected years of schooling for children comprised 5.3 years.

#### 5.0 Urbanization, Social Profile and Poverty Situation:

- 5.1 On average over the last decade, the economy of the country rose from 4.1% in 1998 to 7.4% in 2008. Growth was strong in the services and manufacturing sector, but was weaker in the agricultural sector. The rate of economic growth, however, has been fluctuating over the past few years with GDP established at 6.0% compared to 7.4% in 2008, and 7.1% in 2007.

<sup>2</sup> National Environment Policy 1997. Retrieved from the World Wide Web. [http://www.tzdp.org.or.tz/uploads/media/State\\_of\\_Environment\\_Report\\_final\\_PDF\\_2006.pdf](http://www.tzdp.org.or.tz/uploads/media/State_of_Environment_Report_final_PDF_2006.pdf)

State of the Environment Report 2006. Retrieved from the World Wide Web. <http://www.tzonline.org/pdf/nationalenvironmentalpolicy.pdf>

<sup>3</sup> Ministry of Planning, Economy and Empowerment. 2006. National Population Policy. United Republic of Tanzania. Retrieved from the World Wide Web: <http://www.tanzania.go.tz/pdf/Idadi%20Eng.pdf>

<sup>4</sup> UNDP. 2011. United Nations Human Development Report: International Human Development Indicators. Retrieved from the World Wide Web: <http://hdr.undp.org/en/>

<sup>5</sup> UNESCO. 2009. Institute for Statistics estimates based on its Global Age-Specific Literacy Projections model.

- 5.2 Gross Domestic Product per capita (2008 PPP USD) was 1,426<sup>6</sup>, with final household consumption expenditure per capita PPP of 576. The percentage of the population living below USD 1.25 PPP per day is high at 88.52%. In 2008, nearly two thirds (65.3%) of the population lived in poverty.
- 5.3 It is estimated that 33 percent of Tanzanians live under the poverty line<sup>7</sup>. Average earnings do not meet requirements for basic minimum needs. To many, a single meal in a day is commonplace. Most Tanzanians are still affected with preventable diseases like malaria, diarrhea, cholera, anemia, etc., which have been eradicated in other parts of the world.
- 5.4 Female-headed households constitute 19% of the poorest households. Households headed by widows were amongst the most vulnerable<sup>8</sup>.
- 5.5 The average population density in the United Republic of Tanzania is about 26 persons per square kilometer. Only about 25 percent of the total population lives in urban areas. Households in Tanzania get their incomes mainly from self-employment on farm and non-farm activities, wage employment and rental services. The relative importance of the various sources of income indicate that 54 percent of rural households get their incomes from agricultural activities, 20 percent from non-agricultural self-employment activities and 8 percent from wage employment and 18 percent from other sources. About 28 percent of urban households get their incomes from agricultural activities, another 28 percent from self-employment in non-agricultural activities, 18 percent from wage employment, 2 percent from rent income, and 26 percent from other sources.
- 5.6 In terms of coverage, only 72 percent of the population lived within 5 kilometers from the nearest health facility. About 50 percent of 22 million rural population and 68 percent out of 4 million urban populations have access to improved water supply. Sanitation services are available to about 79 percent of the rural population and 85 percent of the urban population. Total and severe malnutrition had declined from 50 percent in the 1980s to 30 percent in the late 1990s while severe malnutrition had declined from 6 percent to 2 percent during the same period. About 7.2 percent of infants suffer severe malnutrition.
- 5.7 In Tanzania, the literacy rate is about 84 percent. Gross enrolment in primary education is about 80 percent while that of secondary education is about 15 percent. Those who get registered are faced with inadequate facilities at school. Some are forced to sit on the floor during classes. In terms of gender, enrolment at the primary school level is around 50 percent for girls and 50 percent for boys, while at the secondary school level the percentage of girls is slightly lower.

## 6.0 Economy<sup>9</sup>

- 6.1 Agriculture (including livestock) is the dominant sector in Tanzanian economy, providing livelihood, income and employment to over 80% of the population and it accounted for 56 percent of GDP and about 60 percent of export earnings making a significant contribution to the National GDP. Around 85% of the country's poor people live in rural areas and rely on small-scale agriculture as their main

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<sup>6</sup> Based on the growth rate of GDP Data per capita (PPP USD)

<sup>7</sup> World Development Indicators 2007

<sup>8</sup> URT. 2002. Household Budget Survey 2001/01. National Bureau of Statistic. Dar es Salaam.

<sup>9</sup> Vice President's Office. 2007. National Adaptation Program of Action (NAPA) under the United Nations Framework Convention on Climate Change (UNFCCC). United Republic of Tanzania.



source of income and livelihood. It is the main source of employment and livelihood and It is an important economic sector in terms of food production, employment generation, production of raw materials for industries and generation of foreign exchange.

- 6.2 Within the agricultural sector, food crop producers are generally poorer than cash crop farmers. Both operate under cyclical and structural constraints, and are subject to frequent natural disasters such as drought and flooding, lack market access, inputs, credit and irrigation water.
- 6.3 Emerging economic sectors include coastal tourism, aquaculture and natural gas exploitation. These are seen as potentially important resources for national economic development and form part of a diverse strategy to reduce dependency on agriculture as an engine of growth.
- 6.4 The informal sector is by en large the most dynamic and most important source of livelihood for the urban-dwelling poor.

## **II. Government Oversight of Environmental Issues**

- 3. According to the National Environment Act (2004) the administration and institutional arrangement of the Environmental Management in Tanzania is composed of; National Environment Management Committee, Minister Responsible for Environment, Director of Environment and National Environment Management Council. In addition the Law prescribes roles of Sector Ministries, Regional and Local government Authorities in relation to management of environment.
- 4. The national environment management committee is responsible for advising the Minister responsible for environment or any sector ministry on any matter which may be referred to it.
- 5. The Minister responsible for environment is responsible for articulation of policy, guidelines necessary for the promotion, protection and sustainable management of environment in the country.
- 6. The director of environment is, among other responsibilities, responsible for coordination of various environment management activities being undertaken by various agencies and promote integration of environment consideration into development policies, plans, programmes, strategies, projects and undertake strategiv environment assessment to ensure proper management and rational utilization of environmental resources aon sustainable basis for the improvement of the quality of human life Tanzania
- 7. The National Environment Act (2004) is established to to undertake compliance, review and monitoring of environmental impact assessment and in that regard to facilitate public participation in environmental decision making, exercise general supervision and coordination over all matters relating to environment.
- 8. Furthermore the council is empowered to carry out environmental audits, undertake or coordinate research, investigation and surveys in the field of environment. Also the Council is empowered to collect and disseminate information and research findings. Moreover the council has powers to render advice and provide technical support t to entitites engaged in natural resources and environmental management.
- 9. At sector ministries, Regional Administration and Local government authorities there will be designated officers who ensure that these parts of the government comply with the requirement of these laws.

### III. Climate Change in Tanzania

10. Most parts of Tanzania and especially the semi-arid central regions are vulnerable to climate variability. These areas will be more vulnerable to the projected increase in frequency and amplitude of extreme climatic events.
11. In 2007, the United Nations Intergovernmental Panel on Climate Change (IPCC) presented its fourth in a series of reports (AR4)<sup>10</sup> intended to assess scientific, technical and socio-economic information concerning climate change, its potential effects, and options for adaptation and mitigation.
12. The main findings<sup>11</sup> of the AR4 on the impacts of climate change on Tanzania, relate to the following:
  - Kilimanjaro glaciers and snow cover have been retreating (55% of glacier loss between 1962 and 2000). Debate over past and current climate change and ice cap coverage, however, persists. Over the 20th century, the spatial extent of Kilimanjaro's ice fields has decreased by 80%. It is suggested by some, that if current climatological conditions persist, the remaining ice fields are likely to disappear between 2015 and 2020 (for the first time in 11 000 years).
  - Loss of 'cloud forests' since 1976 resulting in 25% annual reductions of water sources derived from fog, affecting annual drinking water of 1 million people living in Kilimanjaro. Along with warming surface waters, deep water temperatures (which reflect long-term trends) of the large East African lakes (Victoria, Malawi) have warmed by 0.2 to 0.7°C since the early 1900s.
  - Deep tropical lakes, are experiencing reduced algal abundance and declines in productivity because stronger stratification reduces upwelling of nutrient-rich deep water. Primary productivity in Lake Tanganyika may have decreased by up to 20% over the past 200 years, and for the East African Rift Valley lakes, recent declines in fish abundance have been linked with climatic impacts on lake ecosystems.
  - The 1997-1998 coral bleaching observed in the Indian Ocean and Red Sea was coupled to a strong ENSO (an indication of the potential impact of climate-change induced ocean warming on coral reefs). In the western Indian Ocean region, a 30% loss of corals reduced tourism in Mombasa and Zanzibar and resulted in financial losses of about US\$ 12-18 million.
  - Mangroves and coral reefs, the main coastal ecosystems in Africa, will likely be affected by climate change. Endangered species associated with these ecosystems, including manatees and marine turtles, could also be at risk, along with migratory birds.
13. Further impact on fresh water resources, the coastal and marine environment, forestry, wildlife, wetlands, agriculture and food security, health, tourism, energy, biodiversity/natural environment, livestock, fisheries, infrastructure, human settlements, land-use sectors have also been identified.

<sup>10</sup> IPCC. 2007. IPCC Fourth Assessment Report: Climate Change (AR4). Cambridge University Press. Cambridge, United Kingdom.

<sup>11</sup> WWF. 2011. Retrieved from the World Wide Web: [http://wwf.panda.org/about\\_our\\_earth/aboutcc/problems/rising\\_temperatures/hot-spot\\_map/tanzania.cfm](http://wwf.panda.org/about_our_earth/aboutcc/problems/rising_temperatures/hot-spot_map/tanzania.cfm)

14. The main challenge facing Tanzania at present is the need to balance accelerated economic growth with a more efficient management of the environment and the use of natural resources to ensure sustainability and address the issue of climate change<sup>12</sup>.
15. Carbon dioxide emissions per capita (tons) in Tanzania are low at 0.1<sup>13</sup>. Tanzania is signatory to both the United Nations Framework Convention on Climate Change (UNFCCC) and the UNFCCC Kyoto Protocol. Under this agreement, the country has submitted an Initial National Communication<sup>14</sup> on 4 July 2003. Planning for a Second National Communication to be submitted to the UNFCCC Secretariat is currently underway.
16. In September 2007, the Division of Environment in the Tanzanian Vice President's Office submitted the country's National Adaptation Program of Action<sup>15</sup> (NAPA) to the UNFCCC. The document was a joint collaboration between the Government of the United Republic of Tanzania, the Global Environment Facility (GEF), and the United Nations Environment Program (UNEP).
17. The NAPA highlights 14 priority project activities that the Government is of the opinion that are the most effective and efficient way in which to cope with and benefit from the impacts of climate change. These are:
  - Water efficiency in crop production irrigation to boost production and conserve water in all areas;
  - Alternative farming systems and water harvesting;
  - Develop alternative water storage programs and technology for communities;
  - Community based catchments conservation and management programs;
  - Explore and invest in alternative clean energy sources e.g. wind, solar, bio-diesel, etc. to compensate for lost hydro potential;
  - Promotion of application of cogeneration in the industry sector for lost hydro potential;
  - Afforestation programs in degraded lands using more adaptive and fast growing tree species;
  - Develop community forest fire prevention plans and programs;
  - Establishing and Strengthening community awareness programs on preventable major health hazards;
  - Implement sustainable tourism activities in the coastal areas and relocation of vulnerable communities from low-lying areas;
  - Enhance wildlife extension services and assistance to rural communities in managing wildlife resources;
  - Water harvesting and recycling;
  - Construction of artificial structures, e.g. sea walls, artificially placing sand on the beaches and coastal drain beach management system; and
  - Establish good land tenure system and facilitate sustainable human settlements.

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<sup>12</sup> Idem.

<sup>13</sup> UNDP. 2011. United Nations Human Development Report: International Human Development Indicators. Retrieved from the World Wide Web: <http://hdr.undp.org/en/>

<sup>14</sup> UNFCCC. 2011. Official Website. Retrieved from the World Wide Web: [http://unfccc.int/essential\\_background/library/items/3599.php?such=j&symbol=TZA/COM/1%20B#beg](http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=TZA/COM/1%20B#beg)

<sup>15</sup> Vice President's Office. 2003. Initial National Communication (INC). United Republic of Tanzania. Retrieved from the World Wide Web: <http://www.newctz.org> and [www.napa-pana.org/private/modules/knowledgebox/io/file.php?entry=681&field=22](http://www.napa-pana.org/private/modules/knowledgebox/io/file.php?entry=681&field=22)

18. The Government of Tanzania has approved a medium term National Strategy for Growth and Reduction of Poverty (NSGRP) that aims at achieving the Tanzania Development Vision (TDV 2025), hence forth requiring the review and possible amendment of a number of acts and policies in order to comply with the goals outlined in both the NSGRP and TDV 2025.
19. The Vice-President Office has developed and launched a National Climate Change Strategy. The Second Communication report is also under preparation.

#### IV. Rationale for Developing a Gender Perspective in Climate Change Strategies

20. Climate change will affect all countries in all parts of the world, but the impacts of climate change will be differently distributed amongst regions, generations, age classes, income groups, occupations and genders<sup>16</sup>. The poor, the majority of whom are women living in developing countries, will be disproportionately negatively affected.
21. Because climate change affects women and men differently, a gender perspective - firmly rooted in the principle of gender equality - is essential when considering policy development, decision-making, and in the development and implementation of strategies concerning mitigation and adaptation.
22. Gender inequality can worsen the impacts of climate change; conversely, taking steps to narrow the gender gap and empower women can also reduce these impacts. Climate change and gender inequality are therefore inextricably linked. By exacerbating inequality overall, climate change slows down progress towards gender equality and henceforth impedes efforts to achieve wider goals such as poverty reduction and sustainable development.
23. Gender inequality also intersects with climate risks and -vulnerabilities. *"Women's historic disadvantages – their limited access to resources, restricted rights, and a muted voice in shaping decisions – make them highly vulnerable to climate change. The nature of this vulnerability varies widely, cautioning against generalization. But climate change is likely to magnify existing patterns of gender disadvantage"*<sup>17</sup>.
24. Women are, however, powerful agents of change and not just helpless victims. The majority of women spend significant time in the field that makes them good innovators and repositories of critical knowledge, including indigenous knowledge on natural resource management. As they spend significant time with families including raising kids, they have great potential to pass knowledge (e.g. that related to adaptation) on to younger generations. Their leadership is therefore critical.
25. Women, for example, can enhance strategies related to coastal management, agriculture, water, tourism, health and energy, amongst others.
26. Incorporating a gender perspective successfully and effectively requires that men and women understand the process of climate change, and share information on counteracting its negative impacts on an equal basis to both women and men. It is important that women have equal access to knowledge, awareness, capacity building, resources and technology, which are prerequisites in influencing climate change. Likewise, it is fundamental that women participate more actively in decision-making and policy development at all levels.

