

**FINAL DRAFT**

**National Report  
to  
The Earth Summit on Sustainable Development**

**IMPLEMENTATION OF AGENDA 21**

**Tuesday, 09 July 2002**

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# **1 INTRODUCTION**

## **1.1 OVERVIEW**

In 1989, the General Assembly of the United Nations called for a global conference to devise strategies that would halt and reverse the negative impacts of anthropogenic activities on the environment and promote sustainable development. The United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3-14 June, 1992 fulfilled the mandate given to it by the General Assembly by adopting Agenda 21, which is a programme of action for sustainable development into the 21<sup>st</sup> century. The Rio Declaration on Environment and Development; and Forest Principles, a non - legally binding authoritative statement of principle for a global consensus on the management, conservation and sustainable development of all types of forests were also adopted.

Tanzania is aware of the inseparable relationship between economic development and the exploitation of natural resources. Our survival and that of future generations depend on our ability to manage our environment and its natural resources in such a way as to achieve growth and sustainable development. Sustainable development is thus key in Tanzania endeavours to get rid of poverty, ignorance, disease and other problems of underdevelopment.

Tanzania committed itself to implementing Agenda 21 since its adoption, 10 years ago. Some of the efforts in this direction include:

- i) the translation of Agenda 21 into a national development agenda (March 1993);
- ii) the preparation of the National Environmental Policy (1997);
- iii) the review of Institutional and Legal Framework for Environmental Management (1998);
- iv) the continuous review of sectoral policies to address sustainable development;
- v) the formulation of policies and strategies aimed at poverty reduction;
- vi) the signing and ratification of several global and regional conventions of relevance to the environment and sustainable development, and
- vii) the adoption of National Development Vision 2025.

## **1.2 THE NATIONAL SUSTAINABLE DEVELOPMENT REVIEW PROCESS**

Preparation of this report involved consultations at various levels and stages. The government identified three consultants - one from a Non-governmental organization – Centre for Energy, Environment, Science and Technology, one from an environmental government advisory body – the National Environmental Management Council, and the last one from a government institution – President’s Office, Planning and Privatization. These consultants were provided with terms of reference to prepare a background paper for the planning/stakeholder workshop.

Stakeholder (planning) workshop with participants from government institutions, private sector, non-governmental organizations and academic institutions was organized. In this workshop, participant went through the background paper and identified major issues of concern for Tanzania. The identified issues include:-

- (i) Achievements attained so far, in implementing national strategies for sustainable development and associated best practices;
- (ii) Constraints during the implementation;
- (iii) Challenges and missing links; and
- (iv) Future options and priorities.

The background paper, which then served as a zero draft was sent back to consultants to incorporate views from the stakeholder workshop. After the incorporation of the views the document was distributed to stakeholders to provide written comments. After receiving the comments, a retreat was organized and written comments were discussed and incorporated in the main document. The composition of the participants to the retreat was as for the planning workshop. After incorporating the views from the retreat, the document was again distributed to stakeholders for final comments and verification. Comments were received, incorporated into the document and finally the government endorsed the document.

The report is divided into five chapters; the first chapter is an Introduction. The second chapter covers issues related to social aspects of sustainable development in Tanzania. Chapter three is on economic issues and the fourth chapter is on utilization and conservation of natural resources for sustainable development. The fifth and last chapter is on institutional and cross cutting issues for sustainable development.

## 2 SOCIAL ASPECTS OF SUSTAINABLE DEVELOPMENT

### 2.1 COMBATING POVERTY

#### 2.1.1 Status

Tanzania resolved to reduce abject poverty by 50% by the year 2010 and total eradication of abject poverty by the year 2025. The country adopts the international definition of poverty; that is, those who live on less than US\$ 1 a day. The poverty line for Tanzania was estimated at US\$ 125 per annum in 1995. More than 50% of the populations of Tanzania live below the poverty line.

Despite both national and international interventions Tanzania is still faced with high poverty in both rural and urban areas. Various indicators have shown level of increasing poverty. Some of the poverty indicators include literacy level, which is now estimated to be 68% compared to 90% in the 1980s, the gross enrolment rate for primary school pupils, which was 77.8% in 1996, down from 90% in the 1980s. Poverty has led to overexploitation of natural resources. For example, over cutting of trees has led to widespread deforestation and drought, hence exacerbating desertification in the central and south eastern parts of the country.

Due to poverty and related problems the economy cannot generate employment opportunities to meet the needs of the labour force. Unfavourable conditions in the rural areas are unable to provide gainful employment opportunities and incentive to retain youths after completing primary and secondary school education.

In order to reach the target for the Development Vision 2025 it is estimated that the GDP growth rate should be around 8.5%. However the current growth rates are 4.9%, which is below the targeted levels (Table 2.1). Debt service has been between 16% and 17% and domestic savings is targeted at 33%. The gross domestic savings was at its best in 1997 when it was 6.2% but dropped to 2.2% in 1999, which is a sign of poor performance of the economy (Table 2.1);

**Table 2.1: Some Selected Poverty Indicators for the Period 1990-2000**

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Per Cap. Inc. Annual Changes (%)	2.6	1.0	1.1	0.3	0.8	1.7	0.7	1.2	2	
Estimated Popul. Growth Rate (%)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Real GDP Growth (%)	6	4	4	3	3.6	4.5	3.5	4	4.8	4.9
Gross Domestic Savings/GDP (%)	-0.6	-2.4	-3.1	-1.2	0.8	5.4	6.2	6	2.2	
Debt Services as % of exports					16.5	17.3	17.5	16.2	17.4	

Source: Action programme for the development of URT 2001 – 2010, March 2001

#### 2.1.2 Achievements

In order to implement the poverty eradication initiatives a National Poverty Eradication Strategy (NPES) has been formulated. The main objective is to guide all stakeholders to identify, formulate, implement and evaluate their poverty eradication programmes.

A poverty monitoring system has been institutionalized and the first steps for the integration of environmental issues in the PRSP have been taken. On the other hand, the country macro-economic achievements have enabled it to qualify as one of the Heavily Indebted Poor Countries (HIPC) initiative and thus embarking on the Poverty Reduction Strategy Paper (PRSP) programme, which streamlines the initial long-term National Poverty Eradication Strategy.

A Rural Development Strategy has been adopted to address, among other things, poverty issues in the rural areas. The Strategy identifies short and medium term priorities that support the goal of sustainable development in the rural areas.

### **2.1.3 Constraints**

- i) Low productivity in agriculture and low level of human resource development;
- ii) Environmental degradation;
- iii) External debt overhung (debt servicing obligation diverted much needed resources for enhancing economic growth and improving delivery of social services);
- iv) Poor record of social indicators like the Human Development Index (HDI);
- v) Poor state of infrastructure;
- vi) Low domestic resource mobilization;
- vii) Weak industrial base;
- viii) Declining ODA and high technical assistance component and;
- ix) Unfavourable terms of international trade.

The adoption of the Development Vision 2025 is a clear indication of the government's commitment in its endeavour to fight poverty. The Tanzania Vision 2025 aims at achieving a high quality livelihood for its people, attain good governance through the rule of law and develop a strong and competitive economy. It is envisaged that these would be achieved by the year 2025.

### **2.1.4 Challenges**

Poverty eradication initiatives will be successful only if they are able to capitalize on challenges and opportunities. The challenges facing the poverty reduction initiatives include:

- i) The international influence on national development agenda. The challenges of globalization, privatization and liberalization including their implications on the rate of employment and the extent to which the country depends on external assistance in financing development;
- ii) Poverty linkage to environment: this a linkage is complicated in that, for example the rural poor heavily depend on natural resources for their daily life; poverty contributes to unsustainable utilization of natural resources leading to environmental degradation; this in turn leading to more poverty;

- iii) People's perception of poverty and the ability the annual changes of 2% to a level which can sustain the current annual growth rate of 2.8%;
- iv) Poor infrastructure impairing production and marketing of goods and services;
- v) Insufficient numbers of extension workers and change agents at grassroot level;
- vi) Difficulty in achieving participation and social mobilization in planning, implementation, monitoring and evaluation of poverty eradication programmes.

The challenge that poverty poses to Tanzania calls for both internal and external initiatives, awareness of the opportunities and repercussions, radical changes in attitude and behaviour, and people's responsibilities;

### **2.1.5 Priorities and Future Options**

Future options and priorities should aim at achieving the following:

- i) Increased economic growth through increased investment in the productive sectors;
- ii) Increased share of the manufacturing sector in the GDP;
- iii) Diversified structure of the economy to reduce the dependence on the agriculture sector and enhance agro-industry;
- iv) Increased people's income to the levels in the current medium income countries, which is US\$ 300 to US\$ 500 per annum;
- v) Reduced general level of unemployment;
- vi) Improved existing roads to make them passable throughout the year, and
- vii) Prioritization for strategic investments.

## **2.2 DEMOGRAPHIC DYNAMICS AND SUSTAINABLE DEVELOPMENT**

### **2.2.1 Status**

Tanzania adopted her National Population Policy (NPP) in 1992, which is now being reviewed. Currently the population is estimated to be 34.6 million (2002). Generally regional population growth rates are high, with growth rates higher than 3.0% per year. At the national level, population growth is mainly due to natural increase. The decline of the national rate of population growth is supported by findings of the Tanzania Demographic and Health Survey of 1991/92 and the Tanzania Knowledge, Attitude and Practices Survey (1994).

An age dependence ratio is high. More than 100 people are being supported by 100 workers. The younger age group, the unemployed and the aged are the contributors to the high dependence ratio. This has implication for the social service needs especially the provision of education, health care, water and energy.

The broad based young population structure of Tanzania has another implication in that, more and more persons enter childbearing age every year, perpetuating the high growth rate of the population.

The population in the rural area has been decreasing over time. Before independence, the proportion was 97%. It decreased to 95% in 1965, 85% in 1978, and 75% in 1988. And it is expected that this proportion has decreased further by now (2002). This population growth trend is linked to rural-urban migration.

The main features of population distribution are: sharp discontinuities in density, with a number of densely populated areas separated from each other by zones of sparse population. The comparatively low population density in much of the interior of the country; and in most parts of the country, tends to consist of scattered individual homesteads rather than nuclear villages, which can be serviced conveniently.

### **2.2.2 Achievements**

- i) Introduction of the family planning process,
- ii) Improvement of health care services for control and prevention of communicable diseases to reduce the mortality rate especially that of the under five.

### **2.2.3 Constraints**

- i) Inadequate social and economic services to meet demands, as well as infrastructure to support the economic growth;
- ii) Reluctance to accept family planning methods;
- iii) Children considered as social security;
- iv) HIV/AIDS has reduced life expectancy from 52 to 49 years; and
- v) Dependency of the unemployed;

### **2.2.4 Challenges**

- i) Reversing the trend of current population growth: rapid population growth is an environmental, as well as a social and economic concern because of various reasons including population growth threaten on what is already a precarious balance between natural resources and people.
- ii) Increasing demand for food and services and consequently land;
- vi) Changing the current production technologies to technologies that can produce enough to feed the ever-increasing population;
- iii) Lowering the annual growth rate and dependence ratio;
- iv) Overcrowding in urban centers;
- v) Improving social services and utilities;
- vi) Counteracting and control HIV/AIDs;
- vii) Reducing unemployment;
- viii) Rural to urban migration thus reducing rural labour force;
- ix) High mortality rate and birth rate;
- x) Increasing the life expectancy of Tanzanians;
- xi) Developing, institutionalizing and financing effective immunization programmes for communicable and other diseases; and
- xii) Putting in place Strategic Rural Investments.



### **2.2.5 Priorities and Future Options**

- i) To address policy elements, that encourage investments in the rural sector and which provides employment opportunities for the rural population;
- ii) Enhancement of family planning through awareness creation;
- iii) Provision of incentives in agriculture: such as subsidies, farm input, training and assurance of markets and prices;
- iv) Diversification of income-generating opportunities both in rural and urban settings; and
- v) Provision of basic social and economic services.

## **2.3 PROTECTING AND PROMOTING HUMAN HEALTH**

Most of the Health problems in Tanzania can be attributed to communicable diseases. About 70% of life years lost are due to ten major diseases which include: malaria, maternal conditions, TB, pneumonia, urinary track infection (UTI), intestinal worms and HIV/AIDS related diseases. Among these, malaria and maternal conditions account for more than 40%.

### **2.3.1 Status**

Tanzania embarked on the Health Sector reform in 1994 by preparing proposals for reform with the intention of revising strategies to improve quality of health services and increase accessibility and utilization of these services by all people on equitable basis. The Health sector reform redefined the role of the Ministry of Health from that of dominant provider to facilitator in health service delivery.

