



**InterGovernmental Authority
on Development**

IGAD Environment and Natural Resources Strategy

April 2007

Acknowledgements

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Executive Summary

The IGAD Environment and Natural Resources Strategy is derived from and guided by the overall IGAD Strategy. It however specifically provides a comprehensive and coherent framework aimed at guiding IGAD programmes in the area of environment and natural resources. The development of this strategy was complemented by the previous one whose main focus was drought and desertification; and by others that addressed issues of peace and security, food security, gender, etc. It also tapped from regional and international development processes, conventions and agreements.

In preparing the strategy, IGAD has embraced and employed the principles of ownership, participation and partnership. With this in mind, IGAD visited all member states except the Republic of Somalia where conditions could not allow and consulted with over eighty technical experts, political leaders and legislators. IGAD also involved to the maximum extent possible, its staff and development partners in preparing the Environment and Natural Resources Strategy.

The strategy document is composed of four main sections. *Section One* introduces an overview of the profile of the IGAD region highlighting the economic and social conditions. *Section Two* contains the situational analysis. It gives a brief overview of the state of the environment and natural resources in the region and an outline of the evolution of environment and natural resources policy and strategy making at IGAD. The section highlights the main environmental and natural resources management challenges but at the same time provides an insight into some of the opportunities presented by the region's endowment of environmental and natural resources goods and services.

Section Three is the strategy itself designed to realise the overall IGAD vision and mission. The overall goal of the IGAD Environment and Natural Resources Strategy is to ***assist and complement the efforts of the member states in environment and natural resources management.***

This will be done by promoting:

- ❖ Harmonization of compatible environmental governance systems;
- ❖ Provision of reliable, timely and readily available environment and natural resources data and information;
- ❖ Capacity building for environment and natural resources management; and
- ❖ Research into and adoption of new, appropriate and affordable technologies.

The operationalization of the Strategy will be guided by a number of principles including:

- ❖ Subsidiary, variable geometry, gender sensitivity, equity, and precautionary and polluter pays principles;
- ❖ The supremacy of national programmes;
- ❖ Recognising environment as an integral pillar of sustainable development; and
- ❖ Responsiveness to the MDGs, PRSPs and other multilateral environmental agreements and treaties.

The Strategy has the following four strategic objectives and their accompanying outcomes.

Strategic Objective 1: To improve the framework for environmental and natural resources governance in the IGAD region.

Outcome 1.1: The process of harmonizing environment and natural resources policies supported and led.

Outcome 1.2: Awareness creation promoted and the process of developing appropriate strategies and concepts in transboundary resources management supported and guided.

Outcome 1.3: Member states assisted to comply with the provisions of, and benefit from, the international instruments.

Strategic Objective 2: To develop information required for sound environmental and natural resources management in the IGAD region and make it readily available.

Outcome 2.1: Environmental and natural resources information provided at the regional level.

Outcome 2.2: Timely exchange of environmental and natural resources information promoted.

Strategic Objective 3: To enhance capacity of member states for improved environmental and natural resources management in the IGAD region.

Outcome 3.1: Capacity of member states and IGAD staff in the use of environmental assessments, crucial for promoting regional cooperation built.

Outcome 3.2: Suitable incentives and disincentives measures to complement regulatory enforcement identified.

Outcome 3.3: A more focused forum targeting the environment and natural resources of civil society organisations and non-state actors established.

Strategic Objective 4: To enhance the capability for environmental and natural resources research and development in the IGAD region.

Outcome 4.1: Research agendas identified and the creation of linkages and networks in the area of environment and natural resources management facilitated.

Outcome 4.2: The capacity of the member states for accessing potential incremental financial resources built.

Section Four of the strategy deals with its implementation modalities. It includes institutional collaboration, sources for financing the implementation of the strategy, and the need for cooperation with other international and regional organizations. The section also provides for the elaboration of a detailed implementation plan to operationalize the strategy; and the need for a monitoring and evaluation system to track inputs and outputs, and to measure performance, impacts, and process and financial sustainability.

This last section of the strategy is followed by two annexes. *Annex 1* shows a matrix of some of the key national activities of the member states which arose partly as a result of the 1990 Environment Protection Strategy. *Annex 2* is a log frame presentation of the strategy.

List of Acronyms and Abbreviations

ABS	Access and Benefit Sharing
ACCNNR	African Convention on the Conservation of Nature and Natural Resources
AEO	Africa Environment Outlook
AIDS	Acquired Immune Deficiency Syndrome
AMCEN	African Ministerial Conference on the Environment
AMU	The Arab Maghreb Union
ASAL	Arid and Semi-Arid Land
AWF	African Wildlife Foundation
CARE	Carrying American Relief Everywhere
CBD	Convention on Biological Diversity
CBNRM	Community-Based Natural Resources Management
CIDA	Canadian International Development Agency
COMESA	Common Market for Eastern and Southern Africa
COP	Conference of the Parties
CPSZ	Crop Production System Zone
CSO	Civil Society Organisation
DANIDA	Danish International Development Agency
DED	German Development Organisation
DFID	Department for International Development
EAC	East African Community
EEZ	Exclusive Economic Zone
FAO	United Nations Food and Agriculture Organisation
GDP	Gross Domestic Product
GMO	Genetically Modified Organism
GTZ	German Technical Assistance
HIV	Human Immune Virus
IAS	Invasive Alien Species
IEO	IGAD Environment Outlook
IGAD	Intergovernmental Authority on Development
IPF	IGAD Partners Forum
IUCN	International Union for Conservation of Nature
JICCA	Japanese International Cooperation Agency
JPOI	Johannesburg Plan of Implementation
LEAP	Local Environment Action Plan
MDG	Millennium Development Goal
MEA	Multilateral Environmental Agreement
MoU	Memorandum of Understanding
NAP	National Action Plan
NAPA	National Adaptation Programme Action

NBI	Nile Basin Initiative
NBSAP	National Biodiversity Strategy and Action Plan
NCS	National Conservation Strategy
NCSA	National Capacity Self Assessment
NEAP	National Environment Action Plan
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation
NORAD	Norwegian Agency for Development
NSSD	National Strategy for Sustainable Development
PEAP	Poverty Eradication Action Plan
POP	Persistent Organic Pollutants
PRSP	Poverty Reduction Strategy Paper
RCE	Regional Centre of Excellence
REC	Regional Economic Community
RDD	Research and Development and Demonstration
SIDA	Swedish International Development Agency
SNA	System of National Accounts
SREAP	Sub-Regional Environment Action Plan
TOE	Tonnes of Oil Equivalent
UN	United Nations
UNCCD	United Nations Framework Convention on Climate Change
UNCLOS	United Nations Convention Law of the Sea
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Organisation
USAUD	United States Agency for International Development
WRI	World Resources Institute
WSSD	World Summit on Sustainable Development
WWF	World Wide Fund for Nature Conservation

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1. Introduction

1.1 Background

The primary objective of the IGAD Environment and Natural Resources Strategy is to enhance the integration of environmental and natural resources concerns into development frameworks for environmentally sustainable economic development in the region. This would be in line with the objectives of IGAD and its institutional strategy; Agenda 21; decisions of the World Summit on Sustainable Development (WSSD), the Millennium Development Goals (MDGs), the Africa Environment Outlook (AEO) and the IGAD Environment Outlook (IEO). More specifically, the strategy seeks to:

- ❖ Prescribe measures to regaining the lost past productivity of environmental and natural resources;
- ❖ Offer possibilities for intensifying cooperation among member states to reverse environmental degradation, among others through awareness creation, information and experience exchange, and strengthening of policies and legislations and other regulatory frameworks both at the national and regional levels, including ratification of regional and global multilateral environmental agreements (MEAs) and conventions;
- ❖ Incorporate the experiences of the regions and organizations active in the region, the provisions of regional and international conventions, and other emerging issues, challenges and opportunities; and
- ❖ Highlight transboundary sub-regional interventions to respond to emerging issues and the environmental challenges.