<sup>16</sup> IPCC. 2001. Climate Change 2001: Impacts, Adaptation, and Vulnerability. Report of Working Group II of the International Panel on Climate Change. Summary for Policymakers. IPCC. Switzerland.

<sup>17</sup> UNDP. 2007. Human Development Report 2007 - 2008. Fighting climate change: Human solidarity in a divided World. USA.

27. To this end, two complementary principles that are recognized globally underlie this Strategy: (i) gender equality and (ii) the empowerment of women<sup>18</sup>.
28. Building on the understanding as set out above, this Strategy acknowledges gender mainstreaming as the primary methodology employed, seeking to recognize and bring to the fore the diverse roles, needs and contributions of both women and men in the sustainable development agenda. Rather than merely adding women's participation onto existing strategies and programs post facto, mainstreaming gender aims to transform unequal social and institutional structures by recognizing the promotion of gender equality as a central driving principle - reducing vulnerability - enhancing significantly the efficiency, effectiveness and overall implementation of programs and projects.
29. To date, many efforts to mainstream gender have too often been confined to simplistic, ad-hoc and short-term technical interventions that have failed to challenge inequitable power structures and, therefore, also failed to ensure optimal implementation. Gender disparities remain among the deepest and most pervasive of all inequalities and, in fact, hinder the best of development efforts profoundly.

## V. Mandates and Policy

30. To date, the Tanzanian government has put in place, amongst others, the following direction relating to the environment:
  - National Adaptation Program of Action (2007)
  - National Environmental Action Plan (1994)
  - National Action Program to Combat Desertification (1999)
  - National Biodiversity Strategy and Action Plan (2000)
  - Coastal Biodiversity Conservation Strategy (1995)
  - Country Program to phase out ozone depleting substances (1996)
  - National Adaptation Programme of Action (2006)
  - Initial National Communication to the UNFCCC (2003)
  - National Environmental Policy (1997)
  - National Environmental Management Act (2004)
  - National REDD Strategy (in process)
  - National Climate Change Strategy (2013)
31. Gender equality is enshrined in the Constitution (1977) and the Bill of Rights (1984). Although Article 13(5) of the original draft of the Constitution did not explicitly mention sex or gender as characteristics upon which people are discriminated, a 2001 revision thereof does recognize gender discrimination. Under these the Government recognizes that women's advancement and achievement of gender

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<sup>18</sup> **Equality** between women and men is a principle that ensures human development while, at the same time, is a fundamental objective in the fight against poverty. Women and men play different roles and have different responsibilities in their families, in their community or in society. They participate in different ways in the social, cultural, economic and political life of their countries and communities. Understanding these differences allows a more focused intervention when developing policies, programs and projects meant to improve the condition of people. Above all, what is intended is that these differences do not generate or worsen conditions of inequality and exclusion.

**Empowerment** is a process for women to gain power and have more control over their lives and is an effective route leading to gender equality and also to reducing poverty. It involves consciousness raising, building self-confidence, improving health and wellbeing, and broadening options and opportunities. Empowerment is an important strategy to transform power structures in all spheres: legislation, education, institutions and in any entity, whether public or private, that predominates, in this case male, and is detrimental to women's social condition.

equality are a matter of human rights and a condition to social justice and reaffirms its commitment to enhancement of women's rights for national and world progress. In addition, the Government also introduced the National Population Policy (2006) that includes a strong gender component and focuses on gender mainstreaming and the development of gender disaggregated data.

32. Tanzania's policy and institutional framework for promoting gender equality are guided mainly by the Beijing Platform of Action and the Outcomes Document, the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) and the Southern African Development Community (SADC) Declaration on Gender and Development (1998).
33. Tanzania has also signed other related international agreements such as the Declaration of Human Rights (1948), the Convention for the Rights of Children (1989) and the ILO Convention for the Elimination for the Worst Forms of Child Labor (1999).
34. The Tanzania Vision 2025 formulated in 1999, as a long term policy contemplates gender equity/equality as underlying principles: "In particular by the year 2025, racial and gender imbalances will have been redressed such that economic activities will not be identifiable by gender or race. All social relations and processes which manifest and breed inequality in all aspects of the society (i.e. politics, employment, education, and culture) will have been reformed"<sup>19</sup>.
35. <sup>20</sup>The Government of Tanzania recognizes that gender is a developmental issue in that the existing gender imbalances and inequalities in society prevent it from realizing its full potential in all the activities of development in economic, social, and political dimensions. It therefore seeks to ensure that gender issues are integrated in planning and budgeting in order to strengthen the relationship between men and women, which is a main driver for development and without which the pace of development will slow down. This is expressed in the National Strategy for Growth and Reduction of Poverty-MKUKUTA under the following principles<sup>21</sup>:
  - Goal 1 of Cluster 3, Governance and Accountability states: Mainstream good governance and gender into policies, plans, budgets, and implementation mechanism including gender monitoring and assessment indicators for good governance.
  - Gender biases in favor of males for instance in terms of land (property) or girls accesses to education add to the pain of poverty by reducing current and prospective earnings of females. In this regards eradicating these biases is a critical challenge.
36. In 2000, the Ministry of Community Development, Gender and Children (MCDGC), developed the Women and Gender Policy. One of the areas of concern identified was that of the environment. In order to follow the actions set out under this policy, a Gender Focal Point in the Permanent Secretary of Environment was appointed. At present a revision of the National Gender Policy by the MCDGC is underway.

<sup>19</sup> URT. 1999. Tanzanian Development Vision 2025. Government of Tanzania. Dar es Salaam. P.12.

<sup>20</sup> This section draws on Mascarenhas, O. 2007. Gender Profile of Tanzania. Tanzanian Gender Networking Program and Swedish International Development Cooperation. Dar es Salaam.

<sup>21</sup> URT. 2005. National Strategy for Growth and Reduction of Poverty. Government of Tanzania. Dar es Salaam.



37. The MCDGC is also in the process of developing a National Guidelines for Mainstreaming Gender into Policies, Programs, Budgets and Plans related to Climate Change Adaptation.
38. The Government, in collaboration with NGOs, has been working to remove discriminatory provisions in existing laws which do not grant equal rights and freedom to women by redrafting inheritance Laws, the Marriage Act and following up on the provisions of the Convention on the Rights of the Child, to which it is signatory.
39. The Government has also developed and implemented several strategies to improve the economic empowerment of women. The first was to make access and equitable control of means of production possible for women. The Government revised the National Land Policy (1995), and enacted both the Land Law Act (1999), as well as the Village Act (1999). These enabled women, at least in statute, to own clan and family land on equal rights with men. The Government and its NGO- and international donor agency partners, have also worked to increase awareness of men and women on the importance of women owning land and other means of production. The role of women and their contributions at the family and community levels in the development process have been emphasized. Further work is still necessary to educate society on these issues and to increase awareness and understanding of how women can benefit from such changes.
40. Unfortunately, the Government has encountered constraints in its efforts to enhance the legal capacity of grassroots women. These include inability to both sensitize women on their rights due to financial constraints, as well as to provide legal assistance to them in courts of law.
41. The Government has changed regulations and taken affirmative action to include women in decision-making. The Parliament passed a Bill in 2000 to increase the seats. In the local Government councils where women are assured of 33 percent of seats while in the Union Parliament women are assured of 20 percent of the seats.
42. Efforts also included increasing the number of women in decision-making positions through Government appointments and other public structures. The Cabinet Decision No. 23 of 1996, among others, endorsed the increase of women in all decision-making levels such as Board of Directors, Heads of Institutions, Commissioners and in national delegations. Mainstreaming of gender in the civil service and the creation of a database on women and their qualifications for use by appointing authorities was also implemented. To put this in practice, the fourth government in 2010 made a historical change by institutionalizing women leadership Parliament. This lead to the appointment of the current Speaker of the National Assembly as the first women in the history of the country to lead the legislature since independence.
43. Yet despite this understanding and recognition, gender considerations were largely ignored in the development of the Initial National Communication (INC), the National Adaptation Program of Action produced under the UNFCCC and the more recent National Strategy on REDD.
44. While the Tanzania Development Vision 2025 envisages that by 2025, each Tanzanian must be living a better life and that poverty would have been addressed, it falls short of recognizing climate change as a new environmental and developmental challenge.
45. This lack of recognition might be due to the time at which the Vision was prepared. However, this does not mitigate the danger posed by climate change on the realization of the Tanzania economic growth and reduction of poverty through climate associated diminishing agricultural productivity, reduced water supply, spread of climate related diseases like malaria, destruction of infrastructures such as roads,

along with so many others impacts.

46. The National Strategy for Growth and Reduction of Poverty does, however, recognize the adverse impacts of climate change as one of the factors that contributes to poverty. The Strategy mentions extreme weather events/-stresses such as floods and droughts as among the factors that contribute to poverty in Tanzania. The Strategy is structured in three clusters, with issues related to the environment falling under the second cluster entitled *"Quality of life and social well being."* In this cluster, the strategy envisages to ensure that improved quality of life and social well-being is achieved through provision, affordability and access to quality food and services like education, information, health, water, HIV and AIDS treatment, among others. For all those to be achieved, the Strategy recognizes the importance of having in place a clean and protected environment. For example, free from air- and water pollution, or free from mosquito breeding sites. It is therefore clear that the adverse impacts of climate change might seriously impinge on the achievement of the objectives of the Strategy.

## VI. Methodology

47. In June 2011, Dr. Terezya L. Huvisa, Minister of State of Tanzania, directed a request to the IUCN Gender Office to support the Government of Tanzania in the development of a *"National Strategy for Mainstreaming Gender in Climate Change in Tanzania"* that could form an integral part of the National Climate Change Strategy (under development) and Action Plan.
  48. Made possible with the generous financial support from the Government of Finland, this document is the result of a series of inputs: research, interviews with policy makers, stakeholder consultation and peer review, among others. It has been drafted on the basis of an analysis of the current national priorities concerning climate change and by means of a workshop with male and female stakeholder representatives - convened from the 28th to the 30th of September in Dar es Salaam, Tanzania (see Annex 1 list of participants).
  49. The main objectives of the workshop were to:
    - Identify and understand the importance and interconnectedness of gender and climate change;
    - Develop a National Strategy on gender and climate change for Tanzania, identifying appropriate entry points, policy- and other recommendations and actions; and
    - Considering both adaptation and mitigation, provide inputs for mainstreaming gender into the National Climate Change Strategy and Action Plan in a coherent, integrated and sustainable manner.
  50. It defines the role that the Vice President's Office will play in initiating and facilitating efforts internally, as well as with strategic partners at the national, regional and international levels. It seeks to mainstream gender in climate change action as outlined in the National Climate Change Strategy and Action Plan (under development) to overcome constraints - and take advantage of - opportunities that promote gender equality and facilitate change.
  51. The mandate for the implementation of the Strategy rests with the Division of Environment of the Vice-President's Office.
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## SECTION B: GENDER AND CLIMATE CHANGE PLAN OF ACTION

### Overall Objective of the Strategy

To ensure that Tanzania mainstreams gender considerations into policies, programs and strategies related to climate change so that both women and men can have access to, participate in, contribute to, and hence benefit from climate change initiatives and efforts, taking into account the diverse needs, roles, and contributions of both men and women in the sustainable development endeavors.

52. The Strategy integrates gender considerations into each of 6 priority sectors as identified jointly by participants and the Government of Tanzania, i.e. agriculture, water, health, energy, forests and coastal management from 2011 to 2016. It establishes clear objectives, outlines substantive activities that each are accompanied by reachable indicators within the ambit of the six priority sectors as identified and highlights the specific contribution women do and can make within each of these as well as the required interventions necessary to incorporate the role of women effectively. For the crosscutting themes of Capacity Building and Awareness and Policy, separate action is identified (refer section XIV).

#### I. Priority Sector: Agriculture

##### *Overview*

53. Agriculture is the foundation of Tanzania's economy and accounts for about 26.6 percent of GDP and about 14.3 percent of foreign exchange earnings. The country is endowed with 94.5 million hectares of land out of which 44 million are classified as suitable for agricultural production and includes crops, animal husbandry, fisheries and hunting sub-sectors.
54. Despite the fact that only about 10.8 million hectares are under cultivation, agriculture contributes significantly to employment, food production and export. Agriculture also accounts for about half of the national income, three quarters of merchandise exports, is the source of food and provides employment opportunities to around 80 percent of the country's population, with strong linkages with other (non-farm) sectors through downstream activities such as agro-processing; consumption and export; providing raw materials to industries and providing a market for manufactured goods<sup>22</sup>.
55. Women constitute the main part of the agricultural labor force in a sector that is largely characterized by smallholder farmers that mostly cultivate rain-fed farms ranging, on average, from 0.9 to 3.0 hectares in size. Around 70 percent of Tanzania's crop area is cultivated by hand hoe, 20 percent by ox plough and 10 percent by tractor. Eighty five percent (85%) of the 5.1 million hectares cultivated annually is for food crop production.
56. The major constraint facing the agriculture sector is the declining labor and land productivity as result of the use of poor technology and an over-dependence on unreliable and irregular weather conditions that is exacerbated by the effects of climate change. Crops, livestock and the associated dependent communities are all adversely impacted.

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<sup>22</sup> Government of Tanzania. 2011. Official Website. Retrieved from the World Wide Web: <http://www.tanzania.go.tz/agriculture.html>

- 57.** Agricultural development is strongly dependent on environmental resources such as land, forest and water. The sustainable use of these resources is vital for the growth and sustainability of the sector. Changes in rainfall patterns and an increase in temperatures shortens, for example, the growing seasons and reduce crop yields impacting on food security which in turn impedes progress towards the Millennium Development Goals (MDGs).

#### *Situation Analysis*

- 58.** Over the last three decades, agricultural policy in Tanzania has evolved to reflect macro economic policy changes in the country - from a centrally planned, to a market led economy. The first agricultural policy was formulated in 1983 and reviewed in 1997 to accommodate this shift<sup>23</sup>. A process to amend the 1997 policies is currently underway to review, update and strengthen national policy. Importantly, it also seeks to include issues such as climate change previously not included.
- 59.** Policies that currently impact on the agricultural sector include, amongst others, the Land Policy (1995); National Employment Policy (1997); National Environmental Policy (1997); the Plant Protection Act (1997); the National Forestry Policy (1998); Local Government Reform Policy (1998); National Land Act (1999); National Micro-Finance Policy (2000); Gender Policy (2000); Rural Development Policy (2001); National HIV Policy (2001); Co-operative Development Policy (2002); the National Water Policy (2002); the National Irrigation Master Plan (2002); the Grazing-Land and Animal Feed Resources Act (2003); National Trade Policy (2003); National Information and Communication Technology Policy (2003); National Energy Policy (2003); Animal diseases Act (2003); National Empowerment Policy (2004); Environment Management Act (2004); National Livestock Policy (2006); Strategy for Urgent Actions on Land degradation and Water Catchments (2006); National Youth Policy (2007); the Agricultural Marketing Policy (2008), the Fertilizer Act (2009); and the National Irrigation Policy (2010).
- 60.** The Government of Tanzania has also embarked upon Kilimo Kwanza - a major agricultural initiative and meaning *Transforming Agriculture*. Kilimo Kwanza entails the modernization of agriculture: increasing crop production, improving livestock husbandry and undertaking fish farming. Unfortunately, the initiative is weak with regard to its recognition of environmental, climate change and gender implications.
- 61.** Food security is a major priority for the Government of Tanzania as it impacts on meeting the objectives set out in both the NSGRP and the MDGs. An estimated 77% of the population in Tanzania lives in rural areas where their livelihoods depend predominantly on agriculture (i.e. crops, livestock). By enlarge, and in most years, the country is 95% self-sufficient in producing food.
- 62.** Apart from producing food for consumption, the agricultural sector in Tanzania is also of particular importance due to its contribution to the national economy and the employment opportunities that it generates. In 2007, the agricultural sector accounted for around 26.7% and the livestock sector contributed around 4.7% of the GDP respectively.
- 63.** The impacts of climate change therefore impacts significantly on both the Government's efforts to raise the standard of living of Tanzanians, as well as on efforts to secure the livelihoods of communities, particularly in rural areas.

