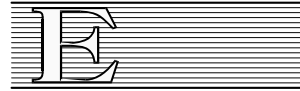




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**Africa Review Report on
DROUGHT AND DESERTIFICATION**

(SUMMARY VERSION)

August 2007

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SECTION I: Introduction

I-1 Background

1. The United Nations Commission on Sustainable Development (UNCSD) at its Sixteenth Session (CSD16) to be held in 2008, will focus on the assessment of the progress made in implementing programs and actions on sustainable development under the thematic cluster of issues covering agriculture and rural development, land, drought, desertification and Africa. This review will be conducted taking into account the goals, commitments and targets set out in Agenda 21, the Programme for the Further Implementation of Agenda 21 (PFIA21) and the Johannesburg Plan of Implementation (JPOI) of the Outcomes of World Summit on Sustainable development (WSSD).

2. The regional commissions are mandated by the United Nations General Assembly Resolution 58/218, to provide regional input to the work of the UNCSD through organizing Regional Implementation Meetings (RIM). This report on drought and desertification has therefore been prepared by the United Nations Economic Commission for Africa (ECA) to provide a basis for discussion at the Africa RIM, which will draw substantive input for the CSD-16.

3. The report is a result of input solicited from Member States and regional partners, and extensive desk review of available documentation and internet resources on drought and desertification, as well as information exchange with and comment from various organizations and individuals. It is in no way meant to be exhaustive but it brings out the main findings obtaining from the above sources on the subject matter.

I-2 Structure and outline of the report

4. The report provides an overview of the status and trends on drought and desertification in Africa. It also reviews progress made in the implementation of measures and actions at national, subregional and regional levels, that are aimed at combating desertification and mitigating impacts of drought, taking into account the main goals and targets set out in Agenda 21, PFIA21, and the JPOI. The report also reflects on challenges and constraints related to the implementation of measures in areas outlined above among others. Priority approaches and actions for further implementation are highlighted.

Section II Overview of drought and desertification situation in Africa

5. Drought and desertification are at the core of serious challenges and threats facing sustainable development in Africa. These problems have far reaching adverse impacts on human health, food security, economic activity, physical infrastructure, natural resources and the environment, and national and global security.

6. In general, drought is defined as an extended period – a season, a year, or several years – of deficient rainfall relative to the statistical multi-year average for a region. This deficiency results in a water shortage for some activity, group, or environmental sector. The underlying cause of most droughts can be related to changing weather patterns manifested through the excessive build up of heat on the earth's surface, meteorological changes which result in a reduction of rainfall, and reduced cloud cover, all of which results in greater evaporation rates. Drought is exacerbated by activities such as overgrazing and poor cropping methods, which

reduce water retention of the soil, and improper soil conservation techniques, which lead to soil degradation.

7. Desertification on the other hand is defined as a process of land degradation in arid, semi-arid and dry sub-humid areas, resulting from various factors, including climatic variations and human activities. Land degradation manifests itself through soil erosion, water scarcity, reduced agricultural productivity, loss of vegetation cover and biodiversity, drought and poverty.

8. Desertification is caused by multiple direct and indirect factors. Among the typical direct causes of desertification in the region are poor agricultural practices such as continuous cultivation without adding any supplements, overgrazing, poor land management practices, and lack of soil and water conservation structures. These practices prevail in many parts of the region. Deforestation, especially to meet energy needs and expand agricultural land is another serious direct cause of desertification. Biomass constitutes 30 percent of the energy used in Africa and over 80 percent used in many sub-Saharan countries. More than 15 million hectares of tropical forests are depleted or burned every year in order to provide for small-scale agriculture or cattle ranching, or for use as fuel wood for heating and cooking.

9. The above direct causes of desertification are driven by a complex set of underlying factors including the high levels of poverty in the region. Without alternatives poor people are forced to exploit land resources including fragile lands, for survival (food production, medicine, fuel, fodder, building materials and household items). Given that most drylands in Africa are as well poverty hotspots the risk of desertification is high in many of the drylands. High population growth increases pressure on limited and fragile land resources. The rural population living in drylands in Africa is estimated to be 325 million. This breeds favourable conditions for deforestation and overexploitation of land that lead to land degradation. Insecure and unclear land and other natural resources tenure and access rights are some of the other main reasons the natural resources end-users are unwilling to invest in long-term sustainable land management (SLM).

II-1 Status and trends of drought and desertification

10. Two thirds of Africa is classified as deserts or drylands. These are concentrated in the Sahelian region, the Horn of Africa and the Kalahari in the south. Africa is especially susceptible to land degradation and bears the greatest impact of drought and desertification. It is estimated that two-thirds of African land is already degraded to some degree and land degradation affects at least 485 million people or sixty-five percent of the entire African population. Estimates from individual countries report increasing areas affected by or prone to desertification. In Ghana, desertification is said to be creeping in at an estimated 20,000 hectares per year, with the attendant destruction of farmlands and livelihoods in the country. Seventy percent of Ethiopia is reported to be prone to desertification, while in Kenya, around 80 percent of the land surface is threatened by desertification. Nigeria is reported to be losing 1,355 square miles (1 mile =1.6km) of rangeland and cropland to desertification each year.

11. Drought is one of the most important climate-related disasters affecting many countries of the region. The region has witnessed a high frequency of occurrence and severity of drought. Climate change is set to exacerbate occurrence of climate related disasters including drought. Current climate scenarios predict that the driest regions of the world will become even

drier, signalling a risk of persistence of drought in many parts of Africa, which has a large area of drylands.