The strategy is divided into four chapters. Chapter 1 covers the introduction. An analysis of the environment and natural resources situation in the region is summarised in Chapter 2. This is derived from the continental and regional Environment Outlook reports. The strategy itself is presented in Chapter 3 and contains the overall goal, guiding principles, strategic objectives, outcomes and activities. Finally, Chapter 4 details the implementation framework – necessary to operationalize the strategy followed by annexes.

1.2 Intergovernmental Authority on Development

IGAD region comprises the countries of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda (see map - Figure 1). The region covers an area of about 5.2 million square kilometres; and has an estimated population of over 190 million people. By 1999, the combined gross domestic product (GDP) of the IGAD region was estimated at US\$ 35.9 billion, representing an average per capita GDP of US\$ 233. The economic mainstay of the IGAD region is agriculture with heavy reliance on environment and natural resources. Nonetheless, other sectors of the region's economy such as trade and services are also growing in importance but their individual contributions are still below the one of the agricultural sector. While the population of the IGAD region is the least urbanized in Africa, the urban population is nonetheless growing at a rate faster than that of the total population. The population growth rate and other selected

Figure 1. Map of the IGAD region



demographic data of the member states are shown in *Table 1*.

Table 1. Some Demographic Statistics of Member States of the IGAD Region

Member State	Life Expectancy at Birth (years) 2004	Adult Literacy Rate (% ages 15+ above) 2004	Total Population in millions 2004	Annual Population Growth Rate % 1975 -2004	Annual Population Growth Rate % 2004 - 2015	HIV Prevalence (% ages 15 – 49)	Refugees by Country of Asylum ('000) 2005
Djibouti	52.9	--i	0.8	1.6	-0.3	3.1	10
Eritrea	54.3	--i	4.2	2.4	2.9	2.4	4
Ethiopia	47.8	--i	75.8	2.7	2.3	2.7	101
Kenya	47.5	73.8	33.5	3.1	2.5	6.1	251
Somalia	46.2	--	--	--	--	--	--
Sudan	58.5	60.8	35.5	2.5	2.0	1.6	147
Uganda	48.4	66.8	27.8	3.3	3.7	6.7	257

--i - Data refers to nationals enrolled both in the country and abroad therefore differ from standard definition of Adult Literacy Rate

-- - Somalia is one of the UN member countries not included in the human development aggregate because the HDI cannot be computed for its citation

Source: UNDP (2006) Human Development Report - Beyond Scarcity: Power, Poverty and the global water crisis, United Nations Development Programme. <http://www.undp.org>

IGAD was established in 1986 as the InterGovernmental Authority on Drought and Development (IGADD) to co-ordinate the efforts of the member states in combating desertification and promoting efforts to mitigate the effects of drought. Thereafter, at an extra-ordinary Summit held on 18th April 1995, the Heads of State and Government resolved to re-vitalize the Authority and to expand its mandate to cover political as well as economic issues. Consequently, the Authority was re-named the InterGovernmental Authority on Development in 1996 and the Agreement Establishing IGAD was amended accordingly. The new Agreement gave IGAD an expanded mandate that includes inter alia, the following areas of cooperation among the member states:

- ❖ Enhancing cooperation and co-ordinating their macro-economic policies;
- ❖ Promoting sustainable agriculture development and food security;
- ❖ Conserving, protecting and improving the quality of the environment;
- ❖ Ensuring the prudent and rational utilization of natural resources;
- ❖ Cooperating in increased sustainable utilization and development of energy resources in the sub-region, and in the gradual harmonization of their national energy policies and energy development plans; and
- ❖ Cooperating in the gradual harmonization of their national policies in scientific and technological research and development, transfer of technology, and their policies on capacity building in science and technology in the sub-region.

While the new Agreement Establishing IGAD identified some twenty areas of cooperation among the member states, the following three priority areas were selected as the immediate entry points for cooperation:

- ❖ Food security and environmental protection;
- ❖ Conflict prevention, management and resolution; and
- ❖ Economic cooperation and integration.

2. Situational Analysis

2.1. State of the Environment

IGAD faces a myriad of sustainable development challenges in attempting to realize its vision, mission and objectives. One such challenge is the sustainable management of natural resources and environmental protection, the very foundation upon which the socioeconomic development of the region depends. As detailed below, the region experiences persistent economic crises, which to a large extent, have roots in severely degraded natural resources and the environment. This, exacerbated by recurrent droughts and other natural and man-made disasters, results in perpetual poverty and under-development which in turn accelerates the degradation of natural resources and the environment, thereby closing the vicious cycle. An urgent need, therefore, exists for member states of the IGAD region to break the vicious cycle by specifically ensuring environmental sustainability in their economic and social activities. Such a strategy would realize the vision of the founding fathers of IGAD whereby the people of this region would develop a regional identity and live in peace and a clean environment having alleviated poverty through appropriate and effective economic, food security, environmental protection and natural resources management programmes. That is, people and livelihoods are at the centre of concern for sustainable development and human beings are entitled to a healthy and productive life in harmony with nature.

Realizing that environmental, social and economic opportunities fit very well with the concept of sustainable livelihoods¹, an environmentally sustainable livelihoods strategy must create gainful employment for income, production and recognition (where employment provides recognition of food security for any population); lead to poverty reduction; improve the well-being and capabilities of people; encourage livelihood adaptation and reduce vulnerability through resilience; and promote sustainability of the natural resources base. Emerging issues such as trade and environment, pollution and genetic manipulation are in addition some of the challenges which this Strategy seeks to address.

The IGAD region has a wealth of natural resources with the potential to drive economic growth and social development. Unfortunately, the full environmental and natural resources potential is not being realized for a number of reasons including: a fast rate of growth of a largely rural, peasant and heavily natural resource dependant population; natural disasters; and institutional weaknesses. As such environmental and natural resources degradation are still evident in the IGAD region, previous efforts notwithstanding.

Atmospheric Resources

The atmosphere is a transboundary asset, hence the need to preserve it. A regional approach can provide opportunities for sharing and mitigating negative impacts on the atmospheric resources including opportunities for disaster response and management, cleaner production, energy efficient technologies, use

¹ A sustainable livelihood is defined as comprising the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

of unleaded fuel, reduction of ozone depleting chemicals and gases and enforcement of emission standards. Despite the existence of the potential of atmospheric resources to contribute to sustainable development, there are attendant threats. Climate variability and climate change, reduced air quality and institutional weaknesses are some of the major threats to realizing the potential of atmospheric resources.