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<sup>23</sup> Draft National Agriculture Policy. August 2009, Draft. Ministry of Agriculture, Food Security and Cooperatives. The United Republic of Tanzania. (Still under development)

- 64.** It is scientifically proven that, even if greenhouse gases emissions were halted today (which is not the case), the impacts of already accumulated greenhouse gases would continue to be felt over a number of years. Adaptation to adverse impacts of climate change is therefore of paramount importance for Tanzania.
  - 65.** The main impacts of climate change on the agricultural sector in Tanzania is suffered through:

    - An increase in droughts, floods and prolonged periods of the dry season as a result of variability and changes to seasonality of rainfall and changes in mean temperature;
    - An increase in temperature resulting in shortened growing seasons for crops and reducing the availability of pasture and crop residues that are important sources of animal feed during the dry season;
    - An increase in water stress and challenges on the use of water for irrigation;
    - An increase in intensity and frequency of fires, including a shift in the geographical distribution of plant species and associated land cover and impacting biomass growth detrimentally;
    - Grasslands replacing forests and woodlands which are important fodder for stock and even loss of biodiversity;
    - An increase in land degradation;
    - Altered range and incidence of pests and diseases and an increase in the incidence of vector-borne livestock diseases;
    - An increase in heat shock/stress and reduced grain quality/nutrient content;
    - Massive loss in livestock; and
    - Impacts in fisheries as result of changes in weather patterns and water temperatures.
  - 66.** Given its dependency on the climate, agricultural production (particularly in developing countries) is threatened by an increasing amount of uncertainty caused by climate variability and climate change. The impacts of climate change on the agricultural sector are projected to be experienced steadily through impact on both land and water. Changes in the frequency and intensity of droughts, flooding, and storm damage are being experienced. Climate change is also expected to result in long-term water and other resource shortages, land degradation, drought and desertification, disease and pest outbreaks on both crops and livestock.
  - 67.** Of particular concern to the Government of Tanzania are the links between climate change, the agricultural sector and poverty, which is projected to rise as result of the anticipated adverse impacts of climate change on the agricultural sector and that will exacerbate rural poverty. Impacts on poverty are likely to be especially severe in Tanzania, where the agricultural sector is an important source of livelihood for a majority of the rural population.
  - 68.** According to the National Adaptation Program of Action (NAPA) areas in the country that receive bimodal rainfall will experience increased rainfall of 5% to 45%, while those with unimodal rainfall pattern will experience decreased rainfall of 5% to 15%. The change in rainfall patterns will cause more severe and increased frequency of flooding in areas that receive increased rainfall and increased seasonal flow in areas that receive less rain.
  - 69.** Changes in rainfall and evaporation will also directly affect groundwater. Climate change may lead to a fall in crop production due to diminished water availability; shortened growing periods and an increase in weeds, diseases and pests will lead to crop losses. With an increase in temperature, reduced rainfall and a change in rainfall pattern the average yield for maize (a staple food in Africa) countrywide is expected to decrease by around 33%.
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- 70.** Climate change is also expected to further shrink rangelands that are important for livestock-keeping communities in Tanzania. This shrinkage will be more accelerated by the fact that about 60% of the total rangeland is infested by tsetse fly, making it unsuitable for livestock pastures as well as for human settlements. Shrinkage of rangelands is likely to worsen conflicts between livestock keepers and farmers in many areas. As a result, most livestock keepers will have to shift their herd to search for pastures of which land degradation and family disturbances will also be experienced.

*Gender in the Agricultural Sector*

- 71.** Despite women being the main producers of crops for both cash and domestic use in the largest sector of the Tanzanian economy, their sociocultural environment does not allow them to build on their own wealth<sup>24</sup>.
- 72.** Food insecurity that permeates the household, the village and the nation is not just a result of low food production, but more because of post-harvest loss due to poor technologies and preservation facilities. The gender-imbalance workload is a major factor contributing to food insecurity. Lack of technological support to women, the main food producers, reduces the level of efficiency and production that will ensure food security. Other factors include: lack of storage facilities and preservation technologies and the limited education and skills, which result in women failing to produce enough food or allocate adequate funds for food items.
- 73.** According to the Food and Agriculture Organization (FAO)<sup>25</sup>, the yield gap between men and women averages around 20% to 30%, and most research finds that the gap is due to differences in resource use. Bringing yields on the land farmed by women up to those levels achieved by men would increase agricultural output in Tanzania between 2.5% and 4%. Increasing production by the same amount could also reduce the number of undernourished people in the order of 12% to 17%.
- 74.** Given the fact that the livelihood of about 80 percent of the population depends on land, and women are more predominate in the use of land than men, land is an essential resource and asset to women. Male-headed households are, however, more likely to received credit than female-headed households (86.7% versus 13.2%)<sup>26</sup>.
- 75.** Traditionally, women could also only use - but not own - clan land. The justification was that women could marry outside the clan and cause the clan to lose its land. Two pieces of Legislation addressed this discrimination: the Land Act No. 4 of 1999 and the Village Act of 1999. Both came into force in 2001.
- 76.** The Village Land Act enhanced gender equality in several ways. Firstly the Village Land Act Section 3(2) states: The right of every woman to acquire, hold, use and deal with land shall to the same extent and subject to the same restrictions be treated as right as any man.
- 77.** Secondly, section 60 provides for women to be involved in decisions regarding the use and disposal of village land through equitable representation in the village land council.

<sup>24</sup> Government of Tanzania. 2011. Official Website. Retrieved from the World Wide Web: <http://www.tanzania.go.tz/gender.html>

<sup>25</sup> FAO. 2011. The State of the Food and Agriculture. FAO. Italy.

<sup>26</sup> TGNP. 2010. Employment, Livelihoods and Trade: What Plans are there for the Poor and Marginalized?. TGNP Policy Brief. No. 1. Tanzania.



- 78.** The Land Act No. 2 of 2002 established Land Tribunals with a provision that the composition of such tribunals must include at least 43 percent of women. The law recognized customary law but stipulate that customs and practices regarding these rights, which contradict the principle of equality of women, are null and void.
- 79.** In spite of the above, the view that women cannot inherit clan land is still very strong. By recognizing the validity of customary laws, most of the gains are only theoretical. Most of the reviews on the matter found that in Tanzania, women are precluded from accessing and owning land. This is particularly true in the case of inheritance from husbands<sup>27</sup>

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<sup>27</sup> Mascarenhas, O. 2007. Gender Profile of Tanzania. Tanzanian Gender Networking Programme and Swedish International Development Cooperation. Dar es Salaam.

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EXAMPLES OF ACTION: AGRICULTURE			
Objectives	Action steps	Indicators of success	Responsible
Build and strengthen institutional understanding on gender, CC and agriculture	Promote and conduct research and studies on gender, agriculture and climate change	Number of studies/research conducted	MNRT FBD TFS MJCA MOFEA VPO/ DoE CBO's
	Conduct studies on women's access to and control of agricultural lands (access to agricultural land in context of community forestry, REDD, village land use planning)	Disaggregated gender data established	
Improve agriculture related infrastructures to adapt to the effects of climate change	Conduct baseline study on infrastructure needs of men and women	Number of improved infrastructures	MAFC MLFD VPO LGAs
	Improve efficiency of the water storage systems through construction / rehabilitation of dams/ charco dams and irrigation system in hands of the women	Number of efficient water storage systems through construction / rehabilitation of dams/chaco dams and irrigation system managed by women	
	Promote water harvesting systems by women	Percentage of women using water harvesting systems	
	Construction/rehabilitation of post-harvest storage facilities that addresses women's and men's needs	Number of constructed/ rehabilitated post harvest storage facilities disaggregated by sex	
	Promote use of tolerant crop varieties on women plots to ensure food security	Improvement in nutrition at the household level	
	Analysis, disaggregated by sex of traditional knowledge relevant to adapt to CC	Existence and utilized indigenous knowledge on storage system	
	Promote existing indigenous knowledge through training and knowledge exchange to improve production, diversification and storage systems in agriculture		

EXAMPLES OF ACTION: AGRICULTURE			
Objectives	Action steps	Indicators of success	Responsible
Enhance local community participation of women and men in components of agricultural sector activities	<p>Promote involvement in and encourage participation of women and men in planning, implementation, monitoring and evaluation of agricultural programs/projects</p> <p>Train women to develop project and grants proposals</p> <p>Promote women's participation in sustainable agriculture programs (terracing, use of power tillers)</p> <p>Promote alternative livelihood strategies for women (e.g. mat making, pottery)</p>	<p>Percentage of men and women involved in planning, implementation, monitoring and evaluation of agricultural programs/projects</p> <p>Number of women participating in planning, implementation, monitoring and evaluation of agricultural programs/projects</p> <p>Drafts of project and grants proposal in place</p> <p>Amount of funds available</p> <p>Number of men and women participating in sustainable agriculture programs</p> <p>Availability and number of utilized alternative livelihood strategies for women (e.g. mat making, pottery)</p>	MAFC MLFD VPO LGAs
Land Tenure and Customary Law to incorporate women's access and title to land	<p>Sensitize local community to be aware of land issue through traditional leaders that will support knowledge and implementation/enforcement of the statutory law</p> <p>To allow women to be aware of and exercise their rights, thus allowing them to access and control land to which they is entitled<sup>28</sup></p>	<p>Number of community sensitized</p> <p>Local community guidelines developed and implemented</p> <p>Number of men who are conscious of women rights</p> <p>Number of women who are conscious of their rights</p>	MAFC LGAs

<sup>28</sup> Women's organizations in Tanzania have been doing interesting work in linking women with local paralegal services, including to enhance access to justice/ legal services around land rights and other rights. UNFPA recently commissioned a review of such paralegal services in several regions in Tanzania.

EXAMPLES OF ACTION: AGRICULTURE			
Objectives	Action steps	Indicators of success	Responsible
	Mobilize local community to develop and incorporate gender in their traditional/ customary guidelines		
Strengthen early warning system in agriculture to facilitate weather forecasting	<p>Conduct campaigns to involve women and men in early warning system</p> <p>Promote use of indigenous knowledge in the development of indicators in weather forecasting and the impact of climate change</p>	<p>Number of local women and men involved in early warning systems</p> <p>Number of death decreased due to CC-associated disasters</p>	MAFC TMA LGAs VPO-DoE
Ensure gender-responsive budgeting	<p>Conduct capacity building for budgeting officers, officials and technicians in the agricultural sector on gender budgeting</p> <p>Monitor the amount of funds made available for gender activities at local level</p> <p>Mainstream gender and CC in budgets</p> <p>Timely disbursement of funds</p>	<p>Gender and CC mainstreamed in budget</p> <p>Amount of resources allocated for women</p> <p>Number of projects targeting women</p> <p>Number of trained budgeting officers, officials and technicians in the agricultural sector on gender budgeting in place</p>	MAFC MOF VPO LGAs
Enhance participation of women and girls through formal and informal education in the agricultural sector	<p>Encourage more women to join the agriculture profession</p> <p>Establish a funding mechanism and scholarships for women in agriculture</p> <p>Empowerment and leadership development of women in the agriculture sector at all levels</p>	<p>Number of women enrolled in agricultural institutions</p> <p>Number of women joining/ participating in the agriculture sector</p> <p>More opportunities for women involved in leadership/decision-making positions in agriculture</p>	MAFC MoEd MSHE

## II. Priority Sector: Water

### *Overview*

80. Tanzania is the largest of the East African countries and with 7% of the country's land surface covered by lakes that either border the country or are situated inland, including lake Victoria (the second largest fresh water lake in the world), Lake Tanganyika (second deepest lake in the world), and lake Nyasa. Inland lakes include Lakes Rukwa, Eyasi and Manyara. Several large rivers flow into these lakes.
81. Despite its large lakes however, many areas of the country are also very dry and cannot support agriculture. One third of Tanzania receives less than 800 mm of rainfall and is therefore classified as arid or semi-arid. Only one-third of the rest of the country has precipitation higher than 1,000 mm and the long, dry season (normally extending from June to October), has a marked effect through low river flows and the drying of water reservoirs.
82. The water sector's contribution to Tanzania's GDP has remained one of the smallest and in recent years remained around 0.2%. However, despite this low percentage, water is a critically important resource for socio-economic development, especially due to its linkages with other sectors such as the economy (e.g. energy), agriculture and others.
83. Water consumption in Tanzania can generally be classified into irrigation, industrial, rural and urban; and livestock use. Irrigation is the largest water user and utilizes around 89%. Rural and urban water supply jointly consumes around 9%, while industrial water use comprises around 2%. An increase in economic activities and the delivery of social activities have, however, also increased demand in the sector and have hence forth placed an additional burden on the government towards delivery/supply.
84. Access to safe water is essential in addressing poverty and health problems. The poor, most of whom live in rural areas in Tanzania, have very limited access to clean water for domestic use, crop production and adequate sanitation<sup>29</sup>.
85. In rural areas, women and children can spend several hours per day collecting water and sanitation services are limited. Only 54% of the population has access to improved water supplies and 24% have access to adequate sanitation. On average, women and children spend over two hours a day collecting water, and this figure increases to up to seven hours in remote areas. As a result, twenty thousand (20,000) children die before the age of five each year due to diarrheal diseases<sup>30</sup> (see also Priority Sector III: Health, page 36).
86. Existing data on the incidence of water-borne, water-related and water-washed diseases indicate that these are mostly prevalent where people use contaminated water or have little access to water for daily use. Such diseases account for over half of the diseases affecting the population and more than 80 percent of Tanzania's population living in rural areas<sup>31</sup>.