Overall objectives of protecting and promoting health in Tanzania include:

- i) To improve the health and well being of all Tanzanians with a focus on those at most risk, and encourage the health system to be more responsive to the needs of the people; and
- ii) To put more emphasis on reducing morbidity and mortality with special focus on infants and children under five.

### **2.3.2 Achievements**

Among the achievements made, include:

- i) Establishment of extensive network of Primary Health care facilities in rural areas;
- ii) Decreased infant mortality rate from more than 100 per 1000 in early 1990s to 99 per 1000 in 1999;
- iii) Decrease in the under five-mortality rate from over 200 per 1000 in early 1990 to 147 per 1000 in 1999;
- iv) Introduction of the sector wide approach (SWAP) where the government and donor together develop and fund one plan using Joint (Basket) funding;

- v) The use of Essential Health Packages at different levels in order to provide quality health services;
- vi) Promotion and co-ordination of private sector contributing to expansion of health services delivery in the country;
- vii) Adoption of the health sector strategy that aims at providing more resources to the health sector and making sure that they are more efficiently used; and
- viii) Establishment of the Tanzania Aids Commission (TACAIDS).

### **2.3.3 Constraints**

Some of the constraints in the health sector include:

- i) Poor quality of services at all levels for both public and private facilities due to financial constraints;
- ii) Inadequate equipment and other hospital supplies; and
- iii) Shortages of qualified staff at most of the primary health care centers.

### **2.3.4 Challenges**

- i) Lowering infant and under five mortality rate from 158 per 1000 (2000) to 127 per 1000 by year 2003;
- ii) Arresting the decline in life expectancy caused by the impact of HIV/AIDS; from 49 (2000) to 52 by the years (2010) Reducing maternal mortality from 529 per 100,000 (2000) to 450 per 100,000 (2005);
- iii) Reducing malaria related fatality for children under five from 12.8% (2000) to 10% by 2003;
- iv) Ensuring that health services are available to both urban and rural population.
- v) Raising the proportion of the rural population that has access to clean and safe water from 48.5% (2000) to 55% in 2003;
- vi) Improving the availability of drugs and all essential hospital supplies;
- vii) Sensitizing the community on common preventive health problems and improve the capabilities at all levels of society to access, analyse problems and design appropriate actions through community involvement;
- viii) Promoting awareness in government and community at large that health problems such as HIV/AIDS can only be adequately solved through multi-sectoral approach co-operation; and
- ix) Promoting public-private mix/partnership in the delivery of health services.

### **2.3.5 Priorities and Future Options**

- i) Promotion of nutrition education, especially to mothers and reinforcement of reproductive health, maternal and child health;
- ii) Promotion of HIV/AIDS and public health awareness;
- iii) Strengthening of the programme of Integrated Management of Childhood illness;

- iv) Introduction of hospital reforms in order to strengthen and reorienting secondary and tertiary health services delivery and ensure more effective support to Primary Health Care; and
- v) Ensure adequate supply of essential drugs and other hospital supplies.

## **2.4 PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING**

Human resources development is central to sustainable development. Education has proved to be an important catalyst in poverty reduction through improvement in both production and productivity. Since independence, Tanzania embarked on policies favourable to human resources development. Among such policies are: Universal Primary Education (UPE), Education For Self Reliance, diversification of secondary education and expansion of both secondary and tertiary education and higher education institutions.

### **2.4.1 Status**

A number of initiatives have been undertaken to address issues related to education, public awareness and training. They include

- a) Reorienting education towards sustainable development;
- b) Increasing Public Awareness; and
- c) Promoting Training.

### **2.4.2 Challenges**

- i) Increasing the level of enrolment of women;
- ii) Improving the quality of education (particularly due to lack of adequate facilities); and
- iii) Establishing and maintain the required number of schools/learning institutions to meet the increasing student enrolments.

### **2.4.3 Priorities and Future options**

- i) To motivate and mobilize private investment in education and public awareness.
- ii) To continue reorienting education towards self-employment.
- iii) Promoting vocational training institutions.
- iv) To improve countrywide media of education coverage etc.

## **2.5 PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT**

Human settlements touch both urban and the rural poor, and initiatives are being taken by local authorities to address basic settlement issues.

### **2.5.1 Status**

The development of housing services in Tanzania is still far from satisfactory due to the following aspects:

- i) Demand for houses in urban areas far outstrips supply;
- ii) Most houses are of poor quality and are built in poor environments where essential services such as clean and safe water supply, sewerage lines and general sanitation, proper access roads etc. are non-existent;
- iii) More than 60 percent of urban population live in squatter areas which are not served with essential services; and
- iv) Most houses in rural areas are of poor quality.

### **2.5.2 Achievements**

Various initiatives have been implemented including establishment of a Building Research Unit, which researches on low-costing housing materials. Furthermore, some squatter upgrading programmes have been implemented in Dar es Salaam by establishing roads and other social amenities.

### **2.5.3 Constraints**

- i) Urban housing programmes are capital intensive and there is lack of sufficient funding for such programmes;
- ii) Lack of awareness for urban dwellers on importance of appropriate housing planning and construction, and in many cases people find it cheap to squat than building in planned areas.

### **2.5.4 Challenges**

- i) Improving set-up of urban growth;
- ii) Improving management of urban population growth;
- iii) Developing an effective strategy for the development of the housing sector;
- iv) Enhancing the provision of housing services in the rural and urban areas;
- v) Enhancing involvement of the private sector in developing the housing sector;
- vi) Improving land surveying and allocation of plots and the provision of basic services to surveyed areas;
- vii) Achieving affordable cost of building material and services;
- viii) Raising the level of research and development in the areas of low-cost housing construction and appropriate technology for the housing sector; and
- ix) Providing adequate housing loans at competitive lending rates.

### **2.5.5 Priorities and Future Options**

- i) Central and local governments should embark on partnerships with urban dwellers to improve the management of urban towns and cities;

- ii) Creation of opportunities for citizens to participate in local decision-making processes directed at improving their urban settlements;
- iii) Creation of enabling environment for the development of the housing sector through reforming policies, institutional and legal framework in order to facilitate involvement of households, community based organization and private sector;
- iv) Rural housing development to be a responsibility of the relevant local governments authorities;
- v) Minimize the conditions which fuel rural-urban migration;
- vi) Improve the process of land surveying and allocation of plots;
- vii) Provide basic infrastructure like piped water, sewage systems, electricity and access roads to surveyed areas;
- viii) Create conditions through fiscal and other policies which promote the availability of cheap building materials and services;
- ix) Promote the establishment of Building Finance Societies; and
- x) Promote research and development in technologies for low cost housing construction.

### **3 ECONOMIC MANAGEMENT FOR SUSTAINABLE DEVELOPMENT**

#### **3.1 ECONOMIC PERFORMANCE**

Tanzania economic performance is guided by Vision 2025 a determination to disentangle the country from the scourge of poverty with the following objectives:

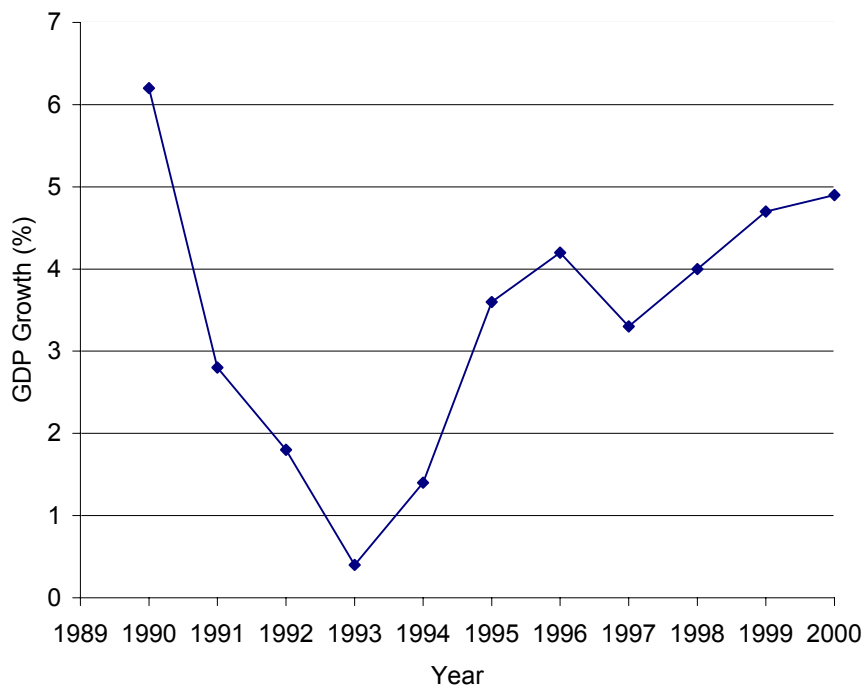
- i) High quality of livelihood;
- ii) Peace, stability and unity;
- iii) Good governance; and
- iv) A well educated and learning society; and competitive economy capable of growth and share benefits.

##### **3.1.1 Status**

In setting (or retaining) targets for the 1990s two issues had to be taken into consideration; enhancing the policy framework and translating the targets of the various international fora into achievable targets.

On the domestic policy framework a number of initiatives (in terms of policies and actions) were taken and implemented in many areas.

The Gross Domestic Product (GDP) registered a steady growth of 3.6% in 1995, and 4.9% in the year 2000 after it had registered a declining growth trend from 6% in 1990 to 0.4% in 1993 (see Figure 3.1).



**Figure 3.1: Trend of GDP Growth 1989-2000**

### 3.1.2 Achievements

The foreign trade sector, and consequently the trade account deficit, has recently shown some significant improvements. This has been possible through the implementation of macro-economic and budgetary measures, including: reductions in tax remissions.

Other achievements include:

- i) Establishment of the Tanzania Revenue Authority (TRA);
- ii) Establishment of the “Inputs Revolving Fund” to encourage agricultural production.

### 3.1.3 Constraints

- i) Overall export grew at a rate twice that of imports as shown in **table 3**; and
- ii) Rise of non-traditional exports from 41.7% of total exports in 1993 to 48.4% in 1999.

### 3.1.4 Challenges

Key challenges include:-

- i) Generating of recurrent budget savings;
- ii) Maintaining the inflation rate at single digit;
- iii) Reducing government indebtedness to the banking system;

- iv) Foreign debt servicing; and
- v) Reducing the widening income gap as the economy recovers and grows.

### **3.1.5 Priorities and Future Options**

The priority future options include:

- i) A diversified and semi-industrialized economy with a substantial industrial sector comparable to typical middle-income countries.
- ii) Macroeconomic stability manifested by a low inflation economy and basic macroeconomic balances
- iii) A growth rate of 8% per annum or more.
- iv) An adequate level of physical infrastructure needed to cope with the requirement of the Vision 2025 in all sectors.
- v) An active and competitive player in the regional and world markets, with the capacity to articulate and promote national interests and to adjust quickly to regional and global market shifts.

## **3.2 INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT AND RELATED DOMESTIC POLICIES**

### **3.2.1 Status**

Tanzania has developed policies and strategies for strengthening international cooperation. This has enabled the country to expand its external market as well as creating enabling environment for foreign investment. A number of multilateral agreements have been signed/ratified in order to enhance partnership with the international community for sustainable development. Important international, regional and sub regional structures to which Tanzania is a party include:

- i) East African Community (EAC);
- ii) Southern African Development Community (SADC);
- iii) Member to Commonwealth state;
- iv) Tokyo International Conference on African Development (TICAD II); and
- v) Multilateral Environmental Agreements (Desertification, Climatic Change, Kyoto Protocol, Montreal Protocol and Biodiversity).

### **3.2.2 Achievements**

Programmes and strategies have emerged from international cooperation in various areas. These include:

- i) The East African Community Development Strategy 2001 – 2005;
- ii) SADC has signed eight sectoral protocols on water use, drug trafficking, mineral development, energy, education and training, trade, tourism and simplification of immigration procedures;

- iii) Tanzania's participation in the United Nations Least Developed Countries Conference (LDC III), which took place in Brussels in May 2001;
- iv) Embarking on preparation of a programme for implementation of TICAD declarations;
- v) Commonwealth countries development programmes;
- vi) South South Cooperation; and
- vii) UNCTAD – Cotonou agreement

### **3.2.3 Constraints**

- i) Inadequate capacity (human and financial);
- ii) Army conflict within the region/sub region;
- iii) Diverse policies between/ among countries; and
- iv) Unfavourable terms of trade (financial).