II-2 Impacts of drought and desertification

12. The region is especially vulnerable to impacts of drought and desertification due to the widespread poverty, the fact that a large share of Africa's economies depend on climate-sensitive sectors mainly rain fed agriculture, poor infrastructure, heavy disease burdens, high dependence on and unsustainable exploitation of natural resources, and conflicts. The consequences are mostly borne by the poorest people, the Small Island Developing States (SIDS), and land locked developing countries (LLDCs). The seriousness of the impacts of drought and desertification in the region is demonstrated by the following examples.

Impacts on economic growth and poverty reduction:

13. It is estimated that some six million hectares of productive land was being lost every year since 1990, due to land degradation. This in turn had caused income losses worldwide of US\$ 42 billion per year. With two-thirds of arable land expected to be lost in Africa by 2025, land degradation currently leads to the loss of an average of more than three percent annually of agriculture GDP in the Sub-Saharan Africa region. Drought and floods on the hand account for 80 percent of loss of life and 70 percent of economic losses linked to natural hazards in Sub-Saharan Africa. The drought of 1990/1991 in Zimbabwe resulted in a 45 percent drop in agricultural production but also a 62 percent decline in the value of the stock market, a 9 percent drop in manufacturing output and a GDP drop of 11 percent.

Impacts on food security

14. The poor households that are affected by drought and desertification do not have adequate resources to deal with food shortages. As a result the millions affected face food insecurity and hunger. If land degradation continues at the current pace, it is projected that more than a half of cultivated agricultural area in Africa could be unusable by the year 2050 and the region may be able to feed just 25 percent of its population by 2025. The consecutive droughts that have occurred in southern Africa since 2001 have led to serious food shortages. The drought of 2002–03 resulted in a food deficit of 3.3 million tonnes, with an estimated 14.4 million people in need of assistance in the subregion.

Impacts on water

15. Both drought and desertification influence water availability, which is projected to be one of the greatest constraints to economic growth in the future. Climate change is expected to intensify the region's increasingly critical water situation. For instance reduced annual average rainfall and its run-off would worsen desertification in southern Africa. This subregion being one of many water-stressed regions could thus see a further decrease in streams flow and the ability of groundwater to 'recharge'. In the Nile region, most scenarios estimate a decrease in river flow of up to more than 75 per cent by the year 2100. By the year 2025, it is estimated that nearly 230 million Africans will be facing water scarcity, and 460 million will live in water-stressed countries.

Impacts on Energy:

16. The impacts of drought and desertification on the energy sector are felt primarily through losses in the potential for hydropower generation and reduction in tree-growth rates. As result of drought leading to reduction in water levels, a drop in power generation and power rationing has been witnessed in Uganda, Kenya, Ghana, Lesotho, Malawi, Mauritius, Tanzania, Zambia and Zimbabwe between 1992 and 2007. This cripples productivity in many sectors of the economy. Due to the limited alternatives available to them and the low priority accorded to meeting their needs in times of scarcity, the rural areas and the urban poor bear the greatest cost of decrease in energy resources.

Impacts on Migration

17. The effects of desertification extend beyond the affected dryland areas. Desertification is displacing big population of people and forcing them to leave their homes and lands in search of better livelihoods. It is estimated that 135 million people - the combined populations of France and Germany - are at risk of being displaced by desertification. The problem appears to be most severe in sub-Saharan Africa, the Sahel and the Horn of Africa. Some 60 million are estimated to eventually move from the desertified areas of sub-Saharan Africa towards Northern Africa and Europe by the year 2020.

18. Against this background of the devastating impacts of drought and desertification and the fact that these impacts permeate and undermine the very foundations for securing sustainable livelihoods and economic growth, poverty eradication in Africa is inextricably linked to success in combating desertification and mitigating the impacts of drought. For millions on the continent, hopes of getting out of poverty therefore hinge on efforts at national, regional and global levels to prioritise the provision of support and the implementation measures for desertification control and coping with drought.

SECTION III: Review of progress and achievements made in combating desertification and mitigating impacts of drought

19. This section provides a review of the progress made in the implementation of measures to combat desertification and mitigate impacts of drought. The review is carried out taking into consideration measures set out in Agenda 21, PFIA21, and the JPOI.

III-1 Progress in the development and implementation of measures to prevent and combat desertification as well as to mitigate the effects of drought within the framework of the UNCCD

20. The JPOI identifies combating desertification and mitigating the impacts of drought among the priority actions needed to enable developing countries to achieve their poverty reduction goals and targets. In this regard, it calls for actions to strengthen the implementation of the UNCCD to address causes of desertification and land degradation in order to maintain and restore land, and to address poverty resulting from land degradation.

21. The UNCCD, which was adopted in 1994 and came into force on December 26, 1996, constitutes the centrepiece in the international community's efforts to combat desertification and mitigate impacts of drought and ensure sustainable development. All African countries are

parties to the convention and are carrying out various activities to fulfil their obligations under the convention. The following are some of the main actions being undertaken at the various levels.

III-1.1 National level

Development and implementation of National Action Programmes to combat desertification (NAPs)

22. African countries with support from development partners are at different stages in developing and implementing their NAPs. As of April 2007, NAPs had been developed and adopted by 42 African Countries. The majority of the remaining countries had launched NAP processes. The NAPs are the overall strategies for specific land and drought-related plans and programs and also serve as important tools in guiding the implementation, donor coordination and monitoring of efforts in combating desertification and poverty reduction. The NAP processes have contributed significantly to the strengthening of capacity of various stakeholders to deal with drought and desertification. The NAP process has also triggered and resulted into institutional and legislative reforms for combating desertification.