Sixty percent of the total land area of the IGAD region is classified as arid, meaning receiving less than 500 mm of rainfall annually. This makes rainfall the most important climatic factor in the region. The rainfall is low, unreliable and unevenly distributed and, although there have always been cycles of drought and flooding, there is evidence to suggest that the climate is becoming more and more unstable and the weather effects more devastating.

From the above, it becomes imperative that the natural link between drought and poverty, or food insecurity and air pollution, human health and hazards needs to be made clear to legislators and policymakers. Also, national and regional capacity for diagnosis, surveillance and control of other climate-related diseases such as Rift Valley Fever, emergence of highland malaria, re-emergence of trypanosomias including the establishment of a regional early warning system for these epidemics which is well equipped to monitor the weather-related effects based on satellite data thus needs to be built.

Biodiversity

The IGAD region is endowed with rich biological diversity which, if sustainably exploited could literally put the region on the road to prosperity. The biodiversity of the region offers ample opportunities for development, including: ecosystems services; biological products; tourism (especially ecotourism); and trade, bioprospecting and biotechnology. A significant amount of the region's biodiversity is transboundary.

Despite the opportunity biodiversity resources present for the sustainable development of the region, these resources are under increasing threat emanating largely from: habitat loss and degradation; alien invasive species; and legal and institutional weaknesses.

To avoid continued depletion and scarcities of resources including those that are transboundary they need to be carefully managed, regulated and conserved through cross-boundary regional agreements using collaborative natural resource management approaches to enhance or maintain ecosystems function and biodiversity conservation in large-scale natural systems. Opportunities also exist, through various international instruments for the sustainable use and management of biodiversity. Most countries in the IGAD region have prepared National Biodiversity Strategy and Action Plans (NBSAPs) and can be used to share information, build institutions and implement core programmes designed to promote wise use of biodiversity. The re-emergence of large tsetse fly populations in the war ravaged parts of South Sudan and northern Uganda presents a particular challenge in conserving biodiversity.

Marine and Coastal Resources

The IGAD region is endowed with a long ocean shoreline of approximately 11 618 km covering the countries of Djibouti, Eritrea, Kenya, Somalia and Sudan, with extensive and diverse coastal and marine resources. That coastline contains thousands of islands, lagoons, coral gardens and mangrove swamps. In line with the UN

Convention Law of the Sea (UNCLOS) the shorelines have exclusive access to a large Exclusive Economic Zone (EEZ)² with potential for marine fisheries, seaweed harvesting, tourism, mining, and oil and gas exploration.

The coastal and marine environment of the region contains a variety of habitats made up of unique ecosystems that support a rich biodiversity and valuable assortment of natural resources. This array of resources has supported an expansion of social and economic opportunities through enterprises such as fishing, agriculture, aquaculture, tourism and industrial expansion. The NEPAD's priorities for coastal and marine environments include the support and implementation of the Abidjan and Nairobi Conventions and the African Process for the management of Africa's coastal and marine resources. These seek to: control pollution and coastal erosion; promote sustainable use of living resources; promote sustainable management of key habitats and ecosystems; and promote sustainable economic development.

The threats to achieving the potential offered by coastal and marine resources in the region are: impacts of climate change (e.g. the El Nino induced floods); habitat loss and degradation (e.g. tar-balls problem since it is the world's main transport route for hydrocarbons whereby oil tankers pass through the Gulf of Aden, transporting some 590 million tonnes of oil a year); over-fishing and fishing-related damage; silting of estuaries and coral gardens and inadequate investment in coastal zones.

Forests and Woodlands

Right from the mangrove forests in coastal areas to others on the mainland, forests and woodlands play a central role in the fight against poverty and the quest for sustainable development. They provide a range of economic, social, cultural, and environmental functions and services – ranging from biomass energy, timber and non-timber forest products that support livelihoods and trade, to the ecological role they play in mitigating land degradation and climate change among others.

In view of the role forests and woodlands play in poverty alleviation and combating environmental degradation, it is necessary that strategies to enhance the optimum utilization of these resources are implemented. For effective planning and utilization, comprehensive inventories and valuations of forest resources will need to be undertaken. The NEPAD Environment Action Plan emphasizes the protection and sustainable management of Africa's forest resources. The IGAD member states should harmonize policies for the exploitation of their forest resources, and share experiences and lessons on effective management. The main constraints to realizing the full potential of forests and woodlands include: forest loss and degradation; policy, legal, institutional and technical constraints; and invasive alien species. Also, some of the forests are located next to wetlands and open freshwater bodies representing critical water catchments.

Water Resources

The freshwater resources of the IGAD region are made up of surface water, groundwater and open water bodies. The region also has sizeable wetland areas, particularly in Uganda, Ethiopia and Sudan which act as storage for water, and filters for polluted water, among others. Freshwater availability is one of the most

² All countries with direct access to the sea have exclusive use of marine resources found along their coastlines up to 200 nautical miles to the sea (with possibility of a claim to 350 nautical miles). These resources are the waters, seabed, subsoil, and living and non-living things.

critical ingredients for social and economic development. Freshwater and wetland ecosystems support multiple functions ranging from water for drinking, sanitation, agriculture, energy generation, manufacturing, transport, and habitat for species as source of food and trade.

The region is yet to fully maximize the use and management of its water resources. There is still potential for improved water supply for enhanced agricultural production, support of industrialization, provision of safe drinking water, and sanitation and other infrastructure services.

Although five of countries of the IGAD region share one of the greatest rivers in the world, many inequities over this common resource exist and are especially difficult to redress. Studies show that the Nile River Basin has enough water to sustain its population. Furthermore, if rainfall were evenly distributed over the basin, the per capita water share of the basin population would be more than 10,000m³ per capita per year, ten times the water scarcity limit of 1,000 m³ per capita per year downstream. Therefore, this calls for increased cooperation among affected member states, for there is tremendous opportunity and benefits in the exploitation of the Nile Basin water resources. The same argument holds for cooperation in the utilization of the countries' wetland resources and other freshwater bodies in the region.

The state and integrity of the fresh water resources in the region continues to play a major role in the livelihoods of many communities. The role played by freshwater as sources of energy, food and human well-being is a major contribution to national economies. However, knowledge gaps exist in quantitative estimates of the region's freshwater and wetlands resources. Given that the IGAD region is expected to be water-stressed by 2025, there is need to have proper exploration and assessment of its current freshwater reserves so as to better formulate appropriate integrated water resources management plans.

Over-exploitation of water resources in some parts of the IGAD region has led to undesirable effects such as lowering of the water table and saline seawater intrusion.

Agricultural Land

In the IGAD region, agriculture is a predominant activity supported by land of differing capacity and utilizing both manual and mechanical means of production. Land utilization pattern is varied in the region, ranging from only 48% of potentially arable land utilized in Uganda, to 88% in Eritrea, while due to extreme aridity the amount of potentially arable land in Djibouti is negligible. The size of potentially arable land can be increased through irrigation. However, at the moment, less than 1% of the cultivable area in the region is irrigated.