<sup>29</sup> Government of Tanzania. 2011. Official Website. Retrieved from the World Wide Web: <http://www.tanzania.go.tz/water.html>

<sup>30</sup> WaterAid. 2011. Official website 2011. Retrieved from the World Wide Web: [http://www.wateraid.org/uk/what\\_we\\_do/where\\_we\\_work/tanzania/](http://www.wateraid.org/uk/what_we_do/where_we_work/tanzania/)

<sup>31</sup> Government of Tanzania. 2011. Official Website. Retrieved from the World Wide Web: <http://www.tanzania.go.tz/water.html>

- 87.** Women in both urban and rural areas suffer the biggest burden of insufficient water supply or water of inferior quality. In Dar es Salaam, for example, an increase in the city's population has led to insufficient water supply, resulting in too few water sources that are too far away from where they live. Whilst private wells are available in some areas, these are run on a commercial basis and often out of reach for many, as they are too expensive and forcing them to seek alternative sources that are either unsafe and/or contaminated by disease and/or chemicals from industries that seep into the wells. As a result, diseases are rampant.

### ***Situation Analysis***

- 88.** Like many poor nations around the world, Tanzania suffers from serious issues involving its people in relation to water. In such a dry country, it is very difficult for people to find access to clean, sanitary water if they don't live near one of the three major lakes that border the country. As a result, Tanzania's ground water is the major source of water for the nation's people - however it's not always clean. Many of these ground water wells are located near or next to toxic drainage systems, which leak into the fresh ground water and contaminate it. Consequently, Tanzanians turn to surface water that contains harmful bacteria and/or human waste and people have no choice other than to utilize these.
- 89.** Tanzania's urban and slum population is also rapidly increasing at a rate of more than six percent per year — one of the highest growth rates in sub-Saharan Africa. The fast-growing urban population, coupled with diminishing capacity of the government to provide or facilitate the provision of water sources, has overburdened the water services in most urban settlements. In urban areas, more than 92 percent of the urban population lives in slums, and "only about 70 [percent] of the urban population has access to reliable water supply." Slums are a reflection of poverty, inequality, and social exclusion that exists in urban areas. Most slum dwellers do not have convenient access to improved water sources. The development of water supply in slum areas is difficult because most are located in ravines, and on hills and flood plains. Also, because of poverty, some slum dwellers build their homes using materials such as mud, plant leaves and stems, and tin which makes it difficult to install permanent water pipes. Further, the cost of installing water pipes may be too high for slum dwellers. Additionally, the statutory laws require one to have a legal tenure on property before constructing a water source or extending water pipes, yet most slum dwellers do not have formal property rights to the land on which they live.
- 90.** According to Tanzania National Website, illnesses, such as malaria and cholera "account for over half of the diseases affecting the population," because people don't have access to alternatives<sup>32</sup>.
- 91.** In Tanzania, the water sector is impacted by climate change through:
- Severe and recurrent droughts in many parts of the country. Variations in rainfall and soil moisture due to a change in mean temperature have decreased water flows in rivers and water levels in lakes respectively;
  - Negatively impacting on the productivity and sustainability of river- and lake basins' resources and associated socio-economic activities, thus affecting water supply for power generation, irrigation, domestic and industrial use. The Pangani basin is both one of Tanzania's most agriculturally productive

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<sup>32</sup> Shore, Rebecca. 2011. "Water in Crisis – Spotlight on Tanzania". The Water Project. Retrieved from the World Wide Web: <http://thewaterproject.org/water-in-crisis-tanzania.php>



areas and also an important hydropower production region. The Ruvu river is an important source of water for domestic and industrial use in the city of Dar es Salaam. Reduced runoff of the Pangani and Ruvu rivers, which are economically important for supplying water and hydro-electricity to major towns where industrial activities are highest in the country, adversely affect socio-economic development in the country;

- Environmental degradation. The adverse effects of climate change have affected many lake basins constituting important components of essential ecosystems. For example, the water levels of Lake Victoria, Lake Tanganyika, Lake Manyara and Lake Jipe have all been reported to drop in recent years and Lake Rukwa has receded around 7 kilometers over the last 50 years.
92. Water and development are strongly inter-dependent. The state of the hydrological regime, its water quality and ecosystems are major factors contributing to human well-being. For example, the world's inland- and marine fisheries are a crucial part of aquatic living resources that are vital in this regard.
  93. Despite the rapidly growing water demands from the growing population and other needs, the volume of available and accessible freshwater is roughly the same and probably might be decreasing as a result of environmental degradation by human activities. Supplying water to the growing population therefore depends on the capacity (and the will) to manage the resource effectively (i.e. ensuring its quality, quantity and access) so that it can reach more people.
  94. Findings from the IPCC Fourth Assessment Report have alluded that climate change is expected to exacerbate current stresses on water resources from population growth and economic and land-use change, including urbanization. The report further warns that mountain snow pack, glaciers and small ice caps play a crucial role in fresh water availability. Therefore, widespread mass losses from glaciers and reductions in snow cover over recent decades are projected to accelerate throughout the 21st century, reducing water availability, hydropower potential, and changing seasonality of flows in regions supplied by melt-water from major mountain ranges.
  95. Predicted impacts of climate change on water resources in Africa articulate that:
    - By 2020, between 75 and 250 million of people are projected to be exposed to increased water stress due to climate change;
    - By 2020, in some countries, yields from rain-fed agriculture could be reduced by up to 50%. In many African countries – including Tanzania – it is projected that agricultural production, including access to food, will be severely compromised. This would further adversely affect food security and exacerbate malnutrition;
    - Towards the end of the 21st century, projected sea-level rise will affect low-lying coastal areas with large populations. The cost of adaptation could amount to at least 5% to 10% of GDP; and
    - By 2080, an increase of 5% to 8% of arid and semi-arid land in Africa is projected under a range of climate scenarios (*high confidence*).
  96. Although there are a number of literature on the whole issue of water resources in Tanzania, starting from the National Water Policy (URT, 2002), all along to other technical papers and articles, which recognize the importance of water resources for socio-economic development, and point out a number of challenges on the management and distribution of the resources, very little of this literature recognize the impacts of climate change on water resources in Tanzania.
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- 97.** The Government of Tanzania has undertaken various initiatives for water sector development that seeks to address the impacts of climate change in the country. These include:
- The National Water Policy (2002) and the Water Resources Management Act No.11 of 2009. The National Water Policy sets out the direction for the Water Sector in achieving sustainable development and management of the nation's water resources for economy-wide benefits, and an increase in the availability of water supply and sanitation services. The policy advocates an integrated approach to water resource management that is participatory, multi-sectoral, multi-disciplinary, and based on river basins. It also places an emphasis on addressing water-related climate change issues. The Water Resources Management Act puts in place a legal framework for implementation of the policy;
  - Implementation of various strategies and plans on the conservation and management of water resources, for example, the Strategy for Urgent Actions on Land Degradation and Water Catchments and the Strategy for Urgent Actions on the Conservation of Coastal and Marine, Lakes, Rivers and Dams Environment;
  - Implementation of both the Lake Victoria Environmental Management Program and Lake Tanganyika Environmental Management Program. Among the key issues in these programs are catchment management and conservation, poverty reduction, fisheries development and wastewater management;
  - Putting in place water user rights for various user groups;
  - Developing and applying techniques and methodologies for assessing the potential adverse impacts of climate change on the water sector in Tanzania's national and local water-related indicators of progress in achieving integrated water resources management are being developed and a national database for water resources is in place. A number of meteorological and hydrological stations around the country have been refurbished, including in the Rufiji and Pangani river basins.
  - Developing and initiating response strategies to address the adverse impacts of climate change in the water sector. In this context, some 200 wells have been constructed to supplement the existing water system with around 18 million liters per day increasing the total capacity to 274 million liters per day;
  - The Government is currently also developing other water sources throughout the country.
- 98.** Policies that currently impact on the water sector, include, amongst others, the Control and Regulation Act (1974) (including amendments to the Act in 1981 and in 1989); the Land Policy (1995); National Environmental Policy (1997); the National Forestry Policy (1998); National Land Act (1999); Rural Development Policy (2001); Water Policy (2002); National Energy Policy (2003); Animal diseases Act (2003); Environment Management Act (2004); National Livestock Policy (2006); Strategy for Urgent Actions on Land degradation and Water Catchments (2006); and the Agricultural Marketing Policy (2008).

#### ***Gender Aspects in the Water Sector***

- 99.** In Tanzania, fetching water is the task of women and girls. Often women and girls spend long hours fetching water for their families. In rural areas, more than fifty percent of households "have to travel more than one kilometre to their drinking water source in the dry season." Women in rural areas travel, mainly on foot, an average of forty minutes to collect water, and almost one quarter of households travel over

an hour. Where there is no easy access to water, girls have to help their mothers with this burdensome task, which often interferes with their right to education. Heavy household workloads, exacerbated by problems of water access, and strict gender roles, greatly affect girls' school attendance.

- 100.** In rural areas an additional factor is the seasonal differences in distance travelled and time taken to fetch water. In many parts in the rural areas, households have to rely on unprotected water sources for part or all of their needs.
- 101.** The situation is exacerbated when there are outbreaks of diseases like AIDS pandemic, which requires extra quantities of water for washing clothes, bedding and the patients themselves. As the main caretakers, the burden of collecting the extra water falls mainly on the female members of the household at the cost of their productive contribution to poverty reduction.
- 102.** Climate change adds to water insecurity and shortage that in turn takes much of women's time for fetching water for domestic uses. Moreover, water insecurity increases women's workload in subsistence farming, as they have to dig deep for land preparation and spend more time in the protection and control of diseases caused by climate change<sup>33</sup>.
- 103.** These are, however, not the only problem plaguing Tanzanian society. Incidences of women being attacked when gathering water, often far away from home, have also been reported. In a household where money is scarce and daughters and mothers have to spend several hours each day walking to get water from pumps, they also run the risk of being attacked or raped. TGNP, Tanzanian Gender Networking Program, found in a study of poor households "that the lack of safe, sufficient, and affordable water in Tanzania had increased rates of gender-based violence and the number of girls dropping out of school."
- 104.** Families who don't have money for water have no choice but to send their daughters out to collect water, despite the possibility of being subject to episodes of violence.

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<sup>33</sup> GenderCC. 2011. The Role of Women in Adapting to Climate Change in Tanzania. Retrieved from the World Wide Web: <http://www.gendercc.net/fileadmin/inhalte/Dokumente/news/Tanzania.pdf>

EXAMPLES OF ACTION: WATER			
Objectives	Action steps	Indicators of success	Responsible
To develop a data bank on vulnerability for drought-prone areas	Conduct a situation analysis, disaggregated by sex	Situational analysis concluded  Use of database per institution	MoW BWO
Build capacity of men and women in local communities on water management related to CC	Strengthen water committees to include women and youth at local level  Conduct water management training with the participation of women	Percentage of women and men involved in water committees  Percentage of women and men trained	MoW BWO LGAs
Enhance gender-responsive budgeting in water resource management	Monitor amount of funds available and spent for gender activities at all levels	Amount of resource allocated for women and men  Number of projects targeted women in CC	MoW BWO
Ensure that national indicators for integrated water resource management are gender-responsive	Request support from gender experts in Tanzania  Establish working relationship with the group in charge of Tanzania's national and local water-related indicators  Development of indicators	National and local indicators mainstream gender considerations	MoW BWO MCDGC
Assess water source catchment areas and improve water flow	Demarcate water source catchment areas and protect these officially  Include women in the water monitoring committee	Number of catchments demarcated and officially protected  Number of women in the committee	MoW BWO
Promote best practices for the efficient use of water and management of water-producing ecosystems	Promote technology innovation initiatives based on the equitable use and sustainable management of water, focusing on the most vulnerable users	Number of friendly technology practices disaggregated by sex	MoW BWO LGAs

EXAMPLES OF ACTION: WATER			
Objectives	Action steps	Indicators of success	Responsible
	Promote the development, validation, dissemination and transfer of technologies for the efficient use of water at household level with particular focus on vulnerable populations		
Establishment of gender based programs for improved conservation and management of lakes and river basins	<p>Women groups mobilized to establish nurseries and plant trees upstream to avoid soil erosion and improve water quality</p> <p>Women representation in water committees</p>	<p>Number of women groups involved in protection of watersheds throughout the country</p> <p>Number of nurseries in the hands of women</p> <p>Number of trees planted by women groups</p>	MoW LGAs WBAs
Investing in ground water extraction and rain harvesting to supplement household and agricultural water needs	<p>Mobilize women groups in rural communities to build dams in water catchment areas</p> <p>Empower women in urban and rural areas to harvest rain water for domestic use where wells are contaminated, expensive or not accessible</p> <p>Develop an initiative on distributing water pumps where maintenance and operation are in the hands of women</p> <p>Building the capacity of women as plumbers in urban and peri-urban areas</p>	<p>Number of boreholes projects established</p> <p>Number of households with rain harvesting equipment</p> <p>Number of women plumbers</p> <p>Percentage increase in water availability to communities</p>	MoW LGAs
Training more women experts in the water sector	Increase enrolment of women in water management courses in all levels of education	<p>Number of women water experts trained and hired</p> <p>Percentage increase in</p>	MoW LGAs

EXAMPLES OF ACTION: WATER			
Objectives	Action steps	Indicators of success	Responsible
	<p>Encourage more women to be trained as water experts in rural communities</p> <p>Train and hire more women water officers in ward level in local areas</p>	<p>women experts over time</p> <p>Number of wards with women water officers</p>	
Invest in private sector and NGO expertise to develop tailor-made and innovative solutions to improve women access to water	<p>Establish a multi-sector working relationship to facilitate women's access to water</p> <p>Private sector and NGOs develop and implement technology to improve women's access to water</p>	<p>Effective working relationship established</p> <p>Number of innovative water projects by private sector and NGOs developed and implemented</p> <p>Percentage increase in women's access to water</p> <p>Reduction of water-borne diseases</p>	<p>MoW</p> <p>Private sector</p> <p>NGOs</p>

### **III. Priority Sector: Health**

#### ***Overview***

- 105.** Promoting and protecting health is essential to human welfare and sustained economic and social development. This was recognized more than 30 years ago by the Alma-Ata Declaration<sup>34</sup> signatories in 1978, noting that health for all would contribute both to a better quality of life, as well as to global peace and security.
- 106.** Citizens rate health one of their highest priorities, in most countries behind only economic concerns, such as unemployment, low wages and a high cost of living. As a result, health frequently becomes a political issue as governments try to meet peoples' expectations.
- 107.** The long-term health of a population largely depends on the continued stability and functioning of ecological and physical systems, also referred to as its life- support system.
- 108.** According to the Fourth Assessment Report of the IPCC in 2007<sup>35</sup>, climate change manifests through increase of average temperature leading to among others, widespread of malaria in highland areas and dengue fever and cholera. It is very likely that climate change will alter the ecology of some disease in Africa and consequently the spatial and temporal transmission of such diseases.
- 109.** This scenario will definitely compromise the human health by a range of factors. There is therefore need to examine the vulnerabilities and impacts of future climate change on other infectious diseases including dengue fever, meningitis and cholera<sup>36</sup>.
- 110.** Climate change is a significant and emerging threat to public health in Tanzania. The effects of climate change on human health are largely based on impacts of climatic events that impacts on the physical environment, including heavy precipitation, rising temperatures and extreme weather conditions such as flooding, drought and strong winds.
- 111.** Vectors, food and water-borne diseases are extremely sensitive to changes in climatic conditions. Under climate change scenarios the geographical range and potential of transmission and/or proliferation rates of infectious diseases increase and climatic variability increases the replication rate of pathogens through a change in ecological systems.