### **3.2.4 Challenges**

- i) Inadequate supportive policies (economic and fiscal);
- ii) Economic imbalances among cooperating states;
- iii) Harmonization of policies of different cooperating states;
- iv) Changing terms and condition of cooperation due to globalization;
- v) Strengthening South-South cooperation;
- vi) LDCs – financing; and
- vii) Achieving genuine trade partnership;

### **3.2.5 Priorities and Future options**

- i) Implementing EAC programmes;
- ii) Strengthening South-South cooperation;
- iii) Building negotiation capacity in international cooperation issues;
- iv) Implementing SADC protocols; and
- v) Implementing LDCs programme of actions; and
- vi) Implementing multilateral environmental Agreements to which Tanzania is a party.

## **3.3 PROMOTION OF TRADE TO ACCELERATE SUSTAINABLE DEVELOPMENT AND RELATED DOMESTIC POLICIES**

### **3.3.1 Status**

- i) The Export Development Strategy and Action Plan have been developed. The objectives of the Strategy and Action Plan among others are to expand and diversify exports;
- ii) The National Debt Management Strategy (External Debt) has been developed. The objectives of the strategy are:
  - Eliminate the debt burden
  - Slow the built up of Tanzania debt



- Alleviating poverty
- iii) Export Processing Zone (EPZ) strategy has been developed. The objective of the strategy are:
  - Attract foreign capital/investment
  - Exploit the country's comparative advantage
  - Stimulate local investment in the industrial sector hence assist in economic development

### **3.3.2 Achievements**

- i) Export Development Strategy and Action Plan in place;
- ii) National Debt management Strategy (External Debt) in place;
- iii) Establishment of coordination mechanism;
- iv) Strengthened institutional arrangement for debt management at central and sectoral ministries level;
- v) Multilateral debt relief fund has been established; and
- vi) Export Processing Zone (EPZ) Strategy:

### **3.3.3 Constraints**

- i) Debt burden;
- ii) Unfair terms of trade; and
- iii) Imbalance in terms of trading

### **3.3.4 Challenges**

- i) Strengthening the capacity to negotiate at international level;
- ii) Meeting international requirements for key exports product;
- iii) Developing, acquiring and adopting appropriate production technology; and
- iv) Addressing marginalized i.e. globalization world.

### **3.3.5 Priorities and Future Options**

- i) Creating enabling/conducive environment through capacity building, technology transfer, better institutional arrangement for improving trading condition at international level; and
- ii) Enhance coordination and cooperation between regional and sub-regional economic grouping.

## **3.4 FINANCIAL RESOURCES AND MECHANISMS**

Since 1990s the government has been engaged in formulating and reviewing national policies and various reforms for the sectors with the aim of streamlining them towards sustainable development. The sources of financial resources for financing sustainable development activities are domestic, multilateral and bilateral.

### **3.4.1 Status**

#### ***3.4.1.1 Local resources***

Local resources are those from:

- i) Local authorities revenue collection,
- ii) Revenue collection from other various activities e.g. tourism, forestry, mining, importation of goods and services,
- iii) Services sector like water, electricity, business licenses, telephones and others, and
- iv) Banks and private funding.

Since 1995, the Government has managed to control monetary expansion, with the resulting consistent decline in non-food inflation. Recently there has been an increase in the components of money supply arising from net foreign assets held by commercial banks and foreign deposits.

#### ***3.4.1.2 Bilateral and Multilateral Financial Resources***

A number of bilateral and multilateral financial resources organizations have taken part in the course of implementing sustainable development activities that address Agenda 21. Such activities include:-

- i) Environmental conservation and management activities;
- ii) Social service development projects and programmes;
- iii) Rural financing and credit services for agricultural development projects;
- iv) Micro credit financing schemes under the small-scale businesses;
- v) Creation of agricultural inputs trust fund;
- vi) Credit schemes for youth, women and other groups;
- vii) Multilateral development banks;
- viii) Bilateral country consultations for financing sustainable activities; and
- ix) Mechanisms like GEF, Montreal Protocol Multilateral Fund and others that are financing sustainable development activities in the country.

Generally financial resources in the contract of ODA have been far from the targets of 0.7 of the developed countries' GDP that was agreed in Rio in 1992.

### **3.4.2 Achievements**

The government has taken a number of initiatives to improve domestic resource mobilization. The achievement include:

- i) Introduction of a system of maintaining the Cash Budget System, with priority sectors given cash funds on quarterly basis and other sectors continuing to receive cash on monthly basis, with indications of likely availability of funds in subsequent months;
- ii) Application of VAT to petroleum products at standard rate;
- iii) Introduction of stock market such as the Dar es Salaam Stock Exchange (DSE).

- iv) Creation of the Tanzania Revenue Authority (TRA) in 1995 to streamline revenue collection;
- v) Growth of credit to the private sector by 48.7% in 1998/99, and during 1999/2000 the growth net domestic financing reached US\$ 13,140,000 equivalent to Tshs. 9.1 billion;
- vi) Introduction of Value Added Tax;
- vii) Rationalization of customs duties;
- viii) Formulation of the Anti corruption commission to fight corruption;
- ix) Launching of PRSP: this has attracted a number of bilateral donors contribution; and
- x) Establishment of the Tanzania Private Sector Foundation (TPSF) as well as the National Business Council as a measure to promote private sector participation in the economy and facilitation of their consultation with the government.

### 3.4.3 Constraints

Despite the successful initiatives in domestic revenue collection and financial resources from both bilateral and multilateral agencies, there has been a number of constraints in accessing funds for sustainable development activities between 1992 and 2001. These include:

- i) Declining ODA and high technical assistance component;
- ii) Increase in external debt;
- i) Low level of awareness of communities to access credit opportunities for undertaking various development activities; and
- ii) Low level of domestic resources mobilization. This is significantly contributing to doubtful sustainability of initiated programs and projects.

**Table 2.2: Key indicators of the external debt burden 1990, 1995-1999 (in %)**

Years	1990	1995	1996	1997	1998	1999
Debt/GDP	14	117	95	85	103	91
Debt service/exports	33	16.5	17.3	17.5	16.2	17.4
Debt service/Government Recurrent revenue	29.9	44.1	40.6	36.4	40.2	27.9

Source: Action Program for Development of URT 2001 – 2010 LDC, (March 2001).

### 3.4.4 Challenges

- i) Creating awareness on available financial opportunities to all stakeholders.
- ii) Developing adequate social and economic infrastructure to attract FDI and ODA.
- iii) Increasing the local financial resources to reduce dependency on external sources.
- iv) Addressing stringent requirements for assessing GEF funds for funding suitable development activities.

### **3.4.5 Priorities and Future Options**

- i) To Strengthen revenue collection initiatives.
- ii) To continue with reforms to strengthen private investment and increase efficiency in the goods and financial markets.
- iii) To continue with privatization and other reforms for reducing government burden.
- iv) To promote micro financing credit schemes for various groups in the society to reduce poverty.
- v) To reduce monopoly of services to increase competitive business and setting performance delivery targets.
- vi) To improve governance, transparency and accountability.

## **3.5 TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY BUILDING**

The use of information technologies in business, schools, and health care institutions improves efficiency and effectiveness. In Tanzania the pace of transfer, adoption and use of technologies and its related information have been on the increase for the last decade.

### **3.5.1 Status**

The transfer of environmentally sound technologies is key to sustainable industrial development in Tanzania.

Some of the underlying causes of industrial pollution in the country are:

- i) the use of inappropriate technologies;
- ii) inadequate awareness on cleaner production technologies;
- iii) inadequate investment capability in acquiring and diffusing newer and cleaner technologies;
- iv) inadequate capability to introduce minor changes to the existing technologies; and
- v) the lack of a maintenance culture.

Tanzania has addressed this issue by undertaking the following initiatives:-

- i) Establishment of the Cleaner Production Centre of Tanzania (CPCT) in October 1995;
- ii) Training industry personnel and government officials in the area of environmental management;
- iii) Advising policy makers on the promotion of cleaner production;
- iv) Strengthening legal regime for Impact Assessment and auditing; and
- v) Local authorities in collaboration with other stakeholders are working on introducing appropriate technologies to reduce, reuse and recycle various waste types.

### **3.5.2 Achievements**

- i) Various industries and institutions have benefited from CPCT services.
- ii) Inventory of industries and monitoring their production process so as to ascertain pollution sources and levels. The database of industries and their status performance has been established.
- iii) Private sector involvement in waste management especially in urban areas, to complement local authorities efforts.
- iv) Incentive package to promote appropriate local technological inventions have been introduced.
- v) Increased information technology opportunities have opened more avenues for scientific information, which facilitate technological information access. For example increased information gateways like internet, e-mails and print media.

### **3.5.3 Constraints**

- i) Inadequate resources to access/develop environmentally sound technology
- ii) Limited skills and knowledge to adapt and use technologies
- iii) Industries and factories were established without due regard to environmental consideration

### **3.5.4 Challenges**

- i) Introduction of environmentally sound technologies for checking pollution;
- ii) Establishment of a databank on the country's environmental process and linkage.
- iii) Absence of financial mechanisms for technological innovation and investments especially new and emerging technologies

### **3.5.5 Priorities and Future Options**

- i) Increase awareness creation on the link between environmental quality and sustainable development.
- ii) Strengthen partnership with private sector through introduction of cleaner production technologies.
- iii) Promotion of environmentally sound waste management
- iv) Incentives for cleaner production ventures (e.g. access to credit from environmental funds etc.)
- v) Strengthening environmental assessment regimes.

## **3.6 ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY**

A country like Tanzania, which is rich in wild plant varieties, can facilitate research to produce high yield varieties with high resistance, which are suited to specific weather conditions.

### **3.6.1 Status**

- i) Ministry of Agriculture and food Security has produced various crop varieties including crops with short period of maturity and high yield e.g. coconut, cereals and fruits;
- ii) On station and farmer oriented researches are conducted by the agriculture research stations.

### **3.6.2 Achievements**

- i) Generally modified hybrids of crops like coconut, cotton, beans, citrus fruits and other crops with high yield resistant to pests, and short period of maturity are available.
- ii) Research on high nutrient legumes for protein is going on.

### **3.6.3 Constraints**

- i) High costs of equipment and laboratories for sophisticated genetic research.
- i) Human resources to undertake genetic researches are limited.
- ii) Funds for biotechnology researches are still limited.

### **3.6.4 Challenges**

- ii) Biosafety concerns on the impact on human and environment of modern biotechnological products;
- iii) Integration of indigenous knowledge into modern agricultural technologies;
- iv) Encouraging biotechnology research geared towards food sufficiency and health.

### **3.6.5 Priorities and Future Options**

- i) Increase awareness on opportunities and benefits of research on biotechnology for increased food production and health.

## **3.7 PROMOTION OF SUSTAINABLE INDUSTRIAL DEVELOPMENT**

### **3.7.1 Status**

In 1996, Tanzania launched the Sustainable Industrial Development Policy (SIDP) (1996-2020) with the main mission to contribute towards the achievement of the overall national long-term development goals as enshrined in the overall National Development Vision, and to enhance sustainable development of the industrial sector.

A number of sustainable development initiatives have been carried out in the industry-sector, which resulted into a notable recovery in the performance of the manufacturing sector. In 1998, for example, the manufacturing sector recorded a growth rate of 6.1%,

from 2.1% in 1986. It also recorded an average contribution of 8.4% of the GDP for the same period.

### **3.7.2 Achievements**

Privatization programme has enabled local industries to improve aggregate performance especially in the beverage sub sector.

The implementation of Industrial strategy is closely linked with the implementation of clean technology strategy, which led to the establishment of a Cleaner Production Centre of Tanzania (CPCT).

The chemical industry in Tanzania has started to identify and reduce pollutants by adding effluent treatment and scrubbing units to existing processes in recognition of the dangers of releasing pollutants into the atmosphere. Some firms have been able to substitute hazardous organic chemicals and trichloroethylene with less hazardous alternatives.

Walk-through audits, semi-detailed audits, and full energy audits for 41 industries have also been implemented.

### **3.7.3 Constraints**

- i) Dumping of imports into the local market;
- ii) Limited access to financial services;
- iii) Poor supportive infrastructure (for packaging and exporting);
- iv) High cost of production due to highly priced inputs especially power and reliable supply of utilities (electricity and water);
- v) Weak complementarity with agriculture and low export dynamism;
- vi) There is a very weak link between the few local R&D institutions and the productive sector in the country. Industrialists do not appreciate the role of R&D activities, and much R&D work is perceived as not addressing the actual needs of the productive sector;
- vii) The substitution of deleterious technologies by environmentally sound technologies involves huge capital investments. Therefore, most operators in industry in Tanzania have opted for add-on technologies and optimizing existing processes.