The IGAD region has the potential to utilize its agricultural land resources to feed its people and contribute to the reduction of poverty through an array of interventions. However, the land should not be seen only in the context of agriculture. The region has the chance to utilise the other opportunities provided by land resources such as minerals, tourism, energy and the vast human resources. In terms of agriculture, a key strategy involves the operationalisation of the Business Plan of the IGAD Sub-Regional Action Programme (SRAP) and the IGAD Food Security Strategy.

The threats to achieving the full potential of land resources and ensure food security in the region are: land degradation and desertification; climate variability; hunger and disease; land tenure issues; armed conflict; and unfavourable terms of international trade.

Pastoral Resources

From time immemorial the IGAD region has been characterized by massive population movements pushed by other groups and pulled by the search for better pasture and water resources, among others. A significant proportion of the people in the region are pastoralists – the greatest number being in Sudan. In Ethiopia, about 10-12 percent of the total population is pastoralist. In Djibouti about 20 percent, 33 percent in Eritrea and 70 percent in Somalia. Pastoralists practice transhumance. The livelihood is practiced predominantly in arid and semi-arid lands (ASALs) where pastoralists are able to exploit land and conditions that normally cannot support rain-fed agriculture. ASALs have traditionally been considered almost ‘waste lands’. Yet in a country such as Kenya, two thirds of the livestock population is found in the ASALs. Also, gum arabic, aloe vera and a host of minerals are known to exist in the ASALs. However, neither the resources of the ASALs of the IGAD region are adequately inventoried, nor is there a clear understanding of the environmental consequences and conflicts associated with pastoralism.

Energy Resources

The most predominant source of energy in the IGAD region is biomass, mainly firewood and charcoal. There is an increasing trade in charcoal. Thus governments of the member states have the opportunity to regularize and tax charcoal trade and put in place long-term plans for sustainable production. There are also opportunities for research into efficient charcoal kilns and cooking stoves. However, the current regional picture is one of increasing scarcity of biomass energy. There is thus an urgent need to look at alternatives.

With respect to other renewable energy sources, the IGAD region enjoys regular solar radiation round the year and there is substantial potential for the use of solar energy. For example, the potential for solar energy in Kenya is estimated at 4 to 6 kWh per m² per day of insolation which translates into about 250 million tonnes of oil equivalent (TOE) per day. Yet there is virtually no large-scale, commercial production of energy from solar radiation in the region.

Another significant potential exists with regards to geothermal energy where reservoirs suitable for the generation of power have been identified in the region. If developed, geothermal power can enhance grid reliability and member states can, to some extent, avoid vulnerability to drought and oil price fluctuations. Kenya is the first African country to tap geothermal power in a significant fashion. On the other hand, the geothermal potential of Ethiopia has been estimated at about 4 000 MW. Some of the geothermal reservoirs identified so far are thought to straddle national boundaries. The geothermal resources of the region need to be studied in detail and looked into in a co-ordinated manner. There is need for a complete geothermal energy assessment, and financial support to selected research institutions to pioneer development of geothermal power options within the region.

Oil and gas is another source of energy, which is already exciting the region. Sudan is producing it. Uganda has announced the discovery of oil and gas deposits of commercial quantities. Off-shore exploration of oil and gas is on-going in Djibouti, Eritrea, Kenya and Somalia. Significant discoveries of oil and gas in the region are likely to have profound effects on the economy, environment, and peace and security. The tools required to deal with these challenges need to be developed.

Mineral Resources

From studies of geological formations and limited exploration work that has been carried out so far, there is evidence to suggest that the IGAD region has sizeable mineral deposits, which provide opportunities for sustainable development. Some minerals such as platinum, silver, soda ash, salt, limestone, phosphate, gold, wolfram, marble, copper and zinc are already being mined. Others are also known to occur across national boundaries, which call for regional cooperation in developing these deposits. Notwithstanding the foregoing, greater effort needs to be put into inventorying the mineral resources of the region, building capacity by training mining engineers, and to preparing modalities for transboundary mining operations.

Fisheries Resources

The IGAD region is endowed with both freshwater and marine and coastal fisheries resources. Fishing is a major economic activity especially for those living around the major lakes and rivers of the region. Most of the fish consumed (more than 90%) in the region comes from freshwater resources as distinct from the marine and coastal fisheries. Off-shore and ocean fisheries are also important and are exploited by local people as well as foreign fleets of trawlers. However, by world standards, the per capita consumption of fish in the region is very low.

Both freshwater and off-shore and ocean fisheries harvesting is unsustainable and important species are being lost in the by-catch. For example, uncontrolled fishing for sharks, lobsters and more recently sea cucumbers is a growing concern along the entire Somali coast. There is also an influx of illegal fishing vessels seeking to meet the demands of an ever-growing international fish market. National processes for the development and management of the coastal and marine fisheries resources are inadequate. Freshwater ecosystems face threats from over-exploitation in the fisheries sector as well. For example, the increase of fish catches following the introduction of the Nile Perch in Lake Victoria resulted in the establishment of fish processing plants which fillet the fish mainly for export, thus resulting in increased fishing effort. This rapid increase in fishing effort is posing a threat to the fishery, as there are indications that the maximum sustainable yield has been exceeded. Collaborative efforts of managing Lake Victoria as a transboundary resource by the East African Community are in place and could be replicated for other water bodies in the region. A regional approach to managing the coastal and marine fisheries resources is also in place (PERGSA), but may need to be further strengthened. Of particular concern is the need for a regional initiative aimed at preventing the illegal and unsustainable harvesting of the coastal and marine fisheries resources of the region.

Human Settlements

Approximately 75% of the population of the IGAD region is rural and experiences high rates of growth and unemployment coupled with very limited interventions in terms of land use planning and provision of services. Both the congested settlements in urban areas and often unplanned ones in rural areas call for the need for strategic settlements planning to avoid more problems in the future.

The IGAD member states in general have committed themselves to the provision of adequate shelter and related services for all in line with the MDGs. The population in the region is growing. Planned human settlements offer opportunities to manage the growing population in sustainable ways. Increased construction activities mean employment and enhanced trade in building materials.

Emerging and Re-emerging Issues

Emerging and re-emerging issues may be completely 'new' environmental phenomena or 'old issues' being looked at in a different light. These issues include: peace and security; alien invasive species and genetically modified organisms; and emerging and re-emerging diseases (avian influenza, Rift Valley Fever, HIV/AIDS, and malaria and tuberculosis).

a) Invasive Alien Species (IAS)

IAS are the second greatest cause of biodiversity loss after habitat alteration. While the issues of IAS are not new, there is an emerging awareness of the negative effects and seriousness of the threat they pose both environmentally and economically.