#### ***Situation Analysis***

- 112.** Climate change threatens to impact adversely on the health of the Tanzanian people, despite progress that have been made in the health sector in recent years.

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<sup>34</sup> The World Health Organization. 2011. Official Website. Retrieved from the World Wide Web: [http://www.who.int/hpr/NPH/docs/declaration\\_almaata.pdf](http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf)

<sup>35</sup> IPCC. 2011. Official Website. Retrieved from the World Wide Web: [http://www.ipcc.ch/publications\\_and\\_data/publications\\_and\\_data\\_reports.shtml](http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml)

<sup>36</sup> IPCC. 2007. IPCC Fourth Assessment Report: Climate Change (AR4). Cambridge University Press. Cambridge, United Kingdom.

**113.** In Tanzania, the health sector is impacted by climate change through:

- An increase in malaria and other vector-borne diseases in traditional areas, common in high temperature and humid lowland areas especially during and after rainy seasons;
- New infestations of malaria observed in non-traditional malaria areas such as highland areas of Tanga, Kilimanjaro, Kagera and Mbeya, among others, where it was not prevalent before due to changes in temperature and rainfall regimes.
- Increased risk of upper and lower respiratory infections in many parts of the country due to increased humidity.
- Increased outbreaks of respiratory diseases and eye infections in dry areas of the country, caused by prolonged dry spells.
- Increased incidences of food-borne and water-borne diseases such as dysentery, diarrhea, cholera and typhoid fever due to extreme weather events that affect water quality and make it difficult for people to practice proper personal hygiene. Experience supported with data show that prevalence of cholera, for example, elevates in rainy season and becomes even higher during floods.
- Increased malnutrition in the country through reduced agricultural productivity as a result of change in soil quality, increased crop pests and livestock diseases, prolonged drought and water scarcity.

**114.** The Government of Tanzania has therefore initiated a number of actions seeking to reduce the effects of climate change on public health. Some of these efforts include signature and ratification of international environmental agreements on climate change, enactment and enforcement of the Environmental Management Act (2004), and the implementation of health programs such as the Health Sector Development Program (2000), Health Sector Program Support, the Community Health Fund and the Malaria Control Program (2009).

**115.** Under the Malaria Control Program, the Government of Tanzania advocates four main strategies:

- Improved malaria case management;
- Vector control through the use of Insecticide Treated Nets (ITNs) and indoor spraying using pyrethroids. Indoor spraying using DDT is due to start in the near future, the moment after a legal requirement of conducting a Strategic Environmental Assessment has been fulfilled;
- Prevention and control of malaria in pregnancy which has involved the distribution of bed nets (free of charge) to pregnant women and children under five years of age; and
- Epidemic preparedness, prevention and control.

**116.** Although these efforts have delivered some encouraging results, further supported is needed in order to fully realize their potential.

#### ***Gender Aspects in the Health Sector***

**117.** Malaria is still the primary cause of mortality for children and adult men and women in Tanzania. Malaria is also the primary cause of morbidity.



- 118.** Maternal mortality rates in Tanzania in 2004/2005 (578 per 1,000 live births) higher than the ones in 1996 (529)<sup>37</sup>. Insufficient iron in their food, as well as consistent attack of malaria, worms and bilharzia, leads to anemia, common among pregnant women and children below five. It also accounts for a large component of maternal mortality in Tanzania. About 80 percent of pregnant and lactating mothers are anemic, while 52 percent have iodine deficiencies disorders<sup>38</sup>.
- 119.** Pregnant women are particularly susceptible to water-borne diseases. This adds to the poor health of such women and consequent complications in birth deliveries as well as higher vulnerability to HIV infection<sup>39</sup>.
- 120.** According to the Tanzanian HIV/AIDS Indicator Survey (THIS) 2003-04, women are more likely to be infected than men (8% compared to 7% for men). Women were also likely to be infected at an early age than men. Prevalence was highest among women aged 20 years to 33 years where the peak for men was in the 4 to 44 year group.

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<sup>37</sup> URT. 2005. Tanzania Demographic and Health Survey, 2004/05. National Bureau of Statics. Dar es Salaam.

<sup>38</sup> Mukangara, F. and Koda, B. 1997. Beyond Inequalities, Women in Tanzania. Tanzanian Gender Networking Programme and the Women in Development Southern Africa Awareness. Dar es Salaam and Harare.

<sup>39</sup> Mascarenhas, O. 2007. Gender Profile of Tanzania. Tanzanian Gender Networking Programme and Swedish International Development Cooperation. Dar es Salaam.

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EXAMPLES OF ACTION: HEALTH			
Objectives	Action steps	Indicators of success	Responsible
Strengthen capacity on technical and scientific links of climate change, health and gender	<p>Conduct comprehensive gender-responsive studies on impacts of CC on the health sector</p> <p>Revise health intervention measures to accommodate impacts due to CC</p> <p>Develop gender-disaggregated data on CC-related diseases</p> <p>Promote training of health experts on the relationship between gender and CC related diseases</p> <p>Develop methodologies and monitoring systems of cc related diseases disaggregated by sex</p> <p>Integrate component of CC/gender perspective into environment protection unit of ministry of health</p>	<p>Number of gender-responsive scientific studies</p> <p>Intervention measures which reflect CC</p> <p>Number of trained experts</p> <p>Database with disaggregated data in place</p> <p>Gender-sensitive methodologies and monitoring system established</p> <p>Environment protection unit strengthened by the inclusion of CC/gender issues</p>	VPO/DoE MoH MOEVT CSOs MCDGC
Enhance the capacity of women in the community to prepare and cope with disasters	<p>Tap into women's indigenous knowledge to predict disasters</p> <p>Develop gender-responsive understanding of early warning system to predict disasters</p> <p>Establish and strengthen/maintain link between women groups and local authority health officers to share information on development of diseases and curative measures</p>	<p>Indigenous knowledge documented and used</p> <p>Early warning messages/information are delivered to and used by women</p> <p>Working relationship between health officers and women groups established and functioning effectively</p> <p>Position of women in community enhanced</p>	VPO/DoE MoH MOEVT CSOs MCDGC

EXAMPLES OF ACTION: HEALTH			
Objectives	Action steps	Indicators of success	Responsible
	Recognize and leverage the role of influential women (e.g.: wives, mothers of traditional leaders) to act as agents of change on CC related issues		
Improve disease surveillance and control program	<p>Establish a disease surveillance system in communities in the hands of women</p> <p>Enhance capacity and recognition by government of women community nurses, similar to midwives, to address CC related diseases</p> <p>Involve and capacitate women to reduce breeding sites of climate change-related diseases</p> <p>Involve women in the distribution of mosquito nets in urban/rural areas</p> <p>Comprehensive studies of nutritional values of women custodians local/native plants and utilize them to address malnutrition due to CC impacts</p>	<p>Surveillance system in the community established and handled by women</p> <p>Government recognition of the role of community nurses</p> <p>Number of community nurses trained to handle CC related diseases</p> <p>Reduction of mortality and morbidity of CC-related diseases</p> <p>Number of women involved in distribution of mosquito nets</p> <p>Decrease of malnutrition in children ages 0 – 5</p>	<p>VPO/DoE</p> <p>MoH</p> <p>MOEVT</p> <p>CSOs</p> <p>MCDGC</p>

**IV. Priority Sector: Energy****Overview**

- 121.** Energy is the engine that drives national socio-economic development as energy availability, production, access and consumption constitute the criteria for assessment of the socio-economic development around the world.
  - 122.** Energy consumption in Tanzania is characterized by very low per capita energy consumption and industrial energy consumption that is below the levels of other Sub-Saharan countries.
  - 123.** Tanzania's electricity grid is fed by a mixture of natural gas, diesel and hydropower. Only 14 percent of people in this country, however, have access to electricity (12% urban). In rural areas, where more than 80 percent of people live, this figure drops to only two percent that have access to electricity.
  - 124.** Hydro electricity constituting the primary source for the generation of power generation in the country and over the past few years the country has experienced severe blackouts and power rationing in urban areas due to drought and subsequent low-water levels, contributed to climate change.
  - 125.** As alternative energy source, Tanzanians burn one million tons of charcoal each year, amounting to clearing more than 300 hectares of forest every day to produce charcoal. The rate of cutting trees and replacing them is, however, not proportionate. Whilst 109,500 hectares are cut every year (300 hectares x 365 days), only 25,000 hectares are planted annually with disastrous environmental effect.
  - 126.** Electricity consumption and demand is expected to continue rising as Tanzania strives to strengthen its economy in pursuit of poverty reduction. Rural electrification is therefore a long-term national priority. Availability of electricity in rural areas and commercial centers would stimulate much needed social and economic development. However, high costs of electricity distribution are a major limiting factor given the vast area of Tanzania.
  - 127.** Tanzania has significant potential for the development of other renewable sources of energy such as solar, wind and geothermal. If efficiently harnessed and utilized, such renewable sources would reduce considerably Tanzania's heavy reliance on traditional energy systems, as well as reverse the resulting ecological imbalances.
  - 128.** Due to the impact of climate change on hydro electricity generation in Tanzania, however, additional resources from the Government which were committed for other development programs had to urgently be reallocated for thermal electricity generation, undermining national efforts to attain the MDGs, jeopardizing poverty reduction efforts.
  - 129.** Petroleum exploration activities in Tanzania started in 1950s and about 33 wells have been drilled to date. As a result, there have been discoveries of natural gas in areas such as Mnazi Bay on the Tanzania/Mozambique border that is estimated to contain 15 million cubic meters of natural gas. Exploitation in other areas are also already producing results, such as that of the Songo Songo gas started in July 2004 after completion of the gas pipeline from Songo Songo Island to Dar es Salaam. Currently about 182 MW of electricity is generated at Ubungo TANESCO thermal power plant, which is connected to the national electricity grid.
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### ***Situation Analysis***

- 130.** One of the major problems concerning energy in Tanzania is the use of solid biofuels for cooking that includes the use of firewood and charcoal of which both the technology and use is very inefficient.
- 131.** Stoves most commonly used in Tanzania (three-stone fireplaces for wood and metal stoves that burn charcoal) waste more than 85 percent of the energy potential of their fuel.
- 132.** The number of people who are dying, particularly women and children, from inhaling the smoke is increasing and the World Health Organization (WHO) estimates that more than 75 people are dying per day in Tanzania as result of inhaling smoke while utilizing these inefficient technologies.
- 133.** The energy challenge in the country, however, is a compounded one as it overlaps with issues such as gender and poverty. The gendered division of labor usually means that women are responsible for most domestic tasks and subsequently women and children are worst affected by the health impacts of smoke inhalation, for example.
- 134.** Women's influence on decision-making in the household is furthermore limited by their economic dependency on men. According to UN-HABITAT, where women are economically empowered, they are more likely to adopt better technologies to change damaging energy practices and improve the living conditions of their families.
- 135.** In the rural village of Igunhwa in the Mwanza region of northern Tanzania, for example, several women's groups have been formed to take advantage of micro-finance schemes and construct more efficient mud stoves designed by an NGO called TaTEDO - the Tanzania Traditional Energy and Development and Environment Organization, initiated in 1999<sup>40</sup>. Also the ministry of Energy and Minerals in collaboration with Rural Energy Agency implement the project called Improved house hold Energy Services in rural Kilimanjaro and Mwanza Region (Kwimba and Ukerewe district), more than 7000 improved mud stoves constructed.
- 136.** More than 80 percent of urban residents also use charcoal for cooking. TaTEDO claims that in Dar es Salaam, for example, around 60 percent of households have been helped to switch to improved charcoal stoves that lower both costs and the burden on the environment through greater efficiency, despite having to deal with limited means, limited income and high initial start-up costs and cultural problems.
- 137.** The government recognizes that energy is an important component in the development of the economy. Because of this recognition, NAPA ranked energy sector as the second most sector that needs climate change related interventions.
- 138.** This is proclaimed in the various Policies, Acts, Legislations, Plans and Strategies. The policies including: National Energy Policy (2003); National Forestry Policy (1998); National Environmental Policy (1997), National Water Policy (2002); National Strategy for Growth and Poverty Reduction (2005).
- 139.** Acts include Environmental Management Act (2004); Rural Energy Agency Act (2005), and others. These policies emphasizes on renewable energy development. Other Government initiatives include the Development of Alternative Energy Sources.

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<sup>40</sup> TaTEDO. 2011. Official website. Retrieved from the World Wide Web: <http://www.tatedo.org/>

- 140.** In trying to solve the longstanding energy problem in the country, the Government collaborates with stakeholders in promoting alternative energy sources. For example, the Tanzania Sisal Authority has commissioned a biogas electricity generation plant with installed capacity of 300kW.

***Gender Aspects in the Energy Sector***

- 141.** Only 38% of urban households, and a measly 2% of rural households, reported using electricity for cooking, lighting or heating and cooling. In contrast 94% of rural and 25% of urban households reported that they use firewood or dung for cooking. Three-quarters of households therefore answered further questions about collection of firewood and dung.
- 142.** Of the households 11% (10% rural and 19% of urban) reported that fuel was delivered to their home, while 29% of rural and 37% of urban reported that they got fuel from a distance of 2km or more.
- 143.** 23% of rural households and 26% of urban households reported that it took two hours or more to collect the fuel. And more than a third of households (35%) report that fuel needs to be collected more than twice a week.
- 144.** 68% of urban heads and 75% of rural heads reports women as the main collectors. When children are named as the main collectors, it is again girls who are more likely to be named than boys<sup>41</sup>.

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<sup>41</sup> TGNP. 2009. Who cares for us?. Tanzania.