23. Implementation of NAPs has commenced in some countries such as Niger where projects on institutional reforms, forest management, watershed, and land management are being implemented in the context of the country's NAP adopted in December 2000.

24. In many countries however, meaningful progress has not been made with the operational implementation of NAPs. Implementation is impeded by such factors as capacity and resource constraints, as well as lack of systematic integration of desertification control plans into planning and budgetary frameworks at national and local levels.

Establishment and operation of National Desertification Funds (NDFs)

25. Some countries such as Kenya have set up National Desertification Funds (NDFs) as part of the NAP process. The NDFs serve as local and easily accessible sources of funding for the implementation of NAP priorities. Some countries are however encountering difficulties in making these funds genuinely operational. This can be attributed partly to the existence at national level of similar or related funds, the momentum building up of incorporating NAPs into National Development Programs (NDPs) and Poverty Reduction Strategies (PRSs), and the emphasis placed by a number of development partners and individual countries on direct budget support and basket funding as the favoured approach to resource mobilization and allocation.

Establishment of National Coordinating Bodies

26. Countries are also establishing National Coordinating Bodies (NCBs), which are charged with coordination, guidance and leadership in order to ensure cross-sectoral and integrated planning for desertification control activities. Country reports highlight the need to strengthen these NCBs whose performance and effectiveness is constrained by the limited human, technical and financial resources, as well as the fact within the administrative structure, they are not placed at level high enough for them to fulfil their functions.

Mainstreaming of NAPs and other SLM priorities into NDPs including PRSs

27. The UNCCD recognizes the linkages between land degradation and poverty, and stresses the need to integrate efforts to combat desertification into other development frameworks. Countries have therefore embarked on integrating NAPs into NDPs, especially the PRSs. Examples of countries that have succeeded in mainstreaming NAPs and other SLM priorities into the NDPS and PRSs include Burundi, Kenya, Tunisia, Burkina Faso and Uganda.

28. In spite of the potential of increased funding and sustainability outcomes that can arise out of integrating NAPs in particular and SLM in general into NDPs and PRSPs, it has been observed that few countries have in practice, effectively integrated NAPs within their national development strategies. The slow pace of integration is attributed to the challenge integration still poses to many countries as a result of institutional limitations, poor coordination and collaboration, insufficient political will, and lack of in-depth understanding and appreciation of drought and desertification especially their links with and benefits to poverty reduction.

III-1.2 Subregional and regional levels

Development and implementation of Subregional Action Programmes (SRAPs) and the Regional Action Programme (RAP) on drought and desertification

29. The development of Subregional Action Programmes (SRAP) and the Regional Action Programme (RAP) on drought and desertification has been undertaken. These programs complement the NAPs particularly with respect to trans-boundary resources such as lakes, rivers forests; and crosscutting issues including information collection and dissemination, capacity building and technology transfer.

30. Four SRAPs have been developed and are being implemented under the auspices of subregional institutions namely: the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS) and Economic Community of West African States (ECOWAS) for West Africa and Chad subregion; the Arab Maghreb Union (AMU) for the AMU sub-region; the Southern African Development Community (SADC) for the Southern Africa subregion; and the Intergovernmental Authority on Development (IGAD) for the Eastern Africa subregion. The SRAP for the Central Africa region is being prepared under the auspices of the Central African Forest Commission (COMIFAC).

31. Under the auspices of the Regional Coordination Unit (RCU) hosted by the AfDB, a RAP has been finalized. The RAP is constituted based on six Thematic Programme Networks (TPNs) namely: integrated management of international river, lake and hydro-geological basins; promotion of agroforestry and soil conservation; rational use of rangelands and promotion of fodder crops development; ecological monitoring, natural resources mapping, remote sensing and early warning systems; promotion of new and renewable energy sources and technologies; and promotion of sustainable agricultural farming systems. The RCU plays a critical role including the exchange of information on combating desertification between regional and global level.

III-2 Progress made in combating desertification and drought impact mitigation through other strategies and programs in agriculture and natural resources management sectors

32. In addition to the measures specifically developed for the implementation of the UNCCD, other strategies and programs that have a significant contribution to mitigating drought impacts and desertification control have been developed and are being implementing as part of activities in agriculture and natural resources sectors.

III-2.1 National level

33. Country level interventions include policies, strategies, plans and projects aimed at fostering food security and sustainable natural resources regeneration through preventing land degradation and /or restoring degraded lands, integrated water resources management, and promotion of efficient energy use and renewable sources of energy. These are illustrated below.

National strategies, policies and plans

34. Many African countries have formulated and are implementing national environmental policies, strategies and plans. In many countries, for example the Gambia, Benin, Cape Verde, Ethiopia, Madagascar and Zambia, National Environmental Action Plans (NEAPs) and National environmental policies, provide the broad policy framework for environment management including activities to combat of desertification.

Legislation

35. Several countries have put in place or updated their legal frameworks in the area of agriculture and natural resource management to address drought and desertification. These legislations among others include framework environmental laws, and sectoral laws on land, water, forestry and agriculture. For instance Kenya has adopted the Environmental Management and Coordination Act 1999 and Uganda has put place the National Environment Act and the Land Act. In the period 2001 to 2003, Zimbabwe carried out land, agrarian and environmental law reforms to redress equity issues and mitigate poverty and environmental degradation aimed at benefiting the landless people of the country. The land reform focused on land redistribution, reorganization of communal areas, tackling the problem of over-cultivation, which had resulted in land degradation and high poverty levels, particularly in the marginal semi-arid regions where 70 per cent of the peasant farmers eked out a living.