### **3.7.4 Challenges**

The main challenge is to build a strong diversified and resilient industrial sector, which can produce goods and services for the local and the world markets. More specific challenges are to:

- i) Sustain a high industrial growth momentum and development of the sector;
- ii) Offer and manage selective protection for the growing productive domestic industries;
- iii) Promote technological innovation and adoption;
- iv) Develop a diversified industrial sector;

- v) Generate employment; and
- vi) Create and develop international competitiveness in industrial production and marketing.

### **3.7.5 Priorities and Future Options**

To address this situation, the following measures need to be undertaken:

- i) Development of export processing zones and industrial parks with basic infrastructure provided in order both to attract industrial investments and increase competitiveness;
- ii) Improving complementarily with other sectors such as agriculture, mining, and tourism through supplying necessary inputs, tools and other services;
- iii) Encouraging and supporting the development of small and medium enterprises in order to increase industrial output and employment;
- iv) Strengthening of institutions that provide support services such as quality control, research and development;
- v) Strengthening existing scientific and technological institutions by providing them with adequate finances, expertise, infrastructure facilities, and schemes for retention of technical experts;
- vi) Promoting and sustaining an export culture;
- vii) Promote the adoption of clean and environmentally friendly technologies;
- viii) Improve access to finance as a basis for encouraging investment in technology and industrial development;
- ix) Create and promote competitive infrastructure facilities especially reliable power, water, telecommunication and transport;
- x) Rationalization and synchronization of R&D institutions; and
- xi) Articulation of areas for collaboration between manufacturers and the local R&D network.

## **3.8 PROMOTION OF SUSTAINABLE TRANSPORT DEVELOPMENT**

### **3.8.1 Status**

The transport sector provides vital spatial and sectoral links in the economy contributing about 12% to the export earnings of the country as well as facilitating trade with other land locked countries in the region. In 1998 the transport and communication sector accounted for about 5.3% of GDP and 28.2% of gross capital formation.

### **3.8.2 Achievements**

Transport sector policy framework has been developed with the major objective of providing, among other things, efficient and effective domestic and international transport services ostensibly aiming at minimising public expenditure while at the same time maximising both foreign and local revenue generation in the sector. The policy reflects further movement to economic reform, market liberalisation/commercialisation and a greater role for the private sector.



Since 1991 a programme for rehabilitation, the Integrated Road Project (IRP) has been in operation directed at restoring the deteriorated network. The proportion of paved trunk roads restored improved from 15% in the pre IRP period to 59% by the year 2000 while for regional roads the corresponding percentages are 10% and 15% respectively. Other initiatives include establishment of a road fund, encouragement of private sector participation and initiatives under regional cooperation, especially under the East African Community.

### **3.8.3 Constraints**

- i) Under funding;
- ii) Low participation of beneficiaries;
- iii) Limited private sector involvement;
- iv) Low capacity of local contractors which has led to the backlog in maintenance and rehabilitation works;
- v) The two existing railway lines are incompatible for easier service exchange;
- vi) Inadequate locomotives, wagons and spare parts;
- vii) Inadequate skilled manpower;
- viii) Inadequate investment capital.

### **3.8.4 Challenges**

- i) Putting in place through sustainable expansion and rehabilitation wide network of well maintained and all weather trunk and feeder roads;
- ii) Improving and sustaining air transport facilities and services;
- iii) Exploiting more effectively the potential for water transport in order to meet domestic, regional and international requirements;
- iv) Ensuring competitiveness of Tanzanian ports with other ports in the region;
- v) Ensuring adequate supply of rolling stock, equipment and spares and proper maintenance of the rolling stock and equipment;
- vi) Developing rail corridors into viable economic areas;
- vii) Electrification of the railway system;
- viii) Building capacity for Dar es Salaam Port to handle more cargo from its hinterland inside Tanzania and from neighbouring land locked countries.

### **3.8.5 Priorities and Future Options**

- i) Increase investment in the trunk roads;
- ii) Put in place sustainable systems of financing periodic and regular maintenance of both trunk and feeder roads;
- iii) Enhance quality efficiency and reliability of water transport services and integrating it with other transport network (railway, road, water and airways);
- iv) Encourage private investment in the marine transport services and instituting capacity building for local private sector;
- v) Encourage investment in road transport facilities by the private sector;

- vi) Refrain by government from intervening in business decision of major actors such a tariff setting, dictate area of operations, strategic investment
- vii) Develop capacity for effective human resource development;
- viii) Encourage local government and community investment initiatives and efforts in the feeder roads;
- ix) Encourage the use of improved technologies in water transport facilities in order to cope with increasing demand for water transport and keep pace with advances in technology;
- x) Encourage investment in rehabilitation of rolling stocks and improving operating and handling efficiency in order to enhance competitiveness in the domestic and regional market;
- xi) Enhance understanding of the socio economic potential of the rail corridors and encouraging local and foreign investment along the development corridors to fully and effectively utilize the potential.

### **3.9 PROMOTION OF SUSTAINABLE TOURISM**

#### **3.9.1 Status**

Tanzania's competitive strength in tourism lies in the abundant and diverse wildlife, the spectacular landscape and scenery, unspoiled environment and friendly people. In addition, there are beautiful waterfalls, large rivers, hot springs marine parks, biosphere reserves, national parks, and antiquities, which offer outstanding attraction for tourists. Furthermore, safari and beach holidays, mountain climbing, hunting and photographic safaris including site seeing and water sports offer variety of tourist activities in the country. Tanzania receives up to 500,000 tourists per annum.

The improvement in macroeconomic performance has created an enabling environment for investment in tourism. There is investor interest, mostly from Africa, Europe, America and Middle East.

Tourism is a topic under discussion in the East African Community. There are evident synergies between the three countries.

#### **3.9.2 Achievements**

- i) The Tourism master plan is in place
- ii) The Tourism Policy was adopted in 2000 with view to
  - a) Improve tourism related infrastructure
  - b) Promote aggressive tourism marketing
  - c) Strengthen capacity of management and promotion of local community participation in tourism development
  - d) Promote regional/international cooperation in tourism
  - e) Create enabling environment for private sector participation in tourism development and management.
  - f) Encourage eco-tourism

### **3.9.3 Constraints**

- i) Weak infrastructure;
- ii) Inadequate number and quality of amenities services and basic facilities in the rural areas where tourist attraction are situated;
- iii) Inadequate financing of investment in tourism;
- iv) Inadequate appropriate skills in tourism marketing, advertisement and operations.

### **3.9.4 Challenges**

- i) To harness and utilize more effectively the tourism potential to generate more income, employment, and foreign exchange earnings;
- ii) Expansion and diversification of tourist industry in Tanzania without compromising the environment and nature;
- iii) Promotion of domestic tourism;
- iv) Promotion and marketing of tourist attractions

### **3.9.5 Priorities and Future Options**

- i) Improve key infrastructure for tourism including transport, communication and information technology;
- ii) Promote international and regional cooperation;
- iii) Encouraging development of sustainable and quality tourism that is culturally, socially acceptable, and environmentally sound;
- iv) Development of the southern tourism circuit to exploit unutilized potential;
- v) Aggressive marketing and strengthened capacity for management;
- vi) Streamline taxation of tourism services;
- vii) Improve the quality of personnel to cope with the increasing requirements of the tourist industry;
- viii) Embark on more active publicity of the industry and marketing arrangement both domestically and internationally;
- ix) Improve the quality and efficiency of service delivery in order to effectively compete with tourist services offered by other countries;
- x) Development of coastal tourism.

## **4 NATURAL RESOURCES UTILIZATION AND CONSERVATION FOR SUSTAINABLE DEVELOPMENT**

### **4.1 PROMOTION OF SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT**

Agricultural sector development objective is to increase production of food and cash crops in order to improve food security, generate foreign exchange, supply domestic industries with raw materials, and raise rural income levels to alleviate poverty.

#### 4.1.1 Status

Agriculture is the lead sector in the economy contributing about 45% of GDP and earning around 55% of the countries foreign earnings. The sector employs 80% of the main labour force. Although agriculture is the mainstay of the economy most farmers are still producing at subsistence level.

Box 1 Agriculture's share of Real GDP and Foreign Exchange Earnings (FEE) (Per cent)				
	1987-1990	1990-1993	1994-1998	1998-2000
Contribution to GDP	48.2	48.4	50.0	50.0*
Contribution to FEE	55.0	56.0	56.2	54.2*

**Source:** URT/WB. Tanzania Agriculture: Performance and Strategies for Sustainable Growth, February 2000

\*Figures for 1999 and 2000 are provisional

#### 4.1.2 Achievements

Key achievements include:

- i) A new Agricultural Policy in place (1997);
- ii) An Agricultural Sector Development Strategy (2001);
- iii) Rural Development Strategy (2001);
- iv) Livestock Development Policy (1997);
- v) Land Act and Village Land act (1999); and
- vi) Involvement of the private sector in production and the provision of services and inputs.

Accordingly, all the above initiatives have been put in place realizing the intended acceleration in real GDP growth and the needed reduction in poverty. The following targets have been established for the coming five years:-

- i) Increasing real annual agricultural GDP growth from about 3.6 percent in 2000 to 5% by 2003 and 6% by 2005;.
- ii) Raising of corresponding rate for the livestock sub-sector from 2.7% 2000 to 5% by 2005; and
- iii) Increasing real annual growth rate for export crops over the same period from 6.8% to 9%.

### **4.1.3 Constraints**

Among the major constraints faced the agricultural sector are:

- i) The low level of both production and productivity;
- ii) Poor rural infrastructure;
- iii) Vulnerability on rainfed agriculture;
- iv) Poor technology;
- v) Inadequate basic inputs such as fertilizers to farmers;
- vi) Limited capital and access to financial services by farmers;
- vii) Inadequate funding for the sector that does not match its contribution towards GDP;
- viii) Inadequate data for effective planning;
- ix) Lack of clear/insufficient regulations and guidelines for food aid;
- x) Inadequate experts and lack of incentives to those employed in the sector;
- xi) Inadequate support services (extension, research etc);
- xii) Weak co-operatives systems and market arrangements; and
- xiii) Multiple taxes.

### **4.1.4 Challenges**

Major challenges facing the agriculture sector include, among others the following:

- i) Promoting agro processing industries;
- ii) Diversification of the sector;
- iii) Improving the utilization agricultural genetic resources;
- iv) Subsistence farming coupled with limited technology use to revamp agriculture productivity;
- v) Limited human, technological and financial input;
- vi) Deteriorating arable land fertility;
- vii) Reducing dependency on rain fed agriculture;
- viii) Low prices - demotivating conclusions and recs. and future farmers options;
- ix) Because agriculture is the mainstay of our economy, strive to semi process farm output to fetch more;
- x) Pricing mechanisms and market;
- xi) Creating conducive environment for borrowing and investing in agriculture sector;
- xii) Allocating commercial farmers while encouraging both subsistence farmers to produce more, to meet national demand.

### **4.1.5 Priorities and Future Options**

The priorities and future options for the sector focuses on the following interventions:

- (i) Strengthening capacity of actors and their coordination.

- (ii) Improving support services (agricultural research, extension, training, regulatory services, promotion of farmers' organizations, animal health and crop protection services and agricultural information services).
- (iii) Facilitating investment and financing in agriculture and livestock, with focus on the development of micro-finance, partnerships between smallholders and agribusiness, and the development of sector specific incentive package.
- (iv) Strengthening agriculture and livestock market efficiency for inputs and outputs, including legalization and promotion of cross border trade, updating and enforcing input and output marketing legislation, improvement of rural infrastructure, establishment of private Agribusiness Sector Support (PASS) units, and promotion of the use of input voucher system.
- (v) Creating conducive administrative and legal environment.
- (vi) Mainstreaming planning for agricultural development in other sectors. Effective agricultural sector development requires participation of many actors over and above the Ministries directly responsible for the agriculture and livestock sector. The government therefore plans to integrate the vision for agricultural sector across all ministries, as well as in conjunction with the private sector. Key areas to benefit from greater cross-government planning include improved utilization and management of land and water resources, enhanced rural infrastructure, fight against HIV/AIDS, environmental management, increased use of labour saving technology, gender, and sustained development of human resource base for agriculture.
- (vii) Sustaining macroeconomic stability. The profitability of agriculture is affected by changes in macroeconomic conditions, such as levels and trends in the inflation rate, interest rates and exchange rate regimes. In this respect, the government will strive to sustain and improve the existing macro-economy stability as a pre-requisite to agricultural profitability and growth, especially under the private sector-led agriculture.
- (viii) Addressing the impacts of climate change to the Agriculture Sector.