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EXAMPLES OF ACTION: ENERGY			
Objectives	Action steps	Indicators of success	Responsible
Increase the number of women experts on gender-sensitive energy technologies	<p>Design special programs to promote women enrollment in energy technology fields at different levels (e.g. vocational training colleges, higher learning institutions)</p> <p>To sensitize and encourage girls to opt for energy related fields in schools/ colleges and informal education</p> <p>Introduce/conduct short course training on gender sensitive energy technologies among women in the energy/environmental sectors</p>	<p>Special program in place</p> <p>Number of girls enrolled annually</p> <p>Number of women trained</p>	MOEVT MCDGC VPO/DoE NGO/CSOs
Increase budget allocation on gender-sensitive energy technologies	<p>Assess current budgetary allocation &amp; priorities</p> <p>Identify gender-sensitive technologies requiring promotion</p> <p>Lobby and advocate for increased budget allocation/investment in support of identified gender-sensitive technologies</p>	<p>Budget allocation reviewed</p> <p>List of identified gender appropriate technologies</p> <p>Budget allocation increased</p>	MCDGC MEM VPO/DoE Ministry of Finance NGOs
Promote investment in gender-sensitive energy solutions	<p>Encourage and support private sector investment in gender-sensitive solutions</p> <p>Investment in research for new gender-sensitive energy technologies</p> <p>Encourage investment in scaling-up proven gender-sensitive technologies</p> <p>Support tree planting programs/campaign with</p>	<p>Resources available from private sector</p> <p>New technologies identified</p> <p>Number of scaled-up technologies</p> <p>Number of women participating in tree planting programs/campaigns</p> <p>Reduction of deforestation</p>	Private Sector MCDGC MEM VPO/DoE NGOs

EXAMPLES OF ACTION: ENERGY			
Objectives	Action steps	Indicators of success	Responsible
	women and women groups (e.g. woodlots)  Support energy efficiency campaign (e.g. energy cooking stoves)	Number of efficient cooking stoves introduced	
Increase access and affordability of alternatives sources of energy to both men and women	Conduct baseline survey to determine levels of access, affordability and availability of alternative sources of energy  Raise awareness on alternative sources of energy  Subsidize alternative energy technologies (tax exemptions, establishment of special funds)  Support local/community availability of different/ alternative energy technologies  Develop the capacities of women to repair and maintain technologies	Baseline survey report  Number of men and women trained on alternative sources of energy  Amount of funds allocated for subsidies  Avalied alternative sources of energy  Number of maintenance systems in hands of women	MCDGC MEM VPO/DoE NGOs Private Sector
Reduce overdependence on biomass energy sources	Conduct a gender-sensitive technological needs assessment to identify needs and priorities  Train and raise awareness on alternative energy technologies in women and men  Promote use alternative energy technologies e.g. Biogas, solar, wind, etc.	Number of new technologies used disaggregated by sex  Number of women and women trained on alternative source of energy  Increase forest coverage  Percentage of biomass used vs. percentage of new energy sources	MCDGC MEM VPO/DoE NGOs Private Sector



EXAMPLES OF ACTION: ENERGY			
Objectives	Action steps	Indicators of success	Responsible
Promote the use of waste-based energy sources (e.g. crop residuals, wood ash)	<p>Conduct research to determine sources, cost and benefit implications, and gender appropriateness for different communities</p> <p>Build capacity of women on processing of specific energy sources (e.g. briquettes)</p> <p>Support application of selected waste-based energy sources (e.g. provision of loans, grants, etc.)</p>	<p>Research results (reports)</p> <p>Number of women trained in processing waste-based energy sources</p> <p>Loans and grants provided by sex</p> <p>Number of beneficiaries benefited by sex</p> <p>Waste-based energy in use by sex</p>	Research and Higher learning institutions NEMC, VPO, MEM, NGOs, MIT, SIDO LGAs

## V. Priority Sector: Forests

### *Situation Analysis*<sup>42</sup>

- 145.** Tanzania has the highest forest cover in Eastern and Southern Africa, and forest and woodlands cover about 33.5 million representing 38% of total land area<sup>43</sup>. Forests supply a variety of wood and non-wood forest products (NWFPs), offer employment, and is a source of revenue through sale of wood and NWFPs and services. Forests also contribute to poverty reduction. The majority of the rural communities depend heavily on forest products for their livelihoods.
- 146.** The value of Tanzania's forests is high. The combined annual value of forest goods and services is estimated at US\$2.2 billion which is equivalent to 20.1% GDP based on 2006 prices<sup>44</sup>. The sector's contribution to the economy is increasing at a very fast rate due to increasing demand for forest goods and services, macroeconomic changes and globalization. The sector provides about 3 million person-years of employment<sup>45</sup>.
- 147.** The main challenge facing the forestry sector is deforestation and forest degradation due to various reasons including clearing for agriculture, overgrazing, wild fires, charcoal burning and over exploitation of forest resources. This takes place mainly in unreserved land. Deforestation and degradation was estimated at 403,000 ha per annum between 1990 and 2010<sup>46</sup>. This is equivalent to 1.16% of the country's total forest area.

<sup>42</sup> The forest and REDD+ situational analysis relies heavily on the Final Draft of the Tanzanian National Forest Policy, 2011. While developing the present Strategy the Policy was in the process of being approved.

<sup>43</sup> FAO. 2010. Global Forests Assessment Report. Italy, Rome.

<sup>44</sup> MNRT. 2008. Tanzania Forest Sector Outlook Study: 2008-2018. Forestry and Beekeeping Division.

<sup>45</sup> Idem.

<sup>46</sup> FAO. 2010. Global Forests Assessment Report. Italy, Rome.

148. The forest sector is threatened by various challenges posed by climate change. They include: degradation in the areas with unimodal rainfall pattern, and increased frequency and intensity of forest fires. Already, Mount Kilimanjaro, the Eastern Arc Mountains and coastal forests are increasingly being deforested and degraded, with consequent change in vegetation composition and reduction in carbon sinks.
149. Overall, the NAPA forecasts change to drier forests/ecosystems as a result of climate change, but the impacts of change in areas where rainfall is predicted to decrease is less clear. Species that are expected to be more vulnerable are those with limited geographical range and /heat intolerant; low germination rates; low survival rate of seedlings; and limited seed dispersal/migration capabilities.
150. Deforestation, forest degradation and other land use changes contribute 18-20% of green house gases. Thus, reduced emissions from deforestation, forest degradation, conservation of carbon stock, sustainable management of forest and enhancement of forest carbon stocks in developing countries (REDD+) is also being considered as climate change mitigation measure. Tanzania is engaged in developing the capacity, knowledge and mechanisms to participate in REDD+ activities.
151. The current National REDD+ Strategy draft does not strongly support gender mainstreaming. Further drafts could substantially strengthen provisions for gender equity and women's empowerment. There are also important gender rights enshrined in other national law and policy instruments, though these rights are often poorly understood and enforced.
152. Further, at all levels there are community organizations, government agencies, civil society organizations, development partners, and others actively promoting gender equality and women's empowerment in natural resource management and other sectors. These organizations have practical experiences that can be drawn upon to support gender mainstreaming in REDD+. They also present opportunities for partnerships to enhance synergy and capacity.
153. In the development and implementation of its National REDD+ Strategy, and further engagement in REDD+ at the national and local levels, Tanzania faces challenging questions about how to ensure respect for women's rights and the realization of gender equity and women's empowerment. REDD+ is in early stages, and globally gender issues in REDD+ are only beginning to be addressed<sup>47</sup>.

#### ***Gender Aspects in the Forestry Sector***

154. There are gender differentiated use, access and control of forest resources. Men dominate in the harvesting of forest products mainly for commercial purposes (timber and poles), while women harvest mainly for less commercial use as food, handcrafts raw materials, medicinal herbs and firewood. Due to these men earn more income from forests products than women.
155. In relation to tree planting and management women are restricted to a third of all forestry activities, they produce most of the tree seedlings annually. However women involvement in tree planting is dependent on multidimensional factors including ownership of land, size of land and distance to forest products and households income. Interestingly women headed households plant more trees than male headed.

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<sup>47</sup> Campese, J. 2001. Gender and REDD+ in Tanzania: An overview of key issues. Tanzania Natural Resource Forum. United Republic of Tanzania.

- 156.** Due to traditional, customary and use rights women's ownership of trees and forest products is constrained and linked to social-cultural determinants inherent to the patriarchal model of social organization. Women's land and tenure rights are often not understood or protected. Tanzania has introduced stronger legal provisions for women's equality in tenure security and property rights. However, these laws are often not sufficiently understood or enforced. Lack of secure tenure puts women at risk of losing access to important resources, as well as access to benefits such as payments for environmental services carried out on their lands<sup>48</sup>.
- 157.** The National Forest Policy gives a statement on general land tenure and forest land rights to be institutionalized for both men and women in local communities – therefore women need to have clear ownership rights to forest and forest land. Urgent need is to promote equal access of women to land ownership and other resources necessary for effective socio-economic participation in forest management.
- 158.** Despite their involvement in forestry, challenges impede women's full involvement, utilization of forest resources, and inhibit the sustainable management of forests at large. Women are disproportionately represented in decision-making regarding forest matters and in some instances their involvement is weak.
- 159.** Participation in forest programs is mostly the preserve of men since women are perceived to lack the knowledge, skills and strength to participate in forest programs.
- 160.** The incorporation of gender considerations into the REDD+ frameworks brings about increased efficiency and sustainability as it contributes to women's involvement and commitment as crucial players of local forest management. A gender perspective in REDD+ initiatives also ensures the integration of the wealth of unique knowledge, skills and experience of women, which is vital to successful REDD+-related initiatives.
- 161.** The benefits from forestry, forest products and services need to be targeted to all members of the society including women. Empowerment of women in management and benefits from forestry resources, products and services is necessary to enable them benefiting also to the emerging opportunities such as carbon trading.
- 162.** Women's access to markets and capital is often limited. This is part because this is seen as men's work. However, women also often lack skills, resources and mobility needed for engaging in market mechanisms.
- 163.** Forestry is considered to be a man's activity/job to such an extent, that the process of self-involvement of women in the formal setting is slow. This can be observed by studying the enrolment of female students for forestry studies towards certificate, diploma and degree courses at forestry colleges, all low compared to male students. Furthermore, the number of female forestry staff at the Ministry is lower than that of men.

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<sup>48</sup> Idem

EXAMPLES OF ACTION: FORESTRY			
Objectives	Action steps	Indicators of success	Responsible
Build and strengthen institutional understanding on gender, CC and forestry	<p>To promote &amp; conduct research and studies on gender, forestry and climate change</p> <p>To strengthen gender disaggregated forest related database</p>	<p>Disaggregated gender data established</p> <p>Number of studies/research conducted</p>	<p>MNRT FBD TFS MJCA MOFEA VPO/ DoE CSOs</p>
Design and implement gender based economic incentive policies to reduce forest and biodiversity vulnerability to climate change	<p>Mainstreaming gender and climate change into forestry activities, by operationalizing the "National Guidelines on Mainstreaming Gender and Climate Change" developed by MCDGC</p> <p>Improve financial incentives with gender consideration on tree and forest management aspects</p> <p>Enhance capacity of women to participate in negotiations and implementation related to carbon trade</p>	<p>Gender mainstreaming guidelines for projects, plans, budgets and activities related to forestry and CC</p> <p>Policy statement with mainstreamed gender and climate change mitigation and adaptation</p> <p>Extent of benefit from forest products and services to women increased</p> <p>Equal access to capital / credits</p> <p>Equal access to carbon markets</p>	<p>MNRT FBD TFS MJCA MOFEA VPO/ DoE CSOs PO-RALG</p>
Enhance participation through formal and informal education for women and girls in forestry sector	<p>To develop awareness programs focusing women engagement in forest sector</p> <p>Encourage more women to join forestry profession</p> <p>Empowerment of women in forestry management and leadership at all levels</p> <p>Establishing funding mechanism and scholarships for women in forestry</p>	<p>Number of women involved in forest institutions</p> <p>More opportunities for women involvement in decision-making created in forestry</p>	<p>MNRT FBD TFS VPO/DoE MOEVT CSOs PO-PSM MCDGC MLE PO-RALG</p>

EXAMPLES OF ACTION: FORESTRY			
Objectives	Action steps	Indicators of success	Responsible
Develop a national road map for guiding REDD pilot projects and other stakeholders involved in REDD programs to mainstream gender fully and effectively	<p>Design of methodology (Conduct a gender review of the national REDD policies/ programs/strategies and other related policies to identify gaps and opportunities (i.e. entry points)</p> <p>Consult different stakeholders involved in REDD programs (including REDD pilot projects, communities, and women groups) to obtain input</p> <p>Develop road map</p> <p>Legalized road map</p> <p>Allocation of resources for activities in the road map</p> <p>Identify champion pilot organizations to pioneer gender mainstreaming process and establish a system for recognition and rewarding mainstreaming gender consideration in REDD+ mechanism</p> <p>Work with the media and communication groups to communicate the gender and REDD roadmap in gender-friendly language</p>	<p>Road Map in place</p> <p>REDD+ mechanism is gender responsive</p>	VPO-DOE MNRT, MCDGC, UN REDD NGOs/CSOs
Build and strengthen the capacity and participation of women and women's organisations on REDD+	<p>Conduct capacity needs assessment for women organizations</p> <p>Develop training materials that are accessible to women</p>	<p>Capacity needs assessment report in place</p> <p>Gender differentiated analysis of use, access and control of forest resources per ecological zone</p>	VPO-DOE FBD-MNRT PMO-RALG UN REDD CSOs

EXAMPLES OF ACTION: FORESTRY			
Objectives	Action steps	Indicators of success	Responsible
	Conduct trainings for local women accordingly to ecological zones <sup>49</sup>	<p>Number of women trained per ecological zone</p> <p>Mapping of risks and opportunities for women in REDD+ per ecological zone</p> <p>Number of women or women organizations involved in REDD process, particularly in REDD+ pilot projects</p>	
To develop gender-sensitive benefit-sharing schemes	<p>Identify existing benefit-sharing schemes in and outside Tanzania to establish best practice for women</p> <p>Select pilot communities to test and document best practices, and build upon on-going pilot projects</p> <p>Validate the outcomes of the pilot schemes to guide the consolidation and implementation phase</p> <p>Development of policy – practice link made, e.g., integrating best practices identified in pilots into guidelines, future drafts of REDD strategy, national REDD safeguards</p>	<p>Best practice schemes for women identified</p> <p>Number of communities from various agro-ecological zones included in pilot</p> <p>A manual on outcomes of pilots developed based on the most effective gender-sensitive benefit-sharing scheme</p> <p>Policy-practice in place</p>	<p>FBD-MNRT</p> <p>VPO-DOE</p> <p>PMO-RALG</p> <p>UN REDD</p> <p>CSOs</p>
To support the mainstreaming of gender considerations in information,	Conduct capacity building on gender responsive information and communication systems for	Channels of communication used/preferred by local women identified and documented	<p>MIC</p> <p>MCDGC</p> <p>UN REDD</p> <p>NGOs/CSOs</p>

<sup>49</sup> An integral part of these trainings will be a gender-differentiated analysis of use, access and control of forest resources. Trainings will also assess risks and opportunities for women in REDD+ initiatives, paying special attention to barriers that limit their participation. Initial trainings will be focused on general issues, subsequent training will focus on activities and capacities needed to be involved in pilot projects.