Sector specific strategies and plans

36. In the forest sector, about two thirds of African countries have developed and are at different stages in implementing National Forest Programmes (NFPs). A majority of countries in Africa have also adopted new forest policies and forest laws, and efforts are being made in many countries to improve law enforcement as part of the NFP processes. Harmonizing implementation of NFPs and NAPs especially in drylands can enhance their impact in tackling land degradation.

37. Policies and plans on land and spatial planning have been formulated by some countries such as Benin and Madagascar to address the problems in land use planning which has been recognized as a major contributing factor to land and natural resource degradation.

38. In the Agricultural sector policies and strategies of countries are increasingly placing emphasis on sustainable agriculture, thus promoting better land management practices and redressing problems related to resource degradation. Examples include Togo's Agricultural and Rural Growth Strategy of 2004, South Africa's Agricultural Strategic Plan of 2002, and Ethiopia's Food Security Strategy.

39. In the water sector, strategies developed place emphasis in the conservation and rational management of water resources, as is the case with South Africa's Water Strategy adopted in 2004 and Ethiopia's Water Sector Strategy.

Rural Development Strategies

40. Rural development strategies that span a wide range of sectors have been initiated and contribute to addressing drought and desertification through rational exploitation and management of natural resources, sustainable agricultural production and diversification of activities and rural incomes, among others. Examples include Algeria's Sustainable Rural Development Strategy of 2004, Ethiopia's Agricultural and Rural Development Policy and the Madagascar National Rural Development Policy.

Programs and Projects

41. Countries have also formulated some programmes, projects and action plans to support the implementation of policies and strategies aimed at controlling drought and desertification. Successes have been registered in many cases. In Algeria for instance, implementation of afforestation plan under National Fund for the Regulation of Agricultural Development has registered fruit trees plantations, which cover more than 1.2 million hectares of land and the conservation and improvement of soils covering an area of more than 2.8 million hectares.

42. The six countries of Burkina Faso, Chad, Kenya, Niger, Senegal and Sudan have benefited from the pilot project: Operation Acacia, which is implemented by the Food and Agriculture Organisation (FAO) with financial support from the Italian government. The project has helped local farmers to restore degraded land by planting native Acacias that produce gums and resins - important products for Sahelian people's livelihoods. The project has among others resulted in restoration of more than 13,000 ha of degraded land.

Innovative community practices in natural resources use and management

43. Some examples of application of innovative practices for natural resource management and livelihood improvement include the utilization of indigenous knowledge systems for land and natural resource management such as in-situ conservation of crop varieties, indigenous terrace building in Konso District, and application of an agro-forestry system in Gedio zone in Ethiopia. Given the effectiveness of these traditional practices, the Ethiopian government has accorded priority to replicating them in different parts of the country.

44. Other examples of innovative community initiatives include successful implementation of soil and water conservation measures on a large scale by the Mossi people of the Central

Plateau and Eastern Region of Burkina Faso; sand encroachment control and agropastoral development project implemented in eight regions of central Mauritania, and the Thuo-Boswa Landcare Cattle Project in the North West Province near Kudumane and Kuruman in the Northern Cap in South Africa.

III-2.2 Subregional and regional level programmes

45. To support and complement country level efforts, the following initiatives and programmes have been undertaken at subregional and regional levels:

46. *The New Partnership for Africa Development (NEPAD)/Comprehensive Africa Agricultural Development Programme (CAADP)* has been developed and endorsed by African heads of state and governments as a framework for the restoration of agricultural growth, food security and rural development in Africa. Pertinent to combating drought and desertification is CAADP's pillar 1: "*Extending the area under sustainable land management and reliable water control Systems*" under which CAADP aims to among others to reverse fertility loss and resource degradation, and ensure broad-based and rapid adoption of sustainable land and forestry management practices in the small-holder as well as commercial sectors.

47. *The NEPAD Environment Initiative (EI)*, which includes combating desertification as an integral and priority program area, has been developed by UNEP. Sub-regional action plans under this initiative have been for all subregions in collaboration with African sub-regional organizations including CILSS, IGAD, Sahara and Sahel Observatory (OSS), SADC, UMA, and ECOWAS. With support from Norway, UNEP is providing support to Mozambique, Libya, Ethiopia, Ghana and Cameroon to develop their national action plans for the EI on a pilot basis.

48. *The Green Wall for the Sahara Initiative*, a program initiated by the African Union (AU) and developed by the AU Commission (AUC) in collaboration with ECA, FAO, UNEP, UNCCD, and CEN-SAD was launched in December 2006. It covers a wide group of countries, including: Algeria, Tunisia, Libya, Egypt, Mauritania, Mali, Niger, Chad, Sudan, Eritrea, Ethiopia, Djibouti, Cameroon, Nigeria, Benin, Burkina Faso, Senegal, The Gambia, and Western Sahara and Cape Verde. The goals of the programme are: to slow the advance of the Sahara Desert, enhance environmental sustainability, control land degradation, promote integrated natural resources management, conserve biological diversity, contribute to poverty reduction, and create jobs.

49. *The ECA-AU-AfDB Initiative on Land policy in Africa* addresses the lack of comprehensive national land policies in most African countries which has been recognized as one of the major factors contributing to many land-related problems including mismanagement of land resources. It is expected that by the end of 2008 a Framework and Guidelines on Land Policy in Africa will have been developed and adopted by AU Heads of States and Governments.

50. In the *SADC sub-region*, heightened attention is being given to programs on drought and food security as a result of frequent droughts with devastating impacts on Agriculture and food security. The region is investing heavily in irrigation. This has seen the area under irrigation grow from 1.63 Million hectares in 1985 to an estimated 1.96 million hectares in 2005. The SADC regional has also developed and adopted a regional framework - the Dar es

Salaam Declaration on Agriculture and food security in the SADC region - to ensure food security and reverse chronic food shortage.