## **4.2 CONSERVATION OF BIOLOGICAL DIVERSITY**

Tanzania is one of the countries with high biodiversity in terms of fauna and flora. The overall objective for the conservation of biodiversity is to contribute to global initiatives for conservation of biological resources also to ensure that national resources are rationally utilized and protected for present and future benefit.

Tanzania has for quite a long time greatly benefited from biological diversity, including in attracting tourism, and as a source of food, medicines, building materials and energy, and as decomposers of organic wastes and soil conditions. Moreover, many commercial enterprises are an offspring of these biological services, including food processing plants (fisheries and agriculture), furniture and pulp enterprises (forestry) and the hotel industry (wildlife and forestry). These biological diversity services and their commercial enterprises can be visualized as the biggest source of foreign exchange earnings in future, helping alleviate poverty.

#### **4.2.1 Status**

- i) Tanzania has signed and ratified several conventions on biodiversity (from 1951-1996) which include illegal trade on wild fauna and flora; international plant protection, protection of world's cultural heritage, endangered species of wild flora and fauna and migratory species of wild animals and the Convention on Biological Diversity;
- ii) High endemism of fauna and flora in the ecosystem;
- iii) A number of programmes and projects supporting biodiversity exist in Tanzania;

#### **4.2.2 Achievements**

- i) Nature conservation is carried in areas with high biodiversity;
- ii) Eastern Arc Mountains are under the conservation programme.
- iii) The conservation of coastal forests and mangroves programmes are in place.
- iv) Existence of ecotourism in nature conservation areas.
- v) Opportunity for Tanzania to contribute to global initiatives for the conservation of biodiversity.
- vi) Benefit from technology transfers, financial assistance, scientific, research cooperation and capacity building.
- vii) Biodiversity is a basis for exchange and cooperation among country parties.
- viii) Biodiversity Assessment report (1999).

#### **4.2.3 Constraints**

These high rainfall forest zones have good agricultural potential. This is why in eastern Usambara forests have been reduced to about 50% of the original size and the western Usambara an estimated average of about 70km<sup>2</sup> of forest was cleared annually between 1960 and 1980. Also in 1965 about 300 km<sup>2</sup> of Shume forests (also in west Usambara Mountain) were cleared for agriculture. In Kilimanjaro Forest Reserve, in 1980 alone about 2 km<sup>2</sup> of water catchment forests were encroached by farmers. The single cash crops varieties grown extensively on plantations in these areas (tea, coffee) are especially prone to fungal and insect pests and, as a result, agrochemicals with a negative impact on biodiversity and farmers' health are used.

Other constraints include:

- i) High dependency of local community on fauna and floral resources.
- ii) Low awareness of community on biodiversity issues
- iii) Biodiversity is prone to disturbance and extinction of some species.
- iv) Scanty information on endangered as well as endemic species.
- v) Financial and expertise shortage.

#### **4.2.4 Challenges**

- i) Inform Community of situation with the endangered and endemic species.
- ii) Impart knowledge on the whole issue of endangeredness and endemism of fauna and flora.
- iii) Raising awareness by the community on the issue of biodiversity conservation.

#### **4.2.5 Priorities and Future Options**

- i) Strengthening of Joint Forest Management systems with local community.
- ii) Set benefits sharing system between government and local community surrounding the resources.
- iii) Develop and strengthen capacity building.
- iv) Enhance survey and inventory of the endemic/endangered floral and fauna species.

### **4.3 MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT**

#### **4.3.1 Status**

Desertification, which involves land degradation in arid and semi arid areas continues to be a major threat to the environment and has been identified as a major problem in the relevant policies including the National Environmental Policy (NEP, 1997), and the National Forestry Policy, (NFP, 1998). Various initiatives to address land degradation/desertification have been undertaken. The National Action Programme to Combat Desertification (NAP) has been prepared. The objective of the NAP is to identify the factors contributing to desertification and practical measures necessary to combat desertification and mitigate the effects of drought. The establishment of the National Environment Fund (Desertification) is being finalized. The fund is intended to support community level anti-desertification and drought mitigating activities

Another initiative on protection of fragile ecosystem is the ratification of the Ramsar Convention, taking steps towards management of wetlands ecosystems by addressing the issue in the Wildlife Policy (1998). Furthermore, Lake Natron and Malagarasi-Moyowosi wetlands have been declared Ramsar sites. In order to protect endemic species the Eastern Arc Mountain Forests ecosystems which is among the 25 biodiversity hotspots in the world because of its high level of endemic species as well as species diversity per unit area has been declared Man and Biosphere Reserve. For example, the number of higher plant species is estimated at nearly 11,000, with about 600 species representing over 60% of all Tanzania's endemic plant species.

#### **4.3.2 Achievements**

A number of remedial measures to address the problem of desertification in the affected areas have been undertaken through launching of conservation/control projects. Furthermore, various projects implemented mainly by Non-Governmental Organizations



to combat desertification have been implemented through catalytic support fund activities related to combat desertification. The objectives of these initiatives range from planting of trees, awareness creation, to improve of economic and social welfare of the poor. Furthermore, the following initiative have taken place:

- i) Improvement of management of catchment and mangroves forests;
- ii) In 2000 the East Usambara Mountains conservation area was declared Man and Biosphere Reserve. About 144 million trees were planted in 2000;
- iii) Lake Natron and Malagarasi-Moyowosi wetlands have been declared Ramsar sites;
- iv) The National Integrated Coastal Management Strategy has been prepared; and
- v) The Tanzania Coastal Management Partnership project which addresses, among other things, establishment of a foundation for effective coastal governance in Tanzania is being implemented.

### **4.3.3 Constraints**

- i) Inadequate financial resources to implement the programmes;
- ii) Limited capacity to implement the programmes;
- iii) The main setback is the caring of trees since some are abandoned after planting.

### **4.3.4 Challenges**

- i) Improving the quality of life of people living in arid and semi arid areas;
- ii) Attaining higher survival rate of planted trees;
- iii) Attaining effective community participation.

### **4.3.5 Priorities and Future Options**

- i) To promote involvement of the communities in planning, monitoring and coordination of activities related to land degradation.
- ii) To facilitate communities to steer the process of reclamation and soil and water conservation activities
- iii) To facilitate the process of combating land degradation through technology transfer and capacity building.
- iv) To facilitate mechanism for channeling funding for land/resource reclamation activities through local authorities or be part of the responsible district budget.

## **4.4 COMBATING DEFORESTATION**

### **4.4.1 Status**

Tanzania has about 38 million hectares of forests and woodlands, covering 40% of the total land area. Causes of deforestation are mainly heavy pressure from agricultural expansion, livestock grazing, wildfire, over-exploitation of wood resources for various

purposes, and other human activities such as mining. The current deforestation rate is estimated to be about 92,000 ha per annum.

The overall goal of the National Forestry Policy (1998) is to enhance the contribution of the forestry sector to the sustainable development of Tanzania and the conservation and management of her natural resources for the benefit of the present and the future generations.

#### **4.4.2 Achievements**

- i) The National Forestry Programme (NFP) has been adopted in 2001 with the main objective of operationalising the 1998 National Forestry Policy.
- ii) The revision of the 1957 Forest Ordinance is in the final stages.

#### **4.4.3 Constraints**

- i) Inadequate financial resources to fund forestry programmes;
- ii) Inadequate skilled manpower resources;
- iii) Inadequate control and protection efforts against deforestation;
- iv) Inadequate awareness about the adverse effects of deforestation on future human development.

#### **4.4.4 Challenges**

- i) To enhance the utilization of the potentials of forests while managing them to ensure sustainability;
- ii) To reduce use of woodfuel as source of energy and maintain it at manageable and sustainable levels;
- iii) To achieve high levels of integration of forestry consideration into all development initiatives which adversely affect forestry;
- iv) To strike a balance between economic use of forestry and forest conservation;
- v) To diversify the forestry sector so as to increase its export earnings.

#### **4.4.5 Priorities and Future Options**

- i) Promote the use of alternative sources of energy other than woodfuels;
- ii) Enhance afforestation efforts by encouraging community participation in forestry management;
- iii) Improve forestry research and extension;
- iv) Increase awareness among the general public and among policy makers about the importance of proper forestry management;
- v) Institute incentives to encourage appropriate forest management.

## **4.5 PROMOTING SUSTAINABLE ENERGY SUPPLY AND USE**

### **4.5.1 Status**

The energy sector in Tanzania covers the non-commercial primary energy sources (mainly woodfuel) and commercial energy (mainly petroleum, natural gas, hydro electricity and coal)

The energy demand and end-use is at a low level of development. Woodfuels including firewood, charcoal and agricultural residues account for 92% of the final energy consumption, with electricity and petroleum fuels accounting for 1% and 7% respectively.

The per capita commercial energy consumption was 35 kg of Oil Equivalent in 1993. Woodfuel is the main source of energy mainly used for domestic cooking and industrial processes such as tobacco curing, fish smoking, salt production, bricks and tiles kilns, pottery and ceramics, brewery, tea processing, and lime and kaolin production.

The 1990 National Energy Policy, which was reviewed in 2000 has the main objective of establishing an efficient energy production, procurement, transportation, distribution, and end-use system in an environmentally sound manner.

### **4.5.2 Achievements**

In the energy-sector in Tanzania, a number of actions and programmes relevant to Agenda 21 have been initiated. Several hydropower stations have been put in place, which slowly have phased out thermal generators. In order to arrest wood fuel depletion development of more appropriate and efficient woodfuel use technologies has taken place. Use of renewable energy sources has been adopted and disseminated to the rural sector.

Natural gas reserves are found in Songo Songo and Mnazi Bay in Tanzania. Songo Songo has proven gas reserves of 540 bcf, probable gas reserves are estimated at 1.1 tcf. Mnazi bay gas reserves are estimated at 14 bcf. Tanzania has embarked on development and utilisation of natural gas from Songo songo offshore gas fields to generate electricity and other industrial applications. Natural gas is expected to be on stream in the year 2002 where 112 MW gas turbines in Dar es Salaam will use the natural gas from Songo Songo. The Mnazi Bay gas is to be used for the generation of 15 MW.

The power sub-sector has been undergoing restructuring. In 1993 for example, Tanzania abolished the state monopoly of the power sector. Prior to that only a single utility was responsible for developing, generating, and distributing electricity in the country. This prompted the public and the private sector to consider promoting and enhancing development and use of alternative energy sources to areas not connected to the grid or where they are economically feasible. The Private participation in investment in the Songo Songo natural gas project is a precursor to wider private sector participation in the

energy sector. Recently an Independent Power Producer (IPP) has completed construction of a 100 MW thermal plant at Sala Sala in Dar es Salaam.

#### **4.5.3 Constraints**

- i) Heavy capital intensity of commercial energy infrastructure;
- ii) High costs of appropriate renewable energy technologies like solar for rural use.

#### **4.5.4 Challenges**

- i) Developing reliable, economically accessible and appropriately priced energy supplies to facilitate the development of other activities in the economy while ensuring environmental sustainability;
- ii) Raising awareness for use of environmentally sound sources of energy.

#### **4.5.5 Priorities and Future Options**

- i) Embark on vigorous rural electrification;
- ii) Encourage investment in the development of alternative sources of energy putting emphasis on the utilization of local resources to ensure security and continuity of supplies and to reduce dependence of biomass based fuels;
- iii) Promote sub-regional and regional cooperation and collaboration in energy;
- iv) Put in place incentives and regulations which will ensure an appropriate balance in the ecosystem;
- v) Establish a system of production, procurement, transportation, distribution and end-use that is efficient and environmentally friendly;
- vi) Encourage planting more woodlots to alleviate burden of fuelwood and pressure on forests.

### **4.6 PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES**

#### **4.6.1 Status**

Official estimates indicate rural and urban water supply coverage levels of 46% and 68% respectively in 1999. Out of 46 percent rural water supply coverage 30 percent is erratic or completely inoperative while 52 percent of the urban water supply coverage is eroded by technical and commercial losses.

Irrigation is an important aspect of water use because of the variability inherent in Tanzania's rain-fed production systems, which create problems of shortages of the main food crops in years of inadequate or unreliable rainfall. Irrigation is not yet widespread, but where it is used, regulation of water consumption is a problem. Smallholder farmers,

who account for about 80% of water abstraction for irrigation, use traditional furrows, which are prone to excessive leakage, poor drainage and water logging.