EXAMPLES OF ACTION: FORESTRY			
Objectives	Action steps	Indicators of success	Responsible
communication and outreach programs	<p>implementing partners</p> <p>Identify the sources and channels of information and communication used/ preferred by women from local communities</p> <p>Select and use the appropriate and most effective sources and channels. Improve extension services and outreach activities</p> <p>Develop a gender-sensitive REDD information package by working with organizations implementing REDD projects</p>	<p>Gender responsive information and communication system in place and implemented</p> <p>Number of women receiving and using the information</p> <p>Forest related extension activities improved</p>	
Ensure opportunities for women and guarantee that they benefit from activities proposed by REDD+ efforts; paying special attention to agro-forestry systems (benefits include both direct benefits (e.g., gender equality in the use/ management/ access to cash payments for carbon credits) and so-called co-benefits, e.g., improved ecosystem services)	<p>Identify and document activities related to forest management and AF systems (locally and internationally) in which women are actively involved and benefiting from</p> <p>Identify best practices conducted by existing pilot projects under NGOs in Tanzania</p> <p>Select pilot communities to test and document best practices</p> <p>Validate the outcomes of the pilot systems to guide the consolidation and implementation phase</p> <p>Development of policy – practice for ensuring benefit sharing schemes</p>	<p>Best practices in forest management and AF systems identified</p> <p>Number of women in communities from the various agro-ecological zones included in pilot</p> <p>A manual on outcomes of pilots developed based on the most effective gender-sensitive forest management and AF systems to guide the consolidation and implementation phase</p> <p>Policy-practice in place with accountable mechanism to parties to ensure benefit sharing</p>	<p>MIC</p> <p>MCDGC</p> <p>UN REDD</p> <p>Existing pilot projects under NGOs</p>

EXAMPLES OF ACTION: FORESTRY			
Objectives	Action steps	Indicators of success	Responsible
Enhance capacity of women to engage in REDD+ MRV initiatives through appropriate methods	<p>Identify capacity building needs including short course- and other training needs for women involved in REDD initiatives in ministries, departments and organizations</p> <p>Identify and document MRV practices (locally and internationally) that women are actively involved in</p> <p>Build the capacities of women and women organizations from the pilot communities to participate in the MRV</p> <p>Select pilot communities to test and document best MRV practices</p> <p>Promote women enrolment in university/school and college courses</p> <p>Validate the outcomes of the pilot practices to guide the consolidation and implementation phase</p>	<p>Best MRV practices Identified</p> <p>Number of communities from the various agro-ecological zones included in pilot</p> <p>A manual on outcomes of pilots developed based on the most effective gender-sensitive MRV practices</p> <p>Increased number of women engaged in MRV</p>	<p>VPO-DOE FBD-MNRT MCDGC UN REDD</p>



## VI. Priority Sector: Integrated Coastal Management

### Overview

- 164.** Tanzania's 800 kilometers of coast is of critical importance to the development of the country. It contributes one-third of the national economy, houses 75 percent of the country's industry, is the location of the largest urban centers, and supports a quarter of the country's population.
- 165.** This is a population that is growing rapidly and inhabits a coast with high biodiversity and productivity. The concentration of people and economic opportunity poses a real threat to the ecosystem services that are so important. The challenge is to balance the conservation and sustainable use of the resource base on which the rural coastal economy depends, while developing new economic opportunities in a way that benefits the people of the coast and the nation as a whole<sup>50</sup>.
- 166.** Even before the advent of climate change concerns, many countries had adopted Integrated Coastal Zone Management (ICZM) strategies to address the complex challenges of sustainable coastal development. ICZM strives to balance environmental, economic, and social objectives within the limits set by natural dynamics. It aims to draw on the participation of all stakeholders to define and achieve these objectives and to resolve potential conflicts among competing interests. Intended to coordinate the relevant policy instruments and actors at multiple scales, and to guide planning that integrates short-term demands as well as medium- and long-range needs, ICZM is considered a suitable framework for climate change adaptation in coastal areas and forms an essential part of a national climate change plan. Thus, the National Communications formulated under the UNFCCC by many Indian Ocean states—including Tanzania—envisage ICZM approaches<sup>51</sup>.
- 167.** Climate change will exacerbate environmental and social problems in the coastal areas of the Indian Ocean basin, including in Tanzania. Climate change impacts are evident in the country's coastal areas and are expected to intensify in the future, affecting fishers, coastal residents, resource users, recreation, infrastructure and tourism development. The poorest coastal communities are often the most exposed to the impacts and the least resilient and able to adapt<sup>52</sup>. Within the Indian Ocean region, the IPCC has identified mega-deltas such as the Ganges-Brahmaputra and Mekong, low-lying coastal cities, and small island states as climate change "hotspots"—areas particularly vulnerable to the impacts of rising sea levels. Examples of vulnerabilities in the region include the following alarming scenario that a sea level rise of 0.5 meters along Tanzania's 800-kilometer coastline would inundate 247 square kilometers of the country.

### Situation Analysis

- 168.** Tanzania is a leader in both regional policy development and field application of Integrated Coastal Zone Management (ICZM). Over the last 20 years, Tanzania has built a strong foundation for coastal management. Interest and capacity in marine science was built through a long-term bi-lateral program

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<sup>50</sup> USAID. 2010. Natural Resources Management and Development Portal. Retrieved from the World Wide Web: <http://Www.Rmportal.Net/Library/Content/Tools/Coastal-Management-Tools/Tanzania>

<sup>51</sup> Michel, D. and Pandaya, A. (Editors). 2010. Coastal Zones and Climate Change. The Henry L. Stimson Center. Retrieved from the World Wide Web: <http://www.stimson.org/images/uploads/research-pdfs/Poh.pdf>

<sup>52</sup> Mahenge, J., Mkama, W., Daffa, J., Meena, H., Lugenja, M., Tobey, J., Torrel, E. & Robadue, D. 2011. Vulnerability Assessment And Enabling Coastal Communities To Adapt To Climate Change Impacts In Selected Villages Of Bagamoyo District, Tanzania. Retrieved from the World Wide Web: [http://Www.Unep.Org/Nairobiconvention/Docs/Climate\\_Change\\_Wio\\_Oral\\_Mahenge.Pdf](http://Www.Unep.Org/Nairobiconvention/Docs/Climate_Change_Wio_Oral_Mahenge.Pdf)

with Sweden. A mandate for coastal and marine management in the region and an agenda of priority actions was framed through a series of regional and national Ministerial Conferences known as the Arusha Process.

169. When the Coastal Resources Management Program (CRMP) began in 1997, there were a number of site-based programs demonstrating how ICZM principles and processes can effectively address coastal problems and opportunities in specific locations. What was lacking was an enabling framework of policy and interagency collaboration at the national level. The NEMC in the Vice President's Office joined forces with CRMP to create the Tanzania Coastal Management Partnership (TCMP), in order to establish the urgently needed national framework for coastal management<sup>53</sup>.
170. Climate change poses a major conceptual challenge to the coastal environment, as it is no longer appropriate to assume that past climatic conditions will continue into the future. Effects of climate change on coastal resources management clearly impacts on many policy areas including health, food security and nature conservation. Thus appraisal of adaptation and mitigation options needs to be conducted across multiple coastal dependent sectors.
171. The IPCC identifies three standard strategies of coastal adaptation to sea level rise:
  - *Managed retreat* (move landward to higher ground);
  - *Accommodate* (stay in the same location but make adjustments, e.g., elevate buildings on piles); and
  - *Protect* (employ various hard structures such as seawalls, bulkheads, groins, and breakwaters or use soft measures such as beach nourishment, mangrove replanting, and preservation of coral reefs).
172. Substantial changes have been observed over recent decades in many coastal environmental variables, but clear formal attribution of the observed changes to natural or anthropogenic causes is not generally possible at present. Projections on coastal environment of future rainfall patterns, sea waves, sea level rise and tropical storms including cyclones at regional, national and local scales are subject to substantial uncertainty. Interpretation and quantification of uncertainties has recently improved and new methods including ensemble-based approaches are being developed for their characterization.
173. Nevertheless, quantitative projection of rainfall patterns, sea waves, sea level rise and tropical storms across the coastal environment remain uncertain so that planning decisions involving climate change must be made in the context of such uncertainties.
174. Coastal environments that are dominated by seasonal snow cover already experience earlier peak flows during warmer months and this is very likely to continue under a warmer climate. Sea-level variation due to global warming occurs primarily because water expands as it warms up with the overall global warming. The melting ice caps and glaciers also add water to the oceans, thus varying the sea level. The major contribution is from large ice masses in the Arctic and Antarctica.
175. According to the IPCC third assessment report, the rate of sea level rise climbed to about 1-2 mm/yr during the 20th century, with a central value of 1.5 mm/yr. The most recent estimate during the 20th century is 1.4 -2.0 mm/yr, with a central value of  $1.7 \pm 0.3$  mm/yr (Church et al., 2006). The IPCC<sup>54</sup>

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<sup>53</sup> USAID. 2010. Natural Resources Management and Development Portal. Retrieved from the World Wide Web: <http://www.rmpportal.net/library/content/tools/coastal-management-tools/tanzania>

suggests that by 2080, sea level rise could convert as much as 33 percent of the world's coastal wetlands to open water. Tidal wetlands, generally found between sea level and the highest tide over the monthly lunar cycle also accounts for erosion of coastal zones.

176. Varying sea levels contributes in eroding beaches, intensify flooding, and increase the salinity of rivers, bays and groundwater storage. Land loss in coastal wetland ecosystems, such as salt marshes and mangroves are particularly vulnerable to varying sea level because they are generally within a short distance from the sea. The ecosystem provide habitat for many species, play a key role in nutrient uptake, serve as the basis for many communities' economic livelihoods, provide recreational opportunities and protect local areas from flooding.
177. As the sea varies, the outer boundary of these wetlands will erode, and new wetlands will form inland as previously dry areas are flooded by the higher water levels. The amount of newly created wetlands, however, could be much smaller than the lost area of wetlands, especially in developed areas protected with bulkheads, dikes, and other structures that keep new wetlands from forming inland.
178. In Tanzania, extensive studies have addressed impacts due to climate variability and change on coastal environment of its 1,424 kilometer coastline stretch including the Zanzibar isles. These studies have given outlines of coastal erosion, inundation of low lying coastal areas, effect of rising sea surface temperature and several adaptation measures which could include technological adaptive responses to mitigate the effects of climate change, establishment and marine coastal protected areas and restoration of degraded habitats and even suggestions for legal instruments to address climate change in the country in a participatory resource management approach to resolve issues and take advantage of development opportunities.

#### ***Gender Aspects in Coastal Zone and Fisheries Management Sectors***

179. The fishing or seafood gathering system is a dynamic system that goes beyond the activity of catching. The system is composed by a cycle involving catching, processing, storage, marketing, acquisition, construction and maintenance of fishing equipment and gear, such as boats and nets, permits clearing, firewood, salt and water gathering and hauling for product processing, and preparation of food for the fishermen, etc. Roles and participation in fishing and fishing related activities are differentiated and divided along gender lines. For example, in artisanal fishing communities, women are mainly responsible for performing the skilled and time-consuming jobs that take place on-shore.
180. In Tanzania women's role largely centers on the processing and marketing of fish that are caught by men. Women may also be involved in the making and mending of nets as well as the building of boats. However they are also engage in fishing with small implements, wading and gleaning the shores for shellfish.
181. Today, women in Tanzanian coastal villages dominate activities such as seaweed farming that includes multiple areas of work, i.e. production, weeding, harvesting, drying and marketing of the products. Seaweed farming has been developed as an alternative to destructive fishing practice, coral and sand mining<sup>55</sup>.

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<sup>54</sup> IPCC. 2007. Idem

<sup>55</sup> C. Chando. 2002. Gender Roles In Fishery Planning And Projects: The Case Study Of Coast Region In Tanzania. Thesis. Department of Social Science and Marketing. Norwegian College of Fishery Science University of Tromsø Norway.

- 182.** Women in various islands are conducting innovative sustainable entrepreneurial activities; such is the case of octopus fishing in places such as Jibondo and Juani (90% are in the hands of the women). As part of the development of the business, women have been trained and learned the importance of keeping records of biological parameters to facilitate conservation.
- 183.** In the artisanal sector of Tanzania women do most of the fish marketing. The majority of women purchases and processes the waste products from the fish plants<sup>56</sup>. Marketing of fish provides the main source of income in many families of Tanzania, reflecting in improved livelihoods when women control this income.
- 184.** Women's role in the industrial processing of marine products is central. In some factories the ratio of women working is three women for one man. Despite this, a study conducted in 2002<sup>57</sup> pointed out that only men were permanently employed, women did not have any leading jobs, nor were they involved in the planning process. The company also practiced different wages for men and women. Women wages were lower than men.
- 185.** It should be noted that, in spite of the importance of women's participation in fishing activities - be it at the time the fish are caught, processed, or sold, the conditions under which their involvement takes place in Tanzania are not of a most equitable nature:
  - Women do not usually participate in the meetings held by the fishermen's organizations;
  - Most of the fishing projects are men-oriented, and the participation of women is limited with respect to planning, programming and management; and
  - There are very few policies or programs within the fishing sector where gender aspects are considered.
- 186.** As a general practice, projects contemplate a technical offer for the fisherman producing large quantities of fish. However, women from marine-coastal zones or riverbanks perform a series of tasks, such as gathering bivalves, mollusks and oysters, among others. Despite the fact that all of these tasks involve intense labor and are extremely time consuming, the exploitation techniques continue being very rudimentary.
- 187.** The technological bias that favors men, particularly in fisheries projects, contributes to the inferior position and suppressed rights and privileges of women in the fishing industry. Women involvement in processing and marketing though recognized has only to a little degree been considered when planning the fisheries development projects.

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<sup>56</sup> Medard, M., Sobo, F. and Ngatunga, T. 2000. Women and gender participation in the Fisheries Sector. Paper presented at the Regional Workshop on Women's Role in Fisheries management. 13-15th November. Kisumu ñ Kenya.

<sup>57</sup> C. Chando. 2002. Gender Roles In Fishery Planning And Projects: The Case Study Of Coast Region In Tanzania. Thesis. Department of Social Science and Marketing. Norwegian College of Fishery Science University of Tromsø Norway.