The IAS are a major factor in environmental change in the IGAD region. They contribute to or exacerbate human vulnerability and may negatively impact on certain livelihood and development options. While the adverse impacts of invasive alien species have been widely documented, there has been scant attention paid to some potential opportunities which can be realised from their exploitation. For example, at various stages of its growth, the *Propopsis juliflora* plant can be used as compost, firewood, fencing material and poles.

b) Tsetse fly Infestation

A very serious problem facing the region is also the wide spread impact of Tsetse fly which has rendered agricultural resources of countries unusable. The re-emergence of sleeping sickness in parts of Sudan and northern Uganda is cause for worry, and calls for a regional collaborative effort.

c) GMOs and Biotechnology

Combined with concerns about IAS is the issue of biotechnology. For hundreds of years, people have been practicing biotechnology through fermentation and brewing. The issue of biotechnology to produce GMOs is one of emerging importance not only to the IGAD region but to the whole of Africa, particularly in terms of its opportunities and potential to contribute to the attainment of many of the Millennium Development Goals (MDGs) – poverty and hunger alleviation, trade, sustainable human development, health and sustainable environment management. However, it is a controversial issue. Particularly, when GMOs are viewed as having unexplained risks to human health and the environment despite their potential to solve global food insecurity. The promises presented by GMOs notwithstanding, controversy exists in three main areas: scientific aspects regarding safety to humans and the environment; economic and political/institutional aspects involving the requirement for a comprehensive risk-benefit analysis; and socio-cultural aspects involving food production, food security and livelihood improvement.

As part of its science-led development strategy, the African Union and the NEPAD have set up the African Panel on Biotechnology to guide the continent as a whole to take a common informed approach to address issues pertaining to modern biotechnology and its applications for health, agriculture, industry, mining and the environment. The IGAD and the other regional economic communities have been proactive in spearheading policy guidance for countries on GMO research, production and marketing.

While biotechnology can overcome some of the production constraints that plague the agricultural sector and create new products for health and industrial uses, a lot of work still has to be done in the region to enhance

national research capacity so as to increase the ability of member states to import and adapt agricultural technologies developed elsewhere, to develop applications that address local needs, and to regulate new technologies appropriately. Currently, the region lacks capacity to deal with issues related to biotechnology generally.

Apart from concerns regarding GMOs the region is experiencing or vulnerable to some key diseases that are closely associated with the state of the environment. Four key emerging and re-emerging diseases of relevance to the region are avian influenza, Rift Valley Fever, HIV/AIDS, malaria and tuberculosis. An outbreak of bird flu in the region would have a disastrous effect on the poultry industry; and if the virus changes into a fully transmittable human pandemic virus then the health implications will be enormous.

d) Pandemics

The HIV/AIDS pandemic is considered to be the greatest development challenge facing the human population at the present. While the IGAD region is endowed with environmental assets, which can be utilized to promote development, HIV/AIDS is exacerbating the problems of poverty, regional conflicts and reduced agricultural productivity.

The re-surgence of the old communicable diseases – malaria and tuberculosis – in more virulent forms and in epidemic proportions are contributing to the burden on health and high mortality in the IGAD region. The most vulnerable populations to malaria and tuberculosis are the young segment of the population, pregnant women, and people from areas which previously had no history of malaria and who thus lack immunity.

Trade and Environment

Trade not aid is the new slogan of many developing countries. The reality is that trade is incredibly powerful, with taxes, tariffs, import quotas and subsidies imposed elsewhere affecting opportunities for human well-being and sustainable environmental management in the developing world, the IGAD region included. Liberalized trade measures have led to loss of global market share and substantial income in many African countries including those in the region. The trade situation of African countries is further worsened by the dependence on a very narrow range of primary commodities. For example, within the region, coffee exports alone account for 62 percent of Ethiopia's merchandise export earnings.

Nonetheless there are opportunities for improving the competitiveness of the region with respect to trade. Among others, it can be done through the development of niche markets. The region can benefit from trade in carbon, virtual water, wildlife and promoting fair trade. However, realising these opportunities requires substantial development of the capacity of the member states. It also means increasing the effectiveness with which member states present their positions at global trade negotiations through a regional approach.

Intra and Inter Regional Conflicts

Environmental quality and sustainable natural resources management is a pre-condition for peace, security and development. One of the approaches that IGAD is promoting is Community Based Natural Resources Management (CBNRM) for the joint management of environmental resources. It is a strategy for creating a climate of cooperation and promoting and maintaining peace, whose dividends are already known – allowing

for investment in various sectors, implementation of environmental programmes and the development of science and technology.

Summary

Finally, *Table 2* shows a summary of asset values and key opportunities by thematic areas; while *Table 3* shows the summary of issues and threats.

Table 2: Summary of Asset Values and Key Opportunities by Environmental Themes

Theme	Asset Value	Opportunity
Atmosphere	Potential for new and renewable sources of energy, as a driver for economic development, and modification of ecosystems	<ul style="list-style-type: none"> ❖ Renewable energy resources ❖ Rainwater harvesting ❖ Potential to support science and technology
Biodiversity	Extensive reserve of biological resources	<ul style="list-style-type: none"> ❖ Ecosystem services ❖ Biological products ❖ Tourism and ecotourism ❖ Trade, bioprospecting and biotechnology
Coastal and marine	Existence of extensive and diverse coastal and marine resources and a long coastline with a large Exclusive Economic Zone	<ul style="list-style-type: none"> ❖ Biodiversity for food security and livelihoods ❖ Tourism development ❖ Mining and energy potential ❖ International maritime industry and coastal development ❖ Provision of marine ecosystem services
Forests	Forest and woodland resources for use as energy, food, timber and non-timber products and potential for wealth	<ul style="list-style-type: none"> ❖ Energy provision ❖ Timber and non-timber products ❖ Provision of ecological services
Freshwater and wetlands	The extensive surface and groundwater resources and the ecosystem services and resources for human use	Land as a factor of production and wealth
Agricultural land and food security	Land as a factor of production and wealth	<ul style="list-style-type: none"> ❖ Land for agriculture and agricultural expansion ❖ Trade, markets and food security ❖ Science and technology ❖ Unexploited mineral potential ❖ Opportunities for geothermal energy ❖ Tourism ❖ Integrated land use planning ❖ IGAD agriculture and environment programme
Human settlements	Existence of shelter with human resources for human welfare and services, space, labour, markets, and infrastructure	<ul style="list-style-type: none"> ❖ Opportunity for planned settlement ❖ Social, economic and cultural exchange ❖ Centres for easy communication and joint use of infrastructure