At policy level, the overall national objective of the revised draft Water Policy (2001) is to provide adequate clean and safe water within easy reach (reserve principles), to satisfy other water needs, and to protect water sources. Specific environmental objectives of the water policy include: protection of water catchment areas; promotion of efficient use of water; promotion of efficient water treatment, and waste water treatment; promotion of water recycling; institution of water charges that reflect full value of water resources; prevention of water pollution; and improved management and conservation of water bodies and wetlands; consideration of minimum water requirement for ecosystems maintenance (silent users).

Tanzania shares a number of water bodies with neighboring countries, such as Lake Victoria, Kagera River, Iwaso Ngiro River, Ruvuma River, Lake Tanganyika and Lake Nyasa.

#### **4.6.2 Achievements**

Initiatives are going on in enhancing efficient water utilisation as well as appropriate management of water basins. The river basin management and smallholder irrigation improvement project aims to strengthen national capacity to manage water resources, and to address national water-related environmental concerns. It is intended to improve irrigation efficiency of selected smallholder traditional irrigation schemes in the river basins. So far there are nine identified river basins, but only two namely Pangani and Rufiji river basins boards have been operationalised.

Furthermore, the following has been undertaken:

- i) Traditional, water management systems are being encouraged and revitalised in some parts of the country;
- ii) Privatisation of water utilities is underway as part of increasing efficiency in management and revenue collection.
- iii) Tanzania is an active partner in transboundary water resources management.

#### **4.6.3 Constraints**

- i) Inadequate financial and human resources for facilitation of activities in the sector;
- ii) Limited private sector participation;
- iii) Low participation of beneficiaries, such as electricity supply, irrigation, forestry and tourism.

#### **4.6.4 Challenges**

- i) To provide and manage water resources to meet all user needs including ecosystems maintenance;

- ii) Enabling the majority of the population access to safe and clean water at a reasonably short distance;
- iii) To secure adequate funding for water services;
- iv) Increased utilization of water resources for irrigation;
- v) Improve management and conservation of water bodies and wetlands
- vi) Strategic negotiations for rational use and management of transboundary water bodies.

#### **4.6.5 Priorities and Future Options**

Water resource management should take an integrated approach. The following need to be undertaken:

- i) The river basin approach be encouraged and promoted;
- ii) Encourage private investment in the provision of water services;
- iii) Strengthen regional water boards;
- iv) Water use efficiency to be the way forward in water resources management
- v) Community involvement in designing water management programmes be promoted;
- vi) Consideration of silent users/ecosystem management in new programmes be a priority;
- vii) All water plans and programmes to be subjected to thorough environmental and social impact assessment;
- viii) Encouraging rain water harvesting;
- ix) Human resources development.

### **4.7 INTEGRATED APPROACH TO PLANNING**

#### **4.7.1 Participation in Planning and Implementation of Sustainable Development**

Since 1999 the Government of Tanzania has been implementing the local Government Reform Programme (LGRP). Essentially, LGRP is about devolution of power and responsibilities from central to local levels. As part of this decentralization of decision-making the LGRP promotes a number of initiatives of participatory planning. The LGRP recognizes that the success and sustainability of the reforms that aim to the improvement of livelihoods and alleviation of poverty at the community level, to a large degree depend on the extent of the participation of major stakeholders in the decision-making process.

As part of the shift to decentralized planning and budgeting the Government has drafted a Framework for Participatory planning and Budgeting at District Level, and has also developed a planning procedure (Opportunities and Obstacles to Development (O&OD), based on PRA methodology which is currently being piloted in a number of districts in the country.

Some valuable experiences have been made through local level implementation of agenda 21 type of programmes. One such example is the Tanzakesho initiative (supported by Capacity 21), which supports local level capacity building for planning for sustainable development.

#### **4.7.2 Planning and Management of Land Resources**

The objective of Land Use and Management is to plan, guide and regulate the allocation, ownership, use, management and administration of land in the country.

##### **4.7.2.1 Status**

A number of factors contribute to land degradation. These include, among others, inappropriate cultivation techniques; a growing population; growing energy requirements; overstocking; and insecure land tenure. In the densely populated highland areas, the average farm-size has decreased. Land degradation is reducing the productivity of soils in many parts of Tanzania.

The expansion of agriculture has often taken the form of shifting cultivation, which is detrimental to vegetation. Traditionally, farmers in Tanzania practiced shifting cultivation or "slash and burn" agriculture.

About half of the land area of Tanzania can be categorized as grazing land, but 60% of this is tsetse fly infested. Livestock is therefore concentrated in the semi-arid savanna areas of north and central Tanzania, where grasses are associated with widely scattered shrubs and stunted trees. In many areas the livestock population far exceeds the carrying capacity of the land resulting in overgrazing. In Shinyanga, especially Meatu district, and Mbulu in Arusha region, the excess is reported to be over 200%.

Allocation of land for various uses in urban areas is not smooth due to demand exceeding supply. The rate of survey is slower due to human and financial constraints. This has resulted in land conflicts and use of marginal lands in some cases.

##### **4.7.2.2 Achievements**

The government has conducted research on development of land use planning and land tenure systems in Tanzania with the following objectives

- i) to review the existing land use planning activities and recommend an action oriented approach to benefit land users;
- ii) develop a basic framework of land and agricultural legislation in order to iron out conflicts of land uses and ownership;
- iii) examine pastoral land problems and recommend possible solutions to pastoral land ownership and management;
- iv) examine environmental programmes in relation to land use planning;
- v) review sociological issues in land use management and recommend areas of law review; and

- vi) identify areas for capacity building.

The study has resulted in the drafting of a national strategy for land delivery. The strategy will reduce competition on land use and stimulate sustainable land use development and natural resource utilization. The government has also introduced a number of measures to streamline land allocation for various uses. So far the following have been accomplished:

- i) Initiated the process of formulating rural land use planning legislation.
- ii) Established framework guidelines for participatory land use management and that encourage participation of all stakeholders in villages and districts.
- iii) Initiated the process of formulating framework guidelines for district planning and budgeting to ensure integration of district development plans as well as resource mobilization.
- iv) Land Act and village Land Act of 1999.

#### **4.7.2.3 Constraints**

- i) Inadequate resources allocated to Land Use and Management
- ii) Inadequate data for planning
- iii) Inadequate research to enhance scientific understanding of land use and management.

#### **4.7.2.4 Challenges**

- i) Resolve conflicting interests of land use groups (e.g. farmers versus livestock keepers)
- ii) Strengthening institutional and technological capacity.

#### **4.7.2.5 Priorities and Future Options**

- i) Ensure more resources (human, financial and technological) are allocated to the sector to speed up and operationalize land use planning and allocation.
- ii) Involvement of NGOs and the private sector
- iii) Increased international cooperation in enhancing land use planning in urban and rural areas.
- iv) Enhancing of sustainable cities programme to address among others the problem of squatting.

### **4.8 SUSTAINABLE EXPLOITATION OF MINERAL RESOURCES**

Tanzania is endowed with a number of minerals including gold, diamonds, mica, tanzanite, ruby and other gemstone. Until the early 1980s, most of these minerals were exploited by small scale miners using traditional technologies. By early 1990s up to now mining of these minerals has attracted foreign investors. The mining policy and legislation are clear on sustainable mining and 1997 reforms are geared towards addressing technological and capacity issues in mining.



#### **4.8.1 Status**

- (i) Increased mining contribution to GDP. Mining contribution to GDP in 1992 was 7.7% while for 2000 it rose to 13.9%.
- (ii) Recent reforms in the sector (mining policy review in 1997 legislation) have opened up the sector to FDIs and initial response has been very positive.
- (iii) Programme of action and policies are in place to support private sector initiatives.
- (iv) Enabling environment for private sector to take a lead in exploration, mines development and marketing.
- (v) Presidential Environmental Award for Environmental Management in mining sector has been established.

#### **4.8.2 Achievements**

- (i) Increased mining contribution to GDP from 7.7% in 1993 to 13.9% in the year 2000.
- (ii) Mineral exports in 1998 totaled to US\$.103 million.
- (iii) Inflow of FDIs and increased output.
- (iv) Increased in employment opportunities.
- (v) Increased development of service infrastructure to the communities.
- (vi) Incentive package for investors in mining for example full exemption of import and excise duty and VAT on mining equipment.

#### **4.8.3 Constraints**

- i) Limited access to capital needed to improve the level of technology for small-scale miners.
- ii) Insufficient effective monitoring of output.
- iii) Increased environmental destruction and pollution of water sources.
- iv) Encroachment of farming lands and reserves.
- v) Lack of frequent reviews on the rate of royalties paid by miners/investors.

#### **4.8.4 Challenges**

- i) Control of small-scale miners for sustainable development.
- ii) Negotiating better terms with large-scale miners to benefit the country and communities.
- iii) Develop capacity for processing marketing and taxing mechanisms.
- iv) Mobilize sufficient and adequate capital resources for mineral exploration and processing.

#### **4.8.5 Priorities and Future Options**

- (i) Strengthening environmental assessment audits.
- (ii) Public awareness programmes for promoting environmentally sound mining.

- (iii) Improvement of social infrastructure in mining areas (occupational health, labour conditions and micro-credits).
- (iv) Improvement of information management systems.
- (v) Establish gemstone-training facility in the country.
- (vi) Capacity building in mining expertise and marketing.
- (vii) Promote effective partnership between government and private sector mining operations.
- (viii) Design mechanisms and marketing mechanisms that would discourage smuggling and illegal export of mineral products.

## **4.9 PROTECTING THE ATMOSPHERE**

Tanzania participated effectively in climate change negotiations and other conventions relevant for protection of the atmosphere.

### **4.9.1 Status**

In participation in the protection of the atmosphere, Tanzania ratified the Vienna Convention for Protection of Ozone Layer Montreal Protocol and its amendment (1993), and the Framework Convention on Climate Change (1996). A country programme on Ozone depleting substances has been developed and operationalized e.g. on aerosols, foam sector and refrigeration. As for climate change, Inventory of sources of greenhouse gases has been completed whereby the inventory shows that in 1994 Tanzania emitted greenhouse gas emissions to the tune of 100,987 Gigagrams of carbon dioxide equivalent, of which methane was 38.11%, nitrous oxide 1.18% and carbon dioxide 60.7%. The contributing sectors include, Land Use, Land Use Change and Forestry (58.8%) Agriculture (29.13%), Energy (11.78%) Waste management (0.94%) and Industrial Processes (0.36%).

Furthermore, a study to assess the vulnerability and adaptation to climate change has been completed. The findings of the study shows that as a result of climate change several sectors will become vulnerable. These sectors include agriculture, water resources, forestry, grasslands, livestock, coastal resources and wildlife and biodiversity. The runoff of three major rivers will be altered. In rivers Pangani and Ruvu runoff would decrease by 6 to 10 percent while in the Rufiji River runoff will increase by 5 to 11 percent. These changes would adversely affect water supply and socio-economic activities.

As part of meeting our obligation to the Climate change convention, an assessment of technological and other options for mitigation of greenhouse gases in Tanzania has been completed. The study involved the analysis of both economic and technological development. A macroeconomic analysis has been carried out to develop the baseline and the mitigation scenarios. The analysis also involved identification and ranking of the greenhouse gas mitigation options in various sectors including energy, forestry and land-use, agriculture and livestock, industry, household energy use and transport. Mitigation options identified are technological and non-technological. Non-technological options include such interventions as policy and behavioural changes.

National initial communication to the United Nations Convention on Climate Change (UNFCCC) has been prepared. This has been done in accordance to Articles 4 and 12 of the UNFCCC which requires Parties to submit their Initial National Communication, which should include a national inventory of sources of greenhouse gases and their removal by sinks, identification of vulnerable sectors and actions to be taken for sustainable future socio-economic developments without a further increase in the emissions of greenhouse gases. Efforts are underway to ratify the Beijing and Copenhagen amendments.

#### **4.9.2 Achievements**

A number of industries have switched to non-ozone depleting substances. Furthermore, the following have been achieved:

- i) Awareness on using non-ozone depleting substances has increased for example in refrigerants.
- ii) Various stakeholders are aware on the opportunities and threats of the climate change phenomenon and thus showing interest in investing in climate friendly technologies;
- iii) Increased awareness on the Kyoto Protocol and the Clean Development Mechanism (CDM) whereby some private companies have shown interest in indulging in CDM activities.

#### **4.9.3 Constraints**

- i) Limited public awareness on opportunities and challenges to climate change convention and its Kyoto Protocol (e.g. Clean development Mechanism);
- ii) High cost for alternative technology for non-ozone depleting substance and greenhouse gas emissions;
- iii) Lack of technical and financial capacity for implementation of adaptation measures for climate change impacts;
- iv) Dumping of second hand goods that are not environmentally friendly.