51. *The Regional Programme for the Integrated Development of the Fouta Djallon Highlands (RPID-FDH)* initiated by OAU within the framework of a Plan of Action on the medium and long term to control desertification, drought and other natural calamities in Africa has been under implementation. It covers eight Member States: The Gambia, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Senegal, and Sierra Leone. The Programme aims at ensuring the preservation of natural resources and environment with the view to contributing to the improvement of the living conditions of populations in the area and reversing land degradation that threaten the sources of 6 important international rivers that originate from the Fouta Djallon Highlands or its extensions.

52. In the *IGAD subregion* a New Environment and Natural Resources Strategy has been developed and endorsed by the Ministers of Environment and Natural resources of the subregion.

III-3 Progress in developing and strengthening systems for monitoring, early warning and adaptation to drought and desertification

53. Activities are underway at national, subregional and regional and global levels to set up and implement systems for monitoring drought and land degradation, early warning and disaster management, and for evaluating implementation of NAPs and other interventions on land degradation. Some of these are highlighted below.

III-3.1 Desertification and land degradation monitoring and information systems

54. In terms of monitoring interventions to combat drought, a good practice in establishing Desertification Information System (DIS) for NAP implementation is demonstrated by the case on the monitoring and evaluation system for steering NAP implementation established in Tunisia. The system aims to assess the impact of investments made in fighting desertification and to enable the compilation of management charts for national policy-makers at different levels. Progress in setting up of similar systems in other countries of the region, has however generally been slow, even among some countries that have adopted their NAPs. This is attributed to limitations of human and financial resources.

55. At the initiative of the OSS, the Long-term Ecological Monitoring and Observatory Network has been established. It gathers environmental data for use of decision makers. This initiative has facilitated observatories in 11 countries to operate and gather high-quality information on the evolution of natural resources and the effectiveness of management systems.

56. In response to the need for up-to-date and comparable land degradation information, the GEF has funded the Land Degradation Assessment (LADA) project, a global initiative implemented by UNEP and executed by FAO with support of the UNCCD secretariat, the Global Mechanism (GM) and the International Soil Reference and Information Centre (ISRIC). LADA project has developed and tested effective assessment tools for land degradation in drylands through pilot projects and studies undertaken in selected countries including Senegal, Kenya, Egypt and South Africa.

III-3.2 Drought monitoring and early warning systems and programs

57. Drought monitoring and early warning systems and programs are being developed and made operational. These include the following:

58. Regional Climate Outlook Forums which are convened annually by the World Meteorological Organisation (WMO) in the Greater Horn of Africa, in South Africa and in West Africa, to elaborate and ensure appropriate dissemination of consensual regional outlooks, bulletins and products about the next rainy season.

59. Climate for Development in Africa (ClimDev Africa) Programme is being developed by Global Climate Observing System (GCOS) in collaboration with ECA, to among others guide the effective integration of climate information and services into development planning for Africa, and to ensure the mainstreaming of climate considerations in achievement of the Millennium Development Goals.

60. Centres charged with timely monitoring of drought intensity, its geographical extent, duration and impact on agricultural production, and issuing early warnings have been established. These include the IGAD Climate Prediction and Applications Centre (ICPAC) in Nairobi and SADC drought monitoring centre in Harare. The African Centre of Meteorological Applications for Development (ACMAD) is also in place and provides similar services.

61. The Project, Africa Monitoring of the Environment for Sustainable Development (AMESD), which is hosted by AUC is under implementation. AMESD, which is funded by European Development Fund, targets the ECOWAS, ECCAS; SADC; IGAD and Indian Ocean Commission (IOC) sub regions.

III-3.3 Drought risk and disaster Management

62. At national, subregional and regional level, strategies and programs to enable countries to manage impacts associated with disasters including drought are being established.

63. More than 30 countries have platforms for disaster risk reduction (DRR) as a way of shifting from disaster response to mainstreaming disaster risk, and some of these countries such Gabon, Madagascar, Malawi, Mozambique, and Niger are reported to have succeeded in linking DRR to poverty reduction related strategies.

64. Some countries have embarked on innovative market schemes such as index-based weather insurance for managing risks associated with drought. Ethiopia and Malawi are piloting these schemes.

65. At the sub-regional level, (IGAD) has developed a sub -regional strategy for disaster reduction. In early 2007 ECOWAS approved a sub-regional Common Policy and mechanisms for DRR. SADC has revised its sub-regional strategy, factoring in DRR, and ECCAS has established a sub-regional centre for DRR in the Republic of the Congo and is developing a sub-regional strategy.

66. Under the auspices of the AUC and NEPAD, the Africa Regional Strategy for Disaster Risk Reduction and program of action for its implementation (2006-2010) have been

developed and adopted to contribute to sustainable development and poverty eradication by facilitating the integration of disaster risk reduction into development programs.

67. In addition, the African Drought Risk and Development Network (Drought Forum) has been established with the support of the UNDP Drylands Development Centre and the Bureau for Crisis Prevention and Recovery and the UNISDR. The forum is promoting the development of coordinated strategies for enhanced and effective drought management at national level.

III-4 Progress in providing support for the implementation of programmes to combat desertification and mitigate effects of drought.

68. The JPOI calls for actions at all levels to mobilize adequate and predictable financial resources, transfer of technologies and capacity-building at all levels to among others address causes of desertification and land degradation, strengthen the capacities of African countries including at the local level, for effective disaster management, encompassing observation and early warning systems, assessments, prevention, preparedness, response and recovery. The following highlight some of the progress made.