Table 3. Summary of Issues and Threats in the IGAD Region

Thematic Areas	Issues and Threats
1. Land	Drought, desertification, population pressure, land pressure, land clearing and degradation, soil erosion, invasive species, sand dunes, land mines
2. Wetlands and Water	Increasing demand for domestic, irrigation, industrial, urban use, overstocking, pollution, sedimentation, invasive species
3a. Biodiversity	Overuse, land clearance, pollution, climate change, invasive species, management capacity
3b. Forests	Deforestation, woodland conversion, unsustainable harvesting, climate change, decrease in natural forests, poverty, political pressure, invasive species, pollution
3. Invasive Species	Extinction of native species, affects economic activities like transport, impacts ecosystems and industries and agriculture, management capacity
4. Coastal and Marine Ecosystems	Coastal erosion, clearing for agriculture, flooding and siltation, pollution, human activities and dumping of wastes, climate change, invasive species
5. Climate Change	Coral reef bleaching, melting glaciers, sedimentation, rising sea levels and flooding, advantage to invasive species, a risk to delicate species unable to adapt to change, health, socio-economic
6. Cross border Management	Lack of dialogue across political borders, unplanned upstream activities affects downstream, cooperation, capacity to manage
7. Biosafety, biodiversity and plant genetic resources	Pollution, species extinction, trade issues, intellectual property rights, climate change, GMOs, ABS, technology transfer
8. Ecosystem services	Ecosystem functions, processes, goods, benefits, valuations, value in economic planning
9. Land tenure and access	Mixed tenure, uncertain tenure, tenure preventing access, uneven access, ABS
10. Gender mainstreaming	Gender issues needed in all aspects of environmental management
11. Waste dumping and pollution	Toxic wastes dumped at sea, on coasts, POPs, toxic waste disposal
12. Conflicts	General degradation of environment, overuse of natural resources by local, transient and refugee people as well as returnees after conflict
13. Trade and Environment	Market forces causing unsustainable natural resource use, movement of species including IAS, pollution
14. Natural disasters	Floods, droughts, storms, earth movements and sea changes, tsunamis
15. Nile Basin	Water use allocation, proposal for water diversions, watershed pollution and agricultural chemicals, invasive species
16. Lake Victoria	Population pressures, pollution from raw sewage, eutrophication of lake, invasive species, over-fishing, watershed mismanagement
17. Pastoralism	Excessive livestock numbers, water and pasture scarcities and conflicts with agricultural communities

NEPAD 2006. *A sub-Regional Environment Action Plan for Eastern Africa (2006)*

2.2 Evolution of Strategy Development

Joint efforts of the IGAD countries to coordinate their activities in environment and natural resources management date back to the beginning of the eighties. This resulted out of the conviction that sustainable environment protection and natural resources management builds the basis for an improved food security and economic growth in the region. The countries therefore agreed to intensify their environment protection and natural resources management activities both at national and regional levels. In this regard, they also requested the UNEP Governing Council in 1983, together with other African Governments, to convene an African Environment Conference to discuss national environmental priorities and to identify common problems worthy of a Regional Programme of Action. This led to the formation of the African Ministerial Conference on Environment (AMCEN) in 1985.

In 1986, six countries of the Horn of Africa created the first generation of IGAD, (the then Intergovernmental Authority on Drought and Development, IGADD). Its main objective was to coordinate efforts of member states to combat drought and desertification and mitigate their consequences. Programmes and projects were identified and developed to counteract drought and desertification. At its creation, the conviction of these countries that desertification can be effectively combated through development led to the evolvement of the Intergovernmental Authority on Drought and Development (IGADD). However, the severity of the drought and the resultant famine in the nations of the region, forced IGAD to give priority to the development and implementation of Early Warning and Food Information Systems both at national and regional levels.

Development programmes and projects were conceived to address regional and national concerns in the areas of Food Security and Environmental Protection. An assessment of the state of environment and natural resources was undertaken in each of the IGAD member states. An IGAD Forum on Environment Protection and the Development of Regional Strategy to Combat Desertification was held in Nairobi, Kenya in 1990. Following this Forum, the member states issued the Nairobi Declaration on Environmental Protection and Development of an IGAD Strategy to Combat Desertification.

The rationale and justification for such a strategy was the increase in awareness of the member states that primary production from land is central to the economies of all the countries and that the dry- and the sub-humid lands are in danger of degradation. The objectives of the strategy were to:

- ❖ *Achieve optimal and sustainable use of the natural resources of the region through regional and natural resources programmes and guidelines, aimed at wise land use practices, protection of vulnerable ecosystems, public awareness, popular participation and institutional capacity building; and*
- ❖ *Maximize the use of the resources allocated for the region through regional and international cooperation.*

After the development of the Environment Protection Strategy, IGAD had been preoccupied in the implementation of some of its elements and components, based on the availability of funds and the requisite expertise. Some of the programmes and projects developed, and partially or totally implemented, included – reforestation projects to control erosion in some member states, off-farm employment projects, projects on alternative sources of energy, development of a Water programme, especially the elaboration of a project

proposal on management of selected shared water resources, development of a Fisheries Programme, development of an Environment Information System as a basis for a continued environmental assessment and monitoring and follow-up and development of regional and international Conventions such as the Convention on Biological Diversity.

Despite some achievements in the implementation of the above programmes/projects, the implementation of the IGAD Environment Protection Strategy in its totality and in a holistic view was not achieved. This was mainly because of the lack of the requisite resources, both financial and skilled human resources. Inadequate infrastructure and the difference in political doctrine and economic policies in the member states also proved to be some of the main constraints. These and other issues and concerns combined with the emergence of new economic and political atmosphere in the region led to a new thinking and development approach, which in turn led to the revitalization of IGAD in 1996. Annex 1 show examples of achievements by the member states based partly on the 1990 IGAD Environment Protection Strategy.

In 2003, IGAD adopted its current Strategy and an Implementation Plan. In the Strategy, the vision statement is for IGAD to be the premier regional organization for achieving peace, prosperity and regional integration in the IGAD region. The mission statement is to assist and complement the efforts of the member states to achieve, through increased cooperation: (a) food security and environmental protection; (b) promotion and maintenance of peace and security and humanitarian affairs; and (c) economic cooperation and integration. The Strategy identifies three strategic objectives.

These are to:

1. Assist the member states ensure that the people of the IGAD region have access to sufficient and nutritious food at all times while protecting the natural resource base and the environment.
2. Promote peace and stability in the IGAD region and address humanitarian needs of the people.
3. Promote regional economic cooperation and integration in the IGAD region.

The IGAD Strategy has four core outputs, namely:

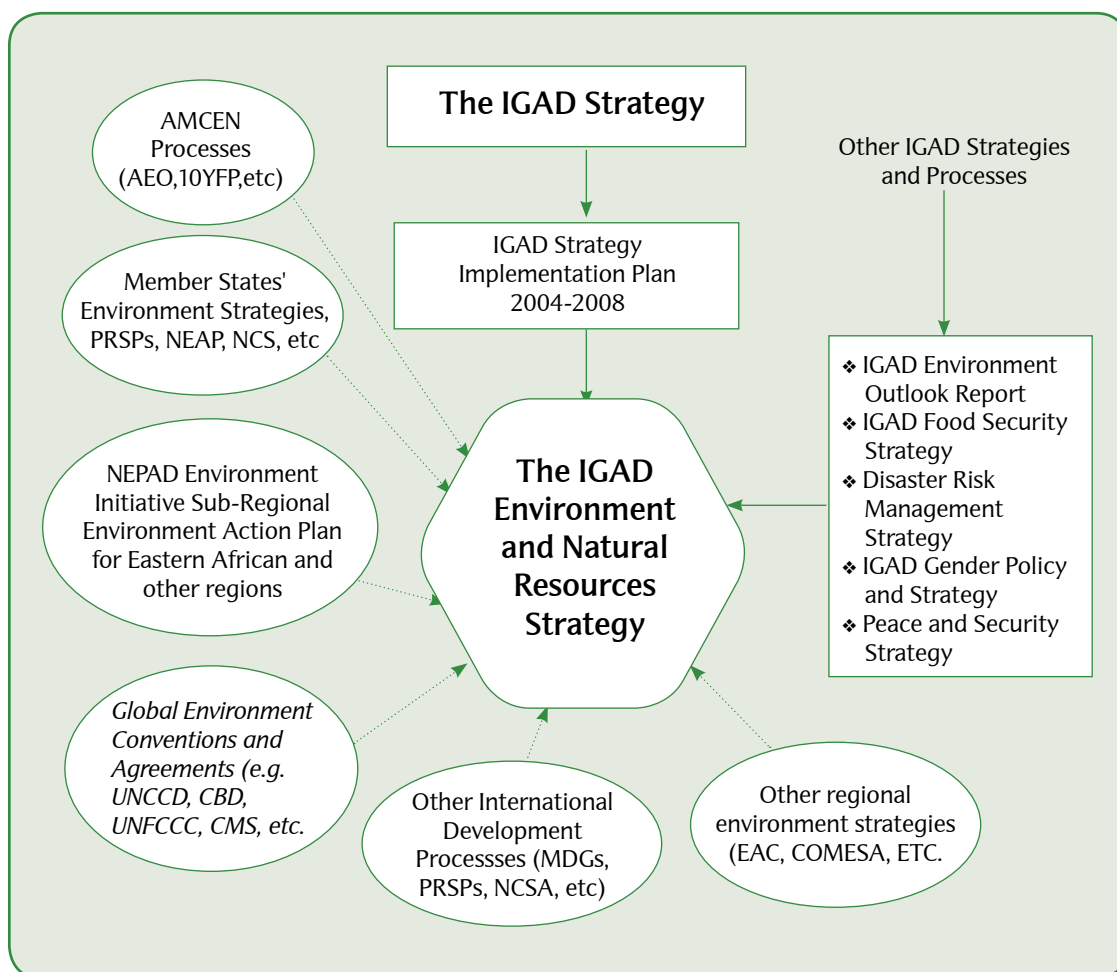
- ❖ Appropriate development policies (promoting compatible policies in the IGAD priority areas, and developing strategies and concepts of regional relevance);
- ❖ Development information (recognizing information as a strategic resource, which when appropriately tapped and shared can accelerate sustainable development for the region);
- ❖ Capacity building (transfer of the skills the IGAD Secretariat has acquired to member states, and building the capacity of the Secretariat); and
- ❖ Research, science and technology agendas (recognizes that technology is a key to development and all IGAD countries are making every effort to generate and adapt new technologies to improve agricultural production, natural resources management and environmental protection among others).

3. The IGAD Environment and Natural Resources Strategy

3.1 Introduction

The IGAD Environment and Natural Resources Strategy derives directly from the IGAD Strategy of 2003 and its accompanying Implementation Plan (2004-2008). Efforts have also been made to link the strategy with other IGAD strategies and processes such as – those of food security, gender, peace and security and the Environment Outlook, among others. In addition, the strategy is significantly influenced by the regional and international development processes (see Figure 2).

Figure 2. IGAD Environment and Natural Resources Strategy and its Links with other strategies and processes



In preparing the Strategy, views were collected from six of the seven IGAD member states – Djibouti, Eritrea, Ethiopia, Kenya, Sudan and Uganda. Somalia could not be accessed. Discussions were held with a total of 84 national experts and government senior officials. Consultations were necessary because the strategy formulation process recognized that the countries have their own environmental initiatives and activities at the national level and that the role of IGAD is to make value added incremental contributions to these efforts by focusing on those interventions best carried out at the regional level. Nonetheless, the environment strategies and action plans, national poverty reduction strategies (PRSPs) and poverty eradication action plans (PEAPs), national capacity self-assessments (NCSAs) and national conservation strategies (NCSs) of the member states, among others, helped better focus the formulation of this Environment and Natural Resources Strategy.

The New Partnership for Africa’s Development (NEPAD) has a number of outputs which were of great value to the strategy formulation process. These include: the NEPAD Environment Initiative and its Capacity Building Action Plan; and the NEPAD Sub-Regional Environment Action Plan (SREAP) for Eastern Africa.

Furthermore, the IGAD countries are signatories to, and have ratified a number of regional and multilateral environmental agreements (MEAs) and conventions which to varying degrees provide for regional and sub-regional approaches to implementation. Of particular significance are the: United Nations Convention to Combat Desertification (UNCCD), United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Convention on Biological Diversity (CBD). The status of accessions of the IGAD member states to the selected regional and international instruments is shown in Table 4.

Table 4. Accession to Key International Conventions/Agreements by IGAD Countries

Country	CBD	UNCCD	UNFCCC	CITES	CMS	Ramsar
Djibouti	✓	✓	✓	✓	✓	✓
Eritrea	✓	✓	✓	✓	✓	✓
Ethiopia	✓	✓	✓	✓	-	(almost)
Kenya	✓	✓	✓	✓	✓	✓
Somalia	✓	✓	✓	✓	✓	-
Sudan	✓	✓	✓	✓	-	✓
Uganda	✓	✓	✓	✓	✓	✓

Source: NEPAD. 2006. A Sub-Regional Environment Action Plan for Eastern Africa

Other international development processes such as Agenda 21, the Johannesburg Plan of Implementation (IPOI) of the World Summit on Sustainable Development (WSSD), and the Millennium Development Goals (MDGs) were also consulted during the formulation of the IGAD Environment and Natural Resources Strategy.

Finally, the Strategy gave cognizance to the fact that member states also belong to other regional and sub-regional groupings hence the need for harmonization of approaches to environmental management. Key among the groupings are: the East African Community (Kenya, Uganda); Nile Basin Initiative (Eritrea, Ethiopia,

Kenya, Sudan and Uganda); and the Common Market for Eastern and Southern Africa (COMESA) to which all IGAD countries belong.

3.2 Overall Goal

The overall goal is to *assist and complement the efforts of the member states in environment and natural resources management.*

This will be done by promoting:

- ❖ Harmonization of compatible environmental governance systems;
- ❖ Provision of reliable, timely and readily available environment and natural resources data and information;
- ❖ Capacity building for environment and natural resources management; and
- ❖ Research into and adoption of new, appropriate and affordable technologies.

3.3 Guiding Principles

The operationalization of the IGAD Environment and Natural Resources Strategy will be guided by the following principles:

1. A large part of the IGAD region is arid or semi-arid, fragile ecosystems with unreliable rainfall patterns. Hence, environmental management in general, and drought and desertification in particular, will continue to require significant efforts of the member states and the IGAD Secretariat.
2. Environment is one of the pillars of sustainable development. To achieve true sustainable development, the three pillars of sustainable development – economic, social and environmental pillars – must be well integrated, in the spirit of Agenda 21.
3. Adherence to the principle of subsidiarity, which requires that decisions and actions are taken at the most appropriate level possible in the hierarchy. Thus, actions should be taken at the regional level by IGAD if it is agreed that the actions of individual member states are insufficient.
4. Responsive to the MDGs, PRSPs and other Multilateral Environment Agreements and Treaties
5. Subscription to the principle of variable geometry, which recognizes that member states are at different levels of development and move at different speeds and constellations depending on their priorities.
6. Adherence to the principle of gender sensitivity and equity.
7. IGAD programmes should be derived from national programmes and the two should neither be parallel nor competitive but synergistic. Hence IGAD programmes should be budgeted and resources sought for at each of the appropriate levels.
8. Member states have their own national policies, strategies, laws and regulations, and plans, programmes and projects. Line Ministries and other national institutions have the responsibility to implement them.