EXAMPLES OF ACTION: COASTAL			
Objectives	Action steps	Indicators of success	Responsible
Develop gender-responsive programs/projects addressing climate change adaptation in coasts	<p>Promote preparation and implementation of gender-responsive Action Plans in all districts along the coastal related to CC</p> <p>Implement projects/ program that address climate change adaptation in coastal zones<sup>58</sup></p> <p>Enhance and encourage women's participation in ICZM projects.</p> <p>Train and involve women so that they can participate in research studies (i.e. monitoring and data gathering methods, gathering of flora and fauna species, physical-chemical analysis, studies about the populations of birds, fish, sea grasses, mammals, and studies about the medicinal properties of coral).</p> <p>Establishment of network of women organization engaged in protection, management and development of coastal and marine areas</p> <p>Support and develop women organizations' capacity so that they can be in charge of monitoring coastal and coral erosion, sea level and tide, light detection and ranging, amongst others</p>	<p>Number of Action Plans that are gender-responsive</p> <p>Number of gender related projects implemented</p> <p>Number of women participated in CC adaption projects</p> <p>Women and men trained on the sustainable use of coastal resources</p> <p>Women and men who share the project-generated benefits (productive, training, credits)</p> <p>Women and men participate actively in the conservation of marine-coastal resources</p>	PMO-LGA

<sup>58</sup> Such as restoration of coastal forests and coral reefs, sand dune restoration, sea-walls, revetments, and headlands, beach nourishment

Encourage women to set up innovative enterprises or expand existing ones	<p>Analysis of key economic activities for coastal people and how these will be impacted differently by CC for men and women with the view of informing CC policies</p> <p>Promote the establishment of innovative enterprise for women<sup>59</sup></p> <p>Prioritization of coastal women's groups in provision of loans and credits for accessing appropriate technologies with the emphasis on seaweed farming, fish farming and aquaculture</p> <p>Promote the adoptions and implementations of coastal project focusing on women for reducing post harvest losses</p>	<p>Key economic activities identified and their impact disaggregated by sex</p> <p>Number of women's groups which had access loans and credits</p> <p>Percentage of women that participate in and manage successful productive projects (i.e. marine farms, ponds, zoo-farms, eco-shelters)</p> <p>Women and men are subject to equitable credit amounts.</p>	
Improve women capacity for addressing the CC challenges in coastal areas	<p>To increase awareness on CC effects on coastal zones, gender differentiated vulnerabilities and gender -sensitive adaptation options</p> <p>Enhance DRR measures by mainstreaming gender consideration</p> <p>Coordinate with Disaster Management Department to incorporate gender consideration in climate related hazards</p> <p>Develop specific programs for ensure adequate nutrition levels for marginalize coastal communities</p>	<p>Number of women and men trained</p> <p>Number of adaptation options</p> <p>Gender considerations incorporated in DMD</p> <p>Decrease malnutrition in children from 0-5 years</p>	VPO MCDGC

<sup>59</sup> Women-managed freezers, warehouses, ice factories or cold-storage rooms to reduce loss of products Management of natural populations of tropical fish, crustaceans and mollusks, by the creation of ponds in marine-coastal zones Plants to process algae and other sub-products such as skins, skeletons, shells and oil Diving guides

**VII. Cross-Cutting Elements Relevant To All Sectors**

- 188.** Capacity building and awareness and policy are crosscutting to all the aforementioned sectors and separate action is therefore identified as follows:

EXAMPLES OF ACTION: POLICY			
Objectives	Action steps	Indicators of success	Responsible
Ensure that gender-responsive climate change criteria are fully integrated in relevant national sector policies	<p>Conduct an inventory of sector policies that are under review at the national level</p> <ul style="list-style-type: none"> <li>• Convene a meeting of the gender focal points from the Ministries to conduct inventory</li> <li>• Identified priorities and steps to mainstream gender and CC considerations</li> </ul> <p>Establish a national expert group (NGOs, CBOs, GO) to support the process</p> <p>Establish alliance with international gender experts on the different topics so that they can become a support group</p> <p>Strengthen the role of women's participation in the process of developing policy</p> <p>Deepen the process of including the views of wider stakeholders</p>	<p>Number of policies that incorporate gender-responsive climate change criteria in Tanzania</p> <p>Number of women and women organization involved in the processes</p>	VPO MCDGC IUCN/GGCA
	Ensure gender energy concerns are fully mainstreamed into energy related policies/programs and work plans <sup>60</sup>	Energy and related policies/programs are gender-responsive	MEM MCDGC VPO

<sup>60</sup> The following are examples of the sectors in which actions should be conducted

EXAMPLES OF ACTION: POLICY			
Objectives	Action steps	Indicators of success	Responsible
	<ul style="list-style-type: none"> <li>Review energy related policies and programs to identify and address gender gaps</li> <li>Develop gender-focused action plan to implement policies and programs</li> <li>Strengthen the role of women's participation in the process of developing policy</li> <li>Deepen the process of including the views of wider stakeholders</li> </ul>	<p>Gender action plan developed</p> <p>Number of women and women organization involved in the process</p>	
	<p>Ensure policies, guidelines, regulations and action plans of Ministry of Fisheries and Disaster Management Department integrate gender and climate change issues</p> <p>Mainstream gender into other regional coastal initiatives (e.g. ICZM Protocol is in advance stage of its preparation)</p> <p>Guarantee that national climate change policies incorporates gender-responsive criteria from coastal communities</p> <ul style="list-style-type: none"> <li>Strengthen the role of women's participation in the process of developing strategy</li> <li>Deepen the process of including the views of wider stakeholders</li> </ul>	<p>Coastal/DRR and related policies/programs are gender-responsive</p> <p>Regional coastal related initiatives mainstream gender considerations</p>	<p>VPO/DoE VPO/NEMC PMO- RALG MCDGC MCLA CSO</p>



EXAMPLES OF ACTION: POLICY			
Objectives	Action steps	Indicators of success	Responsible
	<p>Ensure policies, guidelines, regulations and action plans in the forestry sector, integrate gender and climate change issues</p> <ul style="list-style-type: none"> <li>• Review the National Forestry Policy to ensure that gender considerations are fully integrated</li> <li>• Develop a comprehensive road map for REDD+ mechanism</li> <li>• Strengthen the role of women's participation in the process of developing road map</li> </ul>	<p>Gender-responsive National Forestry Policy</p> <p>Number of women and women organization involved in the development of the REDD+ road map</p> <p>REDD+ mechanism benefits women and men</p>	<p>UNREDD Clinton Foundation IUCN</p>
Enhance the mainstreaming of gender and CC in implementation of National Development Plans including MKUKUTA II, MKUZA II and KILIMO KWANZA	<p>Prioritization of gender and CC related projects in implementation of National Development Plans</p> <p>Established/ strengthening gender focal persons all MDAs with clear roles and budgets</p>	<p>Number of programs developed</p> <p>Number of projects implemented</p>	<p>VPO MCDGC</p>
Develop a sustainable financing mechanism for CC challenges including gender projects	<p>Ministry of Finance to coordinate a process for establishment of a National Climate Financing Mechanism</p> <p>Ensure women participation in the design and operationalization of National Climate Fund</p> <p>Prioritization of gender as a criteria for disbursement of funds</p> <p>Operationalization of Marine Legacy Fund with gender consideration</p>	<p>National Climate Financing Mechanism in place</p> <p>Number of women participating</p> <p>Gender criteria/guidelines in place</p>	<p>Ministry of Finance and Economy</p>

EXAMPLES OF ACTION: POLICY			
Objectives	Action steps	Indicators of success	Responsible
To strengthen the institutional framework for CC governance and improved coordination at all levels	<p>Reviewing the existing institutional framework with the view of improving coordination in implementation of gender consideration in CC efforts</p> <p>Ensure women participation in decision making as part of transformation of institutional framework for CC governance</p> <p>Involvement of women in key National CC coordination committees</p> <p>Ensure stronger involvement of women in CC negotiation</p>	<p>Institutional framework reviewed</p> <p>Number of woman and women organizations participating</p>	VPO PMO-RALG NGOs
	Involvement of the views of women NGOs and local communities in designing and implementation of CC adaption and mitigation initiatives		
To promote Legal and Regulatory Framework for Gender and CC with specific emphasis in empowerment of women for accessing and control of resources	<p>To increase the awareness of women and women groups on the available legal and regulatory frameworks</p> <ul style="list-style-type: none"> <li>Once the new gender -sensitive legislation are in place dissemination campaigns will be conducted</li> </ul>	Number of women trained	Ministry of Constitution

EXAMPLES OF ACTION: AWARENESS AND CAPACITY BUILDING			
Objectives	Action steps	Indicators of success	Responsible
Built the institutional capacity to improve understanding and support processes that mainstream gender and CC in relevant government sector	<p>Conduct a needs and gaps assessment on knowledge in relation to gender in CC in each relevant government sector</p> <p>Training of national experts to conduct training in the different sectors</p> <p>Developed and conduct sector specific-tailored made capacity building processes</p>	<p>Number of training courses conducted</p> <p>Number of trained officials and technicians per sector</p> <p>Gender and CC considerations mainstream in the work plans of the different institutions</p> <p>Percentage of successful gender sensitive CC projects per sector</p>	<p>MCDGC VPO IUCN/GGCA National gender networks Gender focal points in each Ministry</p>
Increase women and men awareness on climate change and its impact on relevant sectors	<p>Developed a national media campaign on the effects of climate change (radio, workshops, and traditional dances).</p> <p>Diversified messages according to impacts on health, forestry, agriculture, forestry, energy, coastal, disasters, on man and women</p> <p>Carry out sensitizing sessions for communities, religious/traditional and political leaders on the impacts, response of gender and cc related issues</p>	<p>Number of women and men influenced by the campaign</p> <p>Number of community leaders trained</p>	<p>Ministry of Constitution VPO/DoE MCDGC</p>

189. In April 2013, the Government of Tanzania agreed to the further development and implementation of the strategy. This endorsement and approval by the Government of Tanzania is critical in order to move forward successfully.
190. Once approved, this strategy should become a mandatory framework in the development of any further initiatives, programs or communication reports on climate change.
191. An intensive campaign for fundraising, supported by the Government of Tanzania, for the full implementation of the strategy will be required.
192. Lastly, it is also important that the strategy is seen as a living document: adapted to the needs and reality of the people of Tanzania from time to time going forward.
193. Further amendment would therefore be required in years to come.

## ANNEX 1

Lists of Participants		
	Name	Institution
1	Prof. Shadrack Mwakalila	WWF
2	Euster Kibona	Environmental Protection and Management Services
3	Amina Akida	Ministry of Natural Resources and Tourism
4	Risper Koyi	Vice President's Office
5	Clara Makenya	UNEP
6	Latif Amars	Tanzania Civil Society Forum on Climate Change (Forum CC)
7	Rebecca Muna	Citizen Global Platform
8	Jovita Mlay	TGNP
9	Eng. Elizabeth Nkini	Ministry of Water
10	Suzana Nchalla	Ministry of Health and Social Welfare
11	Emelda T. Adam	Vice President's Office
12	Dr. Amani Ngusaru	UNDP
13	Flora Nzema	Tanzania Media Women Association
14	Anna Lawuo	Ministry of Natural Resources & Tourism – Forestry & Beekeeping
15	Ali Kh Juma	Vice President's Office
16	Theresia W. Masoy	Ministry of Agriculture, Food Cooperative
17	Freddy Manyika	Vice President's Office – Department of Environment
18	Victor Mwita	Livestock & Fisheries
19	Ladislaus Kyaruzi	Vice President's Office – Department of Environment
20	Asha Aboud	Zanzibar Gender Coalition
21	Steven Nkondokaya	Vice President's Office
22	Godfrey Hicheka	Citizen Development Network
23	Getrude V. Kisima	TAWLAE
24	Samson W. Sampa	Prime Minister's Office – Regional Administration & Local Government - Dodoma
25	Shariff M. Hamad	Care Tanzania
26	Halima A Omar	MSWYWD - Zanzibar
27	Abela Muyungi	NEMC
28	Subira Th Mzee	FVPO – DOE Zanzibar
29	Magreth G. Sembuyagi	PMO – Disaster
30	Theresia C. Kamote	TAWLAE
31	J.A. Mapunda	MCDGC
32	Issa Isihaka	Data CC
33	Dr. Esther W. Dungumaro	IDS – University of Dar es Salaam
34	Maynard Lugenja	Centre for Energy, Environment, Science and Technology Foundation
35	Dr. Eliakimu Zahabu	FAO Tanzania
36	Erneus Kaijage	Clinton Foundation
37	Winifrida Rutaindurwa	Ministry of Education and Vocational Training
38	Joseph Kihaule	Vice President's Office – Department of Environment
39	Sarah E. Osima	TMA
40	Rabia Issa	MEM
41	Bestina Magutu	Tanzania Media Women Association
42	Upendo Hamidu	Fisheries Division



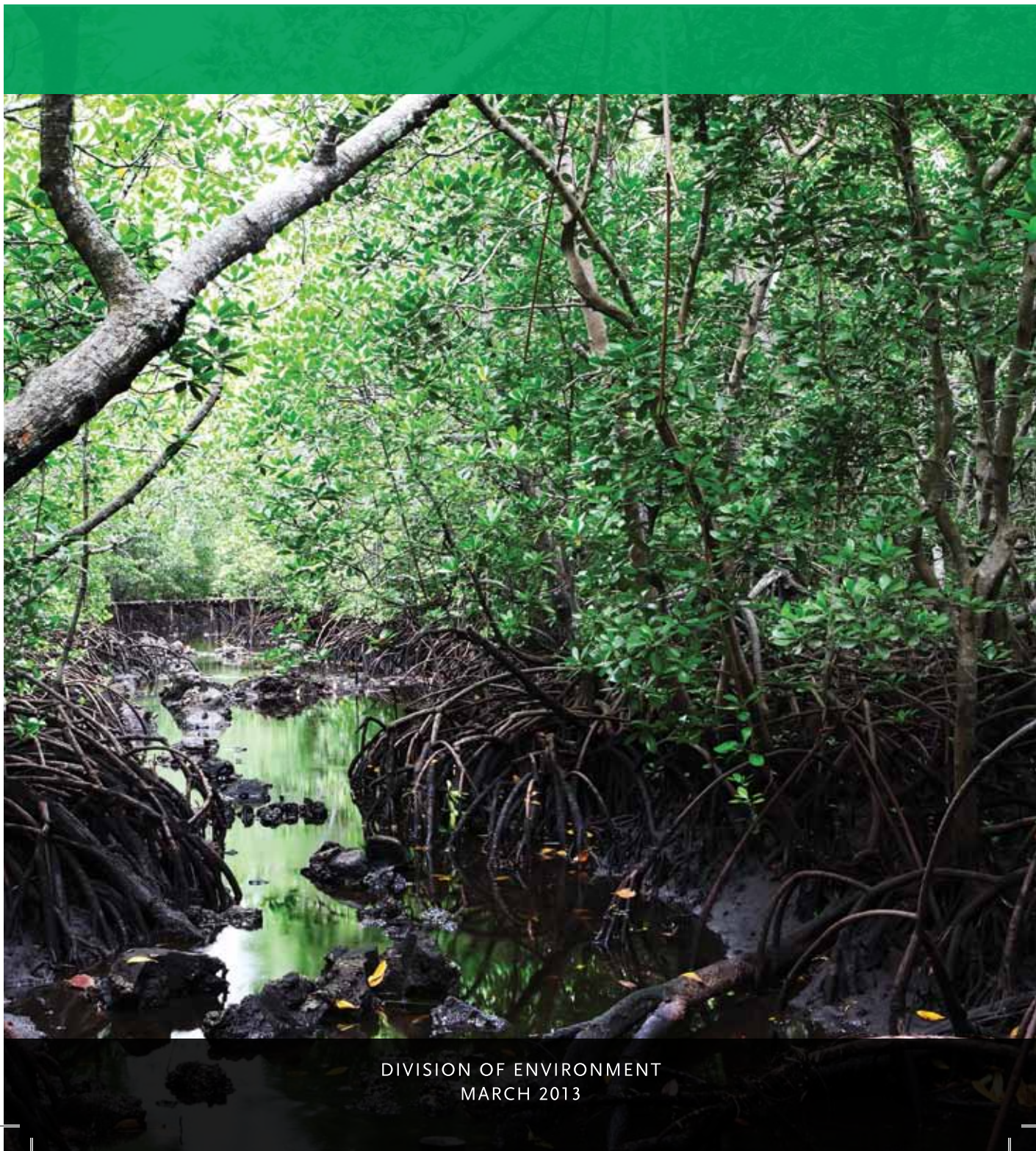








UNITED REPUBLIC OF TANZANIA  
VICE PRESIDENTS OFFICE



DIVISION OF ENVIRONMENT  
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