#### **4.9.4 Challenges**

- (i) Phasing out use of methyl bromide in agriculture sector;
- (ii) Phasing out ozone depleting refrigerants and switching to non-depleting ones, which are still expensive;
- (iii) Implementation of technological and policy options for the mitigation of greenhouse gases in the country;
- (iv) Securing opportunities for clean technology transfer via climate change mechanisms;
- (v) Implementation of adaptation measures for climate change impacts;
- (vi) Establishment and development of database for climate change studies and reporting;
- (vii) Awareness and capacity building.

#### **4.9.5 Priorities and Future Options**

- (i) Streamline legislation to include modalities for monitoring importation of non-ozone depleting substances/equipment;
- (ii) Undertaking awareness programmes for ozone depletion substances and climate change phenomena;
- (iii) Capacity building for recycling of refrigerants;
- (iv) Develop and strengthen awareness creation on climate change issues;
- (v) Establishment of national institutional and legal framework for implementation of the climate change convention and the Kyoto Protocol.

#### **4.10 PROTECTION OF OCEAN, COASTAL AREAS AND THE RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES**

Tanzania has an Indian Ocean Coastal strip of more than 1000 km on the eastern part of the country, which is rich in flora and fauna. The ocean is an important resource for transport, fisheries, ecotourism, sink for various waste and moderating climate including climate change. It is the source of employment (e.g. aqua-culture, seaweed farming etc.) for a significant segment of Tanzanians. The ocean and coastal resources also contribute significantly to the economy and the welfare of those living within this zone.

##### **4.10.1 Status**

Generally there has been increased use of the ocean and coastal resources. Zanzibar attaches quite importance to these resources, since its economic activities are initially linked to the ocean and coastal resources. Ocean and coastal related tourism for both Zanzibar and mainland Tanzania is increasingly contributing significantly to the economy.

##### **4.10.2 Achievements**

- i) The ratification of the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African region (the Nairobi Convention);
- ii) Enactment of the Marine Parks and reserve (No. 29 of 1994) with the main objective of protecting, conserving, and restoring the species and genetic diversity of living and non-living marine resources and the ecosystem processes of marine and coastal areas.
- iii) Involvement of communities by the government in Marine Parks, Marine reserve and coastal areas establishment and management.
- iv) Involvement of communities and local authorities in planning and implementing integrated coastal resources management.

### **4.10.3 Constraints**

- i) Inadequate data and information necessary for management of ocean and coastal resources.
- ii) Inadequate institutional capacity to monitor the exploitation of ocean and coastal resources.
- iii) Lack of appropriate gears for surveillance and monitoring.
- iv) Lack of modern fishing gears by artisanal fishermen.

### **4.10.4 Challenges**

- i) Management of industrial and domestic waste.
- ii) Addressing the impact of climatic changes in the context of sea-level rise and destruction of coastal infrastructure and resources.
- iii) Diversification of exploitation of coastal resources.

### **4.10.5 Priorities and future Options**

- i) Strengthening institutional capacity related to quality enhancement of marine and coastal resources
- ii) Operationalization of the marine contingency plan
- iii) Increased involvement and capacity of communities for management of ocean and coastal resources
- iv) Enhancement of institutional capacity for research
- v) Improve industrial and domestic waste management
- vi) Implementing national programme of adaptation to climatic change
- vii) Increased capacity for surveillance and monitoring

## **4.11 ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC AND HAZARDOUS CHEMICALS AND WASTE**

### **4.11.1 Status**

Hazardous wastes are a threat to sustainable development. Tanzania has joined the international community by ratifying the conventions relevant to hazardous waste management including the Bamako Convention (1993) and the Basel Convention (1993). Since then some programmes for implementation have been instituted. Furthermore, a chemical profile has been prepared, and a study on obsolete agrochemicals in the country has been undertaken and logistics on how to dispose them initiated. Preparation of the draft chemical Bill is going on and the process to ratify the Stockholm Convention on POPs is underway.

#### **4.11.2 Achievements**

As a result of the initiatives aforementioned, incineration of hazardous waste using cement kilns e.g. DNOC was carried out in 1996. Pharmaceuticals that were left at Zanzibar harbour for a long time were incinerated in 2001 and the monitoring of transit toxic chemicals and hazardous waste has been going on.

#### **4.11.3 Constraints**

- (i) Limited technology to handle and dispose toxic chemicals and waste within the country.
- (ii) Limited capacity to handle and monitor illegal trafficking especially at ports of entry.
- (iii) Limited capacity to undertake inventory on hazardous/toxic chemicals in the country.

#### **4.11.4 Challenges**

- i) Development of capacity to handle toxic and hazardous chemicals/waste management
- ii) Public awareness on the effects of hazardous chemicals and toxic wastes.
- iii) Inadequate institutional mechanism to handle toxic and hazardous chemicals.
- iv) Development of institutional mechanisms to address toxic/hazardous chemicals in the country.

#### **4.11.5 Priorities and Future Options**

- (i) Developing capacity for conducting inventory of toxic/hazardous chemicals in the country.
- (ii) Monitoring importation and use to toxic and hazardous chemicals in the country as well as those on transit.
- (iii) Promote public awareness on the effects of hazardous and toxic chemicals.
- (iv) Construction of incinerators especially for hospitals.

### **4.12 ENVIRONMENTALLY SOUND MANAGEMENT OF SOLID WASTE AND SEWAGE RELATED ISSUES**

Solid waste collection and disposal as well as wastewater discharges are increasingly becoming challenging in urban areas in the country. Plastics, which are not easily biodegradable, are posing a major problem in managing their waste.

#### **4.12.1 Status**

- (i) Sustainable Cities Programme is operational in two cities and seven municipalities;

- (ii) Ongoing local government reforms which charge district and town authorities to plan and manage solid and sewerage in urban areas;
- (iii) Partnerships between local authorities and private sector in collection and dispose solid waste are in place;
- (iv) Launching of Urban Sector rehabilitation project in 1997;
- (v) Most industries have no treatment plants for their wastewater;
- (vi) Inventory and industrial monitoring programs are underway;
- (vii) Training on cleaner production technologies has been undertaken for some industries (data from CPCT);
- (viii) Most urban areas are using unsanitary landfills for disposal of solid waste;
- (ix) Only a small percentage of urban population is served by sewerage systems. The rest use sock-away pits and pit latrines.

#### **4.12.2 Achievements**

- (i) Significant reduction of amount of waste generated by industries, which have adopted cleaner production technologies e.g., cement and textile industries;
- (ii) Establishment of urban water and sewerage authorities;
- (iii) Rehabilitation and extension of sewerage in some urban centres;
- (iv) Private sector involvement in waste recycling e.g. plastic and waste paper ad glass bottles;
- (v) Significant improvement in collection and disposal of solid waste.

#### **4.12.3 Constraints**

- (i) Unsorted solid waste at the source.
- (ii) Limited capacity to dispose of non-biodegradable wastes e.g. plastic.
- (iii) Unplanned settlements hinder proper waste collection and sewer construction.
- (iv) Limited financial and technological resources are hampering smooth waste collection and disposal.
- (v) Designation of waste disposal sites.
- (vi) Strengthen enforcement of available environmental standards and prepare the missing ones.
- (vii) Enabling environment for facilitating waste disposal (provision of disposal facilities and equipment).

#### **4.12.4 Challenges**

- (i) Designation and high construction costs of solid waste and waste water disposal sites.
- (ii) Upgrading of unplanned settlements to accommodate waste management facilities.
- (iii) Increase public awareness on hygienic attitudes and ethics on waste disposal.

#### **4.12.5 Priorities and Future Options**

- (i) Extension of sustainable cities programme to other urban areas, which are not covered.
- (ii) Construction of sanitary landfills and central sewers for urban areas.
- (iii) Strengthen legal mechanisms to enforce economic instruments (e.g polluter pay principle).
- (iv) Increase awareness for solid waste management at source.

### **5 INSTITUTIONAL AND CROSS CUTTING ISSUES**

#### **5.1 INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION MAKING**

Sustainable human development involves striking an appropriate balance between development pursuits, cultural considerations and basic needs on one hand and the preservation of the natural environment for the current and future generations, on the other.

##### **5.1.1 Status**

The National Environmental Policy (NEP) which was promulgated in 1996, is one of the cross cutting policies to environmental issues as well as sustainable development. The main objective of the policy is to provide a framework for making fundamental changes that are needed to bring about environmental considerations into the mainstream of decision-making. It seeks to provide policy guidelines, plans and give guidance to the determination of priority actions, and provide for monitoring and regular review of policies, plans and programmes. It further provides for sectoral and cross-sectoral policy analysis in order to achieve compatibility among sectors and interest groups and exploit synergies among them.

- i) The process of making environmental assessments and audits has been initiated.
- ii) Various sectoral policies have been reviewed to include environmental considerations e.g National Forestry Policy (1988); Mining Policy; Tourism Policy (2000); Water Policy; Energy Policy; and Agricultural Policy..
- iii) For a decade there has been an increase political will and awareness amongst top government decision-makers.
- iv) In recognition of the importance of environmental issues in sustainable development,
- v) environmental committees have been formed at district level.

##### **5.1.2 Achievements**

- i) Several new projects have been subjected to EIA.
- ii) Formation of parliamentary standing committee on environment.
- iii) Designation of new protected areas and reserves e.g. Udzungwa National Park and Mafia Marine Park in 1998.



- iv) Elevation of the environment portfolio to the Vice President's Office from the Ministry of Natural resources and Tourism.
- v) Integration of environmental issues in the formal education system.
- vi) Establishment of Natural resources information centers e.g. TPRI, and Institute of Resource Assessment (IRA) of the University of Dar es Salaam, systematic collection of environment information to facilitate decision-making.
- vii) Review of the institutional and legal framework for the environmental management in the country (under the Institutional and Legal Framework for Environmental Management Project -ILFEMP), as currently the environmental issues are spread on several ministries and there is inadequate legal framework.

### **5.1.3 Constraints**

- i) Limited information on the state of Natural resources in the country e.g. rate of deforestation

### **5.1.4 Challenges**

- i) Establishment of the data bank on the environmental resources in the country.

### **5.1.5 Priorities and Future Options**

- i) Increase environmental awareness for decision makers.
- ii) Facilitate and promote collection of environmental information.
- iii) Strengthen the capacity of institutions dealing with environmental management.
- iv) Designate environment liaison units in all sectoral ministries.

## **5.2 INSTITUTIONAL FRAMEWORK**

Environmental management issues are handled at 3 different level namely central government level, sectoral ministry level and local (regional/district/village) level. At central level, there is the Vice President's Office and its institutions e.g. Division of Environment (DoE) and National Environmental Management Council (NEMC). Sectoral ministries deal with sector specific issues (e.g. Forestry, wildlife, fisheries, water, minerals etc). At local level there are municipals and district councils. Other institutions involved in environmental management include NGOs, CBOs, and civil society. Most of these work with grassroots. There are also development partners who support and facilitate environment management activities. Process for streamlining institutional and legal framework for environmental management in the country is going on.

### **5.2.1 Status**

Process for streamlining institutional and legal framework for environmental management in the country is underway. There are sectoral laws and regulations for

environmental management. The process to enact an umbrella law is underway. Some of the outdated legislations have been reviewed e.g. Forestry Ordinance 1957.

### **5.2.3 Achievements**

- i) Local government reform for sustainable development.
- ii) Foundation of district and village environmental committees facilitating mainstreaming of environmental issues in developmental planning.
- iii) Public sector Reforms.
- iv) Established of a Standing Parliamentary Committee on Environment.
- v) Enactment of NGO policy and designation of NGO department under the Vice President's Office.

### **5.2.4 Constraints**

- i) Disjointed and overlapping activities among central level, local levels, and NGOs dealing with environmental management.

### **5.2.5 Challenges**

- ii) Increase transparency in NGOs activities and various decision-making levels. This will assist in streamlining the environmental and sustainable development activities in the country.
- iii) Putting in place a legislation framework for the environmental management and sustainable development.

### **5.2.6 Priorities and Future Options**

- iv) Strengthen and improve institutional and legal framework for sustainable development.

## **5.3 MAJOR GROUPS**

### ***Women Children and Youth***

#### **5.3.1 Status**

The social position of women makes them closer to the environment than men. Since the division of labour (mostly in rural areas) is still gender-based, women perform chores like fuel wood collection, water fetching from distant places, hand-hoe cultivation, etc. Notwithstanding the importance of involving women in natural resource management, women continue to be inhibited by some traditions and by statutory provisions in Tanzania's laws. For example, some codified customary laws prevent a woman from inheriting land in the event of the death of her husband or father. The government

through the Law Reform Commission is working to amend and/or repeal such discriminatory laws.