III-4.1 Financing

69. *Through National budgets* countries of the region are making provisions to fund directly or indirectly projects and activities to address drought impacts and tackle desertification. Funding is channelled mainly through sectoral budgets particularly in the agriculture and environment and natural resources management sectors. Generally, however, these sectors tend to receive low funding. As a consequence, there persist funding gaps for addressing the identified SLM priorities.

70. *The Global Environment Facility (GEF)* through its implementing agencies namely UNEP, UNDP and World Bank is providing support for programs and activities to combat desertification and mitigate drought impacts especially following the approval in 2002 of land degradation as one of GEF focal areas and the subsequent development of the GEF Operational Programme 15 (OP 15) - Sustainable Land Management. Many country reports highlight support provided by the GEF for the NAP processes and support for pilot projects to combat land degradation.

71. In June 2007, GEF approved US \$150 million funding for the Strategic Investment Program (SIP) for Sustainable Land Management for Sub-Saharan Africa. The program aims to restore soil fertility, helping boost food security, increase farm incomes, maintain ecosystem services, and engage local communities in better managing their lands. The 28 beneficiary countries include Benin, Botswana, Burkina Faso, Burundi, Comoros, Central African Republic, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, South Africa, Sudan, Swaziland, Tanzania, Uganda, and Zambia.

72. As highlighted below other initiatives that are aimed at mobilizing and channelling funding to programs to combat desertification, ensure food security and reduce poverty have been put in place and include TerrAfrica, the UNCCD Global Mechanism (GM) and Chef de files.

- (i) *TerrAfrica* has been initiated as a special catalytic partnership effort that aims to scale up harmonized support for effective and efficient country-driven SLM practices

in sub-Saharan Africa (SSA). The TerrAfrica approach focuses on tackling the critical barriers to the scaling-up and mainstreaming of SLM interventions within national development strategies and plans.

(ii) *The UNCCD GM* which is mandated to increase the effectiveness and efficiency of existing financial mechanisms to promote actions leading to the mobilization and channelling of substantial financial resources to affected developing country Parties is undertaking a number of programs to enhance the flow of financial resources for UNCCD implementation. At country level the GM focuses on providing support needed to mainstream NAPs and other SLM priorities into national policies, strategies and budgeting processes. At sub regional level, the GM programme focuses on policy dialogue, enhancing coordination of UNCCD implementation and strengthening the capacity of partner institutions so that they can among others support the country-level processes.

(iii) *Chef de files* instituted under the UNCCD have also been reported as innovative mechanisms for the mobilization and provision of financial and technical support for combating desertification. The Chef de files are development partners that have accepted to act as representatives of the African governments and provide leadership within the aid community to enhance support for country specific support in UNCCD implementation. For instance CIDA on behalf of Government of Canada is rendering this support to Ghana; Norway for Ethiopia; and Italy for Niger.

73. Despite this overall momentum in mobilizing and providing funding, it is note worthy however that countries report gross inadequacy of funds and some countries still have difficulties in gaining access to both domestic and external financing for SLM.

III-4.2 Capacity building

74. Institutional and human resources capacity building programmes that have been carried out include the following.

Enhancing synergy and the implementation of the Rio Conventions

75. Capacity building programs have been undertaken with the aim of strengthening implementation of the Rio conventions, namely the UNCCD, the Convention on Biological Diversity (CBD) and the United Nations Framework convention on Climate Change (UNFCCC) and /or with the view to promoting SLM within the framework of poverty reduction, especially in drylands.

76. The National Capacity Self-Assessment (NCSA) funded by the Global Environmental Facility (GEF) has enabled countries in the region to review their capacity needs to address priority national and global environmental issues, and to prepare national capacity development strategies and plans of critical actions particularly related to the three Rio conventions. Additional support to implement the NCSA outputs was provided through the Global Support Programme (GSP), which was jointly initiated by the GEF, UNDP and UNEP in 2005. The workshops conducted under the GSP for all the sub regions in Africa increased networking and experience sharing between NCSA teams.

77. The Bali Strategic Plan for Technology Support and Capacity Building developed under the auspices of UNEP provides a means for assisting developing countries and countries with economies in transition to address their capacity building and technology support needs in the field of environment. The Bali Plan is of particular interest to Africa, as it is fully in line with the objectives of Agenda 21, and the Capacity Building Program of NEPAD's Environment Initiative. As part of the efforts to kick-start the implementation of the plan, UNEP has in close cooperation with UNDP, initiated a pilot project in six countries of Burkina Faso, The Gambia, Kenya, Lesotho, Rwanda and Tunisia. The pilot project will draw lessons learnt to inform the scaling up of implementation of the Bali plan in the region.

Integrating NAPs and other SLMs into national development plans (NDPs)

78. There is a growing effort to support countries in the region to integrate drought risk reduction, NAPs, other SLM strategies and plans and environment management activities in general, into development frameworks especially the PRSs. The following examples can be mentioned:

- *UNDP Integrated Drylands Development Programme* coordinated by its Drylands Development Centre which among others things assists countries to integrate NAPs into national economic frameworks and move from strategy development to effective implementation of the UNCCD including through resource mobilization. As of 2005, 29 Africa countries were being assisted under the program;
- *UNEP/UNDP initiative on poverty and Environment* is supporting the implementation of pilot projects in seven African countries with the aim of increasing the capacity of governments to mainstream environment into national development processes. The countries covered are: Kenya, Mali, Mauritania, Mozambique, Rwanda, Tanzania and Uganda; and
- *UNEP, UNDP and ISDR* initiative to mainstream disaster risk reduction into development practice, including environmental management.