Tanzania is keen to enhance women's participation in development and environmental management. A Women and Gender Development Policy (2000) has been adopted, whose main objective is to promote full and equal participation of women in social, cultural and economic activities. Women information centers have been established to collect, analyse, and disseminate gender-disaggregated information for use in policy and programmes planning and implementation.

Youth make up a substantial part of the population and a significant part of its working population. In recognition of the importance of youth development Tanzania has committed itself in making sure that every child has access and equal opportunity for education. Furthermore, in 1996 the Vocational Education and Training Authority Act was enacted, through which a statutory fund was launched for the purposes of supporting vocational training.

### **5.3.2 Achievements**

- i) Students enrolment procedures have been revised with emphasis on gender equality;
- ii) Formation of youth groups which are working on development activities like agriculture, fishing, and environmental conservation;
- iii) Women have been involved in poverty eradication activities through credit schemes and self help programmes, e.g. SELF programme;
- iv) Gender networking programmes with projects targeting women have been introduced;
- v) Ministries responsible for women and youth have been established;
- vi) A National Policy on Women and Gender Development is in place;
- vii) Increased number of women in the parliament and cabinet has been a remarkable achievement.

### **5.3.3 Constraints**

- i) Inadequate capacity to coordinate and organize the women groups;
- ii) Stringent conditionalities for access to credit facilities;
- iii) Unequal opportunity for women and children in education at tertiary level.

### **5.3.4 Challenges**

- i) How to provide adequate resources for empowerment of local communities;
- ii) How to close the gender gap in education;
- iii) Recognizing the woman as an equal and valued partner in development;
- iv) Removing the gender bias in access to resources, participation in decision making and ownership of property;
- v) Ensuring that women's rights to basic and reproductive health are safeguarded;

- vi) Ensuring that women have equal access to employment;
- vii) Giving due recognition and respect to women's roles in production and reproduction;
- viii) Reducing women workload;
- ix) how to involve women and children in major decisions;
- x) How to remove cultural and social barriers in all spheres of life.

### **5.3.5 Priorities and Future Options**

- i) To ensure that development plans contain initiatives to provide the youth (and the general population) with a healthy environment, improved standards of living, education and employment opportunities;
- ii) To ensure that women have access to resources and capital for economic activities;
- iii) To ensure that women are empowered by receiving training in management skills, negotiation techniques, entrepreneurship, and community leadership;
- iv) To ensure that gender issues are mainstreamed in all developmental planning.

### ***Non-Governmental Organizations***

#### **5.3.6 Status**

Tanzania embraces a wide spectrum of NGOs ranging from social welfare NGOs, developmental NGOs, educational NGOs, women and youth NGOs, and research NGOs. Most NGOs were formed after the Bill of Rights came into force in 1987. This Bill guaranteed the right to free association and freedom of speech. However, the regulatory framework for NGOs is based on the Societies Ordinance Cap. 337 of the Laws of Tanzania which was mainly meant to govern charitable organizations.

NGOs have been playing a very important role in managing the environment and spearheading development programmes. NGOs render technical support to community-based projects. They are familiar with community problems, needs, and solutions. They also assist communities in interpreting laws and regulations.

Although most of the NGOs are doing a good job in spearheading development projects and environmental conservation activities, their functions remain largely uncoordinated. In addition, most NGOs lack the necessary capacity to manage their activities. Their capacity needs to be built and strengthened.

#### **5.3.7 Achievements**

Various NGOs exist in the country, which indulge in various areas of concerns. These include action oriented, advocacy or pressure oriented NGOs, Research oriented NGOs which are linked with universities and research institutions, and community based NGOs which are closely linked with communities in the rural areas, popularly known as Community Based Organizations, (CBOs).

Activities of some of these NGOs have led to the formation of Land Task Force which contributed significantly to the formulation of Land Policy and Land and Village Land Act (1999) whereby the women rights on land were critically addressed. Furthermore they effectively participated in the enactment of various laws, which protect interests of special groups including women, children and the elderly.

### **5.3.8 Constraints**

The smaller NGOs are community based and are continuously affected by problems of poor leadership and lack of financial resources. Donor dependence has also affected the functioning of most NGOs. Other constraints include, among others, the following:

- i) Limited vision and mission;
- ii) Inadequate capacity for administration and coordination.

### **5.3.9 Challenges**

- i) Improvement of coordination of NGOs;
- ii) Development and increasing of capacity for lobbying and negotiation

### **5.3.10 Priorities and Future Options**

- i) Development and increasing of NGOs capacity for their management and coordination;
- ii) Creation of conducive environment for NGOs to access financing and credit facilities for their activities.

## ***Business and Industry***

### **5.3.11 Status**

The Business Sector Advisory Committee on Economic Empowerment and Environmental Management was established in order to advise the government on policies related to poverty alleviation and environmental management; and the enabling environment necessary for the business community to participate effectively in economic empowerment and environmental management.

The Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) has formed a committee on natural resources and environment with the main objective of raising the awareness of the business community on environmental issues so as to integrate environmental responsibility in company policies. The government will work with the business community in drafting national procedures for environmental impact assessment; the evolution of national environmental standards; and in the implementation of international conventions, protocols, and other agreements to which Tanzania is a party.

### **5.3.12 Achievements**

- i) Formation of the Tanzania Chamber of Commerce Industry and Agriculture (TCCIA) in 1999;
- ii) World Business and Economic Forum which was spearheaded by TCCIA;
- iii) Formation of Tanzania Confederation of Industries;
- iv) Formation of the Tanzania Chamber of Mines.

### **5.3.13 Constraints**

- i) Overlapping and uncoordinated activities among the institutions;
- ii) Lack of financing of the activities of the institutions;
- iii) Weak link to the relevant stakeholders.

### **5.3.14 Challenges**

- i) Developing institutional capacity to carry out activities so that industrial stakeholders to have a common voice;
- ii) Putting in place a mechanism for appropriate institutional coordination.

### **5.3.15 Priorities and Future Options**

- i) Encourage a national partnership in business and industry for addressing the goal of sustainable development
- ii) Promotion of responsible entrepreneurship for the key stakeholders, which is the business community.

## **5.4 SCIENCE FOR SUSTAINABLE DEVELOPMENT**

Recognizing the importance of science and its potential impact on sustainable development, the government of Tanzania has put in place among others a Higher Education Policy to provide the direction and guidance to stakeholders and service providers. The policy has placed emphasis on the teaching of basic sciences and the development of corresponding skills.

The aim is to provide information to enable formulation and selection of the environment and development policies in the decision making process.

### **5.4.1 Status**

- i) Tanzania has already embarked on the implementation of Higher Education Policy. Key issues addressed in the policy are:
  - enhancement of scientific understanding
  - strengthening of scientific capacities, and in ensuring that the sciences are responsive to emerging needs.

- ii) In this context, the national higher education curriculum has been revised to include environmental sciences covering the following areas among others:
  - Environmental pollution including water and air pollution.
  - Management and disposal of toxic and radioactive wastes.
  - Climate change related sciences and issues.
  - Disaster management.
  - Energy production, conservation and use.
  - Environmental protection and management.
  - Management of chemicals, drugs, pharmaceuticals, fertilizers etc. and their implication to the environment.
  - Biodiversity and genetic engineering (including biotechnology).
  - Land management including addressing issues of desertification.
  - Research and systematic observation in the area of meteorology and oceanography etc.

#### **5.4.2 Achievements**

- i) Establishment of Commission of Science and Technology which among its objectives is to identify research needs and priorities for development of sound policies in the process of decision making.
- ii) Creation of enabling environment for opening up new universities and other higher learning institutions.
- iii) Agriculture Resources Institute involvement in Promoting Sustainable Development Through Science And Technology (S&T)
- iv) Increased number of women involvement at higher learning institutes.
- v) Formation of science clubs for youths.

#### **5.4.3 Constraints**

- i) Lack of scientific research equipment.
- ii) Inadequate financial and technical capacities.
- iii) Lack of well-established information technology systems.
- iv) Inadequate institutional networking.
- v) Retaining highly trained manpower in research and higher learning institutions

#### **5.4.4 Challenges**

- i) Integrating research and high learning institution in the globalized information technology.
- ii) Increasing conducive environmental and incentive package to retain them.
- iii) Building capacity through on-job training.
- iv) Maintaining and enhancing scientific research systems and infrastructure.

#### **5.4.5 Priorities and Future Options**

- i) Orienting research towards addressing basic national problems identified in the Vision 2025.
- ii) Creating conducive environment to retain national experts in research and higher learning institutions.
- iii) Cooperate with other research and higher learning institutions, regionally and internationally.
- iv) Encourage private sector to invest more in science and technology.
- v) Creating critical mass of national scientists to address national, regional and global environmental and sustainable development challenges such as climate change.

### **5.5 INFORMATION FOR DECISION MAKING**

#### **5.5.1 Status**

Recognizing the need for information at all levels, and that decisions can only be based on sound information, Tanzania decided to establish specialized information centers to address sector specific and general needs. The Tanzania National Resources Information Center (TANRIC) was established in 1994 to collect and manage national resources, environmental data and information. TANRIC is made up of the following components: a computerized information system (TANRIS) consisting of a data base of information on organizations working in the environment and natural resources, a bibliography, a population module, an expertise profile data base, a meteorology data base, and a geographic information system (GIS) catalogue; a reference library; and a GIS unit.

#### **5.5.2 Achievements**

- i) Formation of Telecommunication Commission.
- ii) Apart from TANRIC, each higher learning institution has nodes of the information system for environment and sustainable development. For instance the University of Dar es Salaam has established a biodiversity reference center; Sokoine University of Agriculture has established Center for Information on Agriculture.
- iii) Government ministries have information units of relevance to environment and sustainable development. Such information include those related to implementation of multilateral agreements and emerging issues in the areas of environment and sustainable development.
- iv) Establishment of a node linking with the UNEP in the context of environment and sustainable development related information and data.



### **5.5.3 Constraints**

- i) Most of data and information are scattered and exists in different quality and format. This makes it difficult to compare, extrapolate or update information for the purpose of carrying out environmental planning and monitoring.
- ii) Inadequate coordination and capacity to manage the available information and data.

### **5.5.4 Challenges**

- i) Transformation of data into useful information for decision-making.
- ii) Decentralization of information for decision making at various levels.
- iii) Timely availability of information for timely decision making.
- iv) Using information as a precautionary tool for decision making.

### **5.5.5 Priorities and Future Options**

- i) Integration of Tanzania into global systems of information technology.
- ii) Information policy
- iii) Enhance institutional mechanism and networking and flow of the same to decision makers.

## **5.6 INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS**

International Legal Instruments are covered under the relevant sectoral chapters. This is a listing of major agreements and conventions relevant to Agenda 21 in Tanzania, but not covered elsewhere:

- i) Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on their destruction, adopted in 1971.
- ii) Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques, adopted in 1977.
- iii) International Tropical Timber Agreement, adopted in 1983.

### **5.6.1 Status**

- i) Tanzania, understanding the importance of international legal instruments and sustainable development, has ratified all key conventions and protocols in this regard. These include the three post Rio conventions and the Kyoto Protocol on climate change.
- ii) The elaboration and relevance of such instruments and mechanisms have been shown in the relevant chapters.

### **5.6.2 Achievements**

- i) Tanzania has been a key participant in the negotiations in the process of negotiating key multilateral agreements.
- ii) In 1997 Tanzania was the chair of the G77 and China, in the negotiations that led to adoption of Kyoto Protocol.
- iii) Tanzania is in the process of ratifying the Kyoto Protocol on climate change paving ways in the participation in the Kyoto Protocol mechanisms and related projects (CDM projects).

### **5.6.3 Constraints**

- i) Inadequate financial and human resources to participate effectively in the process of putting in place international legal instruments and mechanisms for environment and sustainable development.

### **5.6.4 Challenges**

- i) Translating international conventions and protocols into national legal instruments for sustainable development.
- ii) Attracting investments and related capacities emanating from international conventions and protocols.
- iii) Building institutional capacity for effective participation in international negotiations.
- iv) Translating international legal requirements under various conventions and protocols into national legal system.
- v) Accommodation of the mushrooming international environmental agreements in the national development vision.

### **5.6.5 Priorities and Future Options**

- i) Building institutional capacity for effective participation in international negotiations.
- ii) Ensuring international environmental governance provides opportunities necessary for sustainable development of Tanzania.
- iii) Ensuring effective participation in international law making through enhanced institutional and technical capacities.