III-4.3 Enhancing access to technology

79. A number of countries report initiatives in promoting access and use of appropriate technology particularly in energy efficiency and substitution, improving agricultural techniques and water harvesting and conservation.

80. Ethiopia agricultural policy for instance gives special attention to agricultural research and development and market-oriented economy. The country has therefore strengthened the lead research institutions and has established joint research activities with international research centres.

81. Through the Mediterranean Renewable Energy Programme (MEDREP), UNEP with support from the Italian Ministry of Environment and Territory is promoting renewable energy investments in the southern Mediterranean. Since the launch in April 2005, three partner banks have lent almost \$6 million for the installation of 8,000 solar systems in Tunisia. A similar programme for hotels in Morocco has targeted 80 hotels for new solar water heater systems.

82. The UNEP-Rural Energy Enterprise Development (REED) initiative nurtures new, clean energy enterprises in developing countries by providing enterprise development services

and early stage seed finance. The Africa REED (AREED) is operating in Senegal, Mali, Ghana, Zambia and Tanzania. AREED applies a market-based approach to help rural and peri-urban households (and enterprises) climb the energy ladder.

83. Countries report increased photovoltaic (PV) market and successful improved cook stoves programmes particularly in urban areas. In Zambia, the use of solar energy has reduced pressure on forests and in certain areas the rate of deforestation has gone down tremendously.

SECTION IV: Challenges and constraints

84. The region is confronted with many challenges and constraints that have hampered progress in the development and implementation of measures to combat desertification and to mitigate impacts of drought. The main ones include the following:

- (i) The high level of poverty which continues to be main overarching challenge and constraint to implementation of measures to address drought and desertification in the region;
- (ii) Poor coordination and collaboration among actors, insufficient political will, lack of in-depth understanding and appreciation of drought and desertification issues, especially their links with and benefits to poverty reduction. These contribute among others to difficulties in achieving effective integration/mainstreaming of drought and desertification control plans into national development and budgetary frameworks;
- (iii) Weak institutional capacity including poor set ups, lack of legislative backing and inadequate human resources which constrain effectiveness of organs such as NCBs, which are being set up specifically to coordinate the planning, and implementation of desertification control programs and activities;
- (iv) Reform and enforcement of policies and legislation to guarantee clear legal ownership and access rights to land, water and other natural resources that remains a challenging task;
- (v) Lack of financial resources which is a systemic and one of the most pressing constraints to most countries and regional programs in the implementation of desertification control plans. Resource users especially the local people do not have access to affordable credit facilities to acquire funding, which they could profitably invest both in tackling land degradation and to sustain their livelihoods;
- (vi) The inadequate information available on drought, desertification and drylands and the difficulties encountered in accessing and sharing this information continue to hamper activities and progress;
- (vii) The development, management and implementation of processes that are responsive to local community priorities, and are genuinely participatory, and cross-sectoral is still a challenge;
- (viii) The limited development of economic and social infrastructure and services in drylands as result of low levels of investments, hampers access to drylands and does not provide

incentives enough to attract and sustain other investments needed for SLM in these areas;

- (ix) Technology options that empower communities remain largely inaccessible and unaffordable particularly to a majority of rural populations and the urban poor;
- (x) The high rates of prevalence of HIV/AIDS and other infectious diseases in some countries of the region pose a challenge to addressing drought and desertification in the affected countries; and
- (xi) The political instability and conflicts faced by some countries in the region breed conditions such as displacement and concentration of populations, destruction of natural resources and infrastructure, which favour land degradation and/or hamper implementation of programs to reduce poverty and address drought and desertification.

SECTION V: Lessons learned and recommended priority approaches and Actions

V-4.1 Lessons learned

85. Drawing from reports as well as analysis during this review, the following are some of the lessons learned:

- (i) Combating desertification and assisting them to manage the impacts of drought constitute the primary and essential route out of poverty for millions of people in Africa;
- (ii) Desertification control and drought mitigation are complex issues that need an integrated approach to achieve meaningful and durable results;
- (iii) NDPs including PRSPs can be important platforms for securing attention and resources for implementation of interventions to address impacts of drought and combat desertification if NAPs and other SLMs plans are effectively mainstreamed into these plans;
- (iv) Information for education, policy advocacy and planning as well as monitoring of trends and impact of interventions on drought and desertification are central to the success of efforts in combating drought and desertification;
- (v) Given the crosscutting nature of drought and desertification issues, it is pertinent that strong and well-functioning institutional frameworks are put in place to coordinate the formulation and implementation of related policies and programmes and to ensure that they are adequately mainstreamed into national development plans and PRSPs, as well as relevant sectoral policies and strategies;
- (vi) Through a mix of soil and water conservation techniques, combined with better tree and pasture management, simple and low cost farmer led innovations and technologies can help achieve sustainable farming systems needed to combat land degradation;

- (vii) Drought and desertification interventions should be designed through effective involvement of local communities and to ensure their sustainability and that affected communities derive maximum benefits;
- (viii) Many success stories, best practices and lessons learnt exist in approaches undertaken at various levels to combat desertification, and need to be compiled, shared and replicated;
- (ix) Farmers in the drylands need market and reasonable prices for the commodities, which they produce in order to fight poverty as well as invest in SLM; and
- (x) Drought has always been treated in the region as an emergency and thus not adequately addressed in the medium to long-term development plans.

V-4.2 Recommended priority approaches and actions

86. The following are some of the priority approaches and actions needed to enhance implementation of programs to effectively address drought and desertification as well as to achieve sustainable growth and poverty reduction in the region.

- (i) ***Up-scale the implementation of NAPs and other SLM plans with a special focus on concrete on the ground community programs and activities with the objective of achieving measurable results on SLM and poverty reduction.*** This requires actions among others to establish accessible and innovative mechanisms for channelling increased levels of support, particularly financing to farmers and other frontline natural resources managers; and to mobilise and empower local authorities, civil society, private sector and local communities through increased capacity building that is linked to tangible results on poverty reduction, and integrative natural resources management.
- (ii) ***Mainstream/integrate systematically, priorities identified in the NAPs and other SLM processes into national development programs including national sustainable development and poverty reduction strategies as one of the means to mobilize implementation resources, and to foster medium and long-term political commitment for drought mitigation and desertification control programs.*** This entails actions to build political leadership and support for SLM, strengthen institutional arrangements for effective mainstreaming; sharpening and disseminating tools for integration; and to generate information and compelling evidence including economic analyses and arguments on SLM and poverty reduction linkages.
- (iii) ***Establish and promote incentives for and address barriers to agricultural development and sustainable land and other natural resources management by among others:*** providing dryland areas with increased access to appropriate and affordable agricultural technologies such as drought resistant crop varieties, affordable credit facilities and links to markets; developing economic and social infrastructure such as roads, and energy and water supply infrastructure in order to facilitate local people in the affected areas to manage their own development; and carrying out reform and/or effective enforcement of land and other natural resources regulatory frameworks to promote secure tenure and/ or access rights to land, water and other natural resources.
- (iv) ***Strengthen the information base on drought and desertification and enhance knowledge application including through identification, documentation, dissemination, and***

sharing of best practices through programs at regional, subregional and national level. These programs should entail activities to: strengthen collection of information including through targeted research; establish comprehensive information systems; develop and apply benchmarks, indicators and methodologies for monitoring land degradation; strengthen active involvement of the local community in land degradation and drought research and monitoring; and promote networking and centres of excellence.

(v) *Link and coordinate measures for combating drought and desertification with those measures aimed at addressing climate change and biodiversity conservation so as to enhance synergy, diversify resources available for implementation of NAPs and related programmes and thus up scale SLM programs.* The focus devoted by UNFCCC on adaptation and vulnerability reduction provides opportunities for synergistic investments in addressing land degradation and carbon sequestration within the framework of the UNFCCC Clean Development Mechanism (CDM) especially in drylands.

(vi) *Strengthen management and adaptation to drought and desertification impacts especially in the face of the expected climate change and the high vulnerability of the region to climate change impacts.* This requires action to strengthen the following: capacity for systematic climate observations by specialized centres; timely climate information outreach and application; early warning systems and drought risk management institutions; and knowledge networking platforms and tools such as subregional and regional forums; and the use of information communications technologies based on a mixture of traditional and modern technology.

(vii) *Strengthen institutional arrangements and human resources capacity to provide effective leadership for coordination, planning, monitoring and championing of drought and desertification programs at national and sub-national levels.* The capacity needs of lead institutions such as NCBs, and those of decentralized systems, NGOs, private sector and local communities merit special focus.

(viii) *Promote knowledge management on, and access to appropriate affordable technology for improved agricultural production and SLM through actions to:* establish more flexible financing mechanisms for technology development; improve access to affordable credit facilities for technology acquisition especially in rural areas; expand energy services to the poor; and promote demand-driven research.

(ix) *Strengthen capacity for financial resources mobilization and channel increased funding for implementation of NAPs, SRAPs, RAP and other SLM initiatives.* In order to achieve this, actions required include: integrating and according a high priority ranking to SLM programs within development assistance policies and programming; strengthening SLM resources mobilization and financing mechanisms at global, regional and subregional levels; enhancing coordination among these mechanisms; and developing and implementing a clear agenda and fundraising strategies for funding SLM from local sources including from the private sector and emerging schemes such as payment for ecosystem services.

(x) *Foster peace and stability in the region through among others, the development and implementation of comprehensive and coherent conflict prevention and management strategies at national, subregional and regional levels.* In addition strategies and actions are required to deal with environmental and drought refugees and to assist internally displaced persons.

SECTION VI: Conclusion

87. Drought and desertification continue to threaten the livelihoods of millions of people in Africa, increasingly making them unable to edge out of poverty. This trend is set to worsen with the onset of climate change, to which many countries in the region are most vulnerable. As such desertification and drought are at the heart of development challenges in Africa and merit urgent attention in policies and actions at national regional and global level.

88. Combating desertification in the continent has tremendous benefits in enhancing the continent's progress towards meeting MDGs particularly in terms of poverty reduction, attaining food security, combating diseases and ensuring environmental sustainability. Otherwise current trends in land degradation and high level of vulnerability of the region to the impacts of both drought and desertification will be major impediments to the attainment of the MDGs as well ensuring security and social stability at all levels in the region and at global level.

89. African countries have responded and made some demonstrated progress towards tackling drought and desertification. The UNCCD has been central and provides vital opportunities for tackling drought and desertification in the region and globally. With support from international partners, many countries are taking some concrete action at various levels to tackle desertification as well as to mitigate the impacts of drought.

90. The region continues to face a number of challenges and constraints that merit urgent and focused attention in order to accelerate progress. The main priority approaches and actions proposed, recognize the need to address the root causes of desertification as well as to respond to the main challenges, tackle constraints, and upscale implementation of ongoing programs and plans for SLM, building on the success stories.

91. In order to succeed and achieve significant progress in combating desertification and mitigating impacts of drought, there is need for enhanced political will and commitment at all levels to address these problems as integral priority element within MDG and poverty reduction based programs and strategies.