IGAD's role will be to work on the basis of national priorities and will only move in or contribute into, if significant value addition can be expected.

9. Flexibility and dynamism are two important characteristics of any effective strategy in the context of fast changing conditions in the IGAD region as well as in the regional and global environment.
10. Adherence to the pre-cautionary principle.
11. Promotion of integrated environment and natural resources management for sustainable development.
12. Adherence to the polluter pays principle.

3.4 Strategic Objectives and Outcomes

Strategic Objective 1: To improve the framework for environmental and natural resources governance in the IGAD region.

Outcome 1.1: The process of harmonizing environment and natural resources policies supported and led.

The IGAD member states continually update/develop and pursue various policies and strategies in order to create conducive conditions and frameworks for sound environmental and natural resources management. These include national environment action plans (NEAPs), national strategies for sustainable development (NSSDs), and sectoral policies, strategies and action plans (water, forests, land, wetlands, etc.). The IGAD's role will continue to be efforts that will lead to the development of these instruments at the national level which will in turn allow for cross-border harmony. The environment policy issues of regional relevance pertain to strategic areas of cooperation in the region. It is the role of IGAD to initiate, support and lead the process of harmonizing environment and natural resources policies. This responsibility envisages the identification of relevant fields together with the member states, carrying out policy studies, proposing policy options to countries and providing a regional forum for discussion and advice on the mechanisms for the implementation of the policies. The approach allows for the promotion of compatible policies; and the development of strategies and concepts of regional relevance.

Outcome 1.2: Awareness creation promoted and the process of developing appropriate strategies and concepts in transboundary resources management supported and guided.

A significant amount of the natural resources in the IGAD region occurs across national borders. These transboundary natural resources include: ecosystems, wildlife populations and below-ground resources such as minerals, oil and gas, geothermal energy and groundwater aquifers. There is ample evidence to show that there is a weak level of cooperation in the management of transboundary natural resources. IGAD will assume the role of promoting awareness creation and supporting and guiding the process of developing appropriate strategies and concepts. This includes identifying the root causes of the problems, carrying out regional studies, organizing forums for discussion and exchange of ideas and development of concepts. Once the concepts are developed, the member states will translate them into programmes and implement them.

Outcome 1.3: Member states assisted to comply with the provisions of, and benefit from, the international instruments.

When the 1990 IGAD Environment Protection Strategy was produced there were a number of multilateral environmental agreements (MEAs) in place. However, from 1992 onwards, additional MEAs have been introduced. Some of these, especially the three Rio Conventions (UNFCCC, UNCCD and CBD) have become important avenues for financing environmental management.

Policy Strategic Actions

Outcome 1.1: The process of harmonizing environment and natural resources policies supported and led

- 1.1.1 Develop protocols for regional collaboration in the areas of joint control of alien plant and animal species, locusts, grasshoppers, the abnoxious water weeds, tsetse fly infestation, disaster preparedness and response plans; and pastoralism.
- 1.1.2 Develop manuals for mainstreaming cross-cutting issues (environment, gender), into development plans, programmes and activities of Member States.
- 3.3.3 Develop a framework for the use of community bye-laws as a tool for transboundary resources management including quarantine and transboundary transport of flora and fauna.

Outcome 1.2: Awareness creation promoted and the process of developing appropriate strategies and concepts in transboundary resources management supported and guided

- 1.2.1 Promote the development of ecosystems approaches to environment and natural resources management and the establishment of region-level river basin organisations where these do not exist.

Outcome 1.3: Member States assisted to comply with the provisions of, and benefit from, the international instruments

- 1.3.1 Promote the domestication of MEAs; and synergistic approaches and harmonised reporting for the Rio Conventions, and assist Member States in the implementation of the provisions of the African Convention on the Conservation of Nature and Natural Resources, together with effective participation at international fora.
- 1.3.2 Assist Member States with coastlines to put claims for extension of the Continental Shelf from 200 to 350 nautical miles by facilitating assessment of off-coast resources.
- 1.3.3 Develop a model policy on the transfer and exchange of information and technology that also addresses the issue of intellectual property rights (IPRs) and patents.

The 1968 Algiers Convention has also been revised and re-named 'The African Convention on the Conservation of Nature and Natural Resources'. Further, there are other regional agreements such as the Nairobi Convention for the Protection, Management and Development of Marine and Coastal Environment of the Eastern Africa Region as well as various regional agreements and protocols under the global international conventions like the Jakarta Mandate of the Convention on Biological Diversity.

The Conventions are simply too many (over 250 at last count) and IGAD countries like other Contracting Parties are having tremendous difficulties meeting the reporting requirements of the agreements. Domesticating

these international agreements provides another challenge; and so does meeting the requirements for accessing financial and technical assistance. Thus, IGAD has a pivotal role to play in assisting its member states comply with the provisions of, and benefit from, the international instruments.

Strategic Objective 2: To develop information required for sound environmental and natural resources management in the IGAD region and make it readily available.

Outcome 2.1: Environmental and natural resources information at the regional level provided.

In general, information is a strategic resource and so are environmental data and information. IGAD will provide environmental and natural resources information at the regional level. This will include information on transboundary natural resources, emerging and re-emerging issues, natural disasters, and early warning. Key emerging and re-emerging issues for which information is critical are: conflicts and insecurity; invasive alien species and genetically modified organisms (GMOs); and HIV/AIDS, malaria, tuberculosis, tsetse fly infestation and bird flu; and international trade among others. These issues have the potential to cause environmental disasters and bring about untold human suffering in the region.

Outcome 2.2: Timely exchange of environmental and natural resources information promoted.

Drought events are common occurrences in the IGAD region. Floods mainly induced by the El Niño phenomenon have occurred periodically; and so are the occurrences of earthquakes. Whenever these disasters strike, there are urgent calls for international assistance. While soliciting for international support is partly the result of meager resources at the disposal of member states, it also demonstrates clearly the low level of preparedness and the very short lead times countries have by way of forewarning. IGAD will promote timely exchange of environmental and natural resources information; and disseminate the philosophy behind the establishment of environmental natural resources information systems.

Environmental and Natural Resources Information Strategic Actions

Outcome 2.1: Environmental and natural resources information provided at the regional level

- 2.1.1 Carry out regional inventories of greenhouse gases, dust storms, surface and groundwater resources and transboundary mineral deposits, and promote mapping and analysis (remote sensing, GIS, digital elevation models and water quality).
- 2.1.2 Establish regional networks for information collection, analysis and exchanges (for example strengthening electronic communication and networks for the collection and dissemination of real/near real time information within Member States and the IGAD Secretariat) on emerging and re-emerging issues, disasters, hydrological networks and facilities.
- 2.1.3 Develop and disseminate environmental and natural resources education and awareness programmes for CSOs and the private sector.
- 2.1.4 Establish databanks and meta-databanks and information systems for environmental management in the region including the development of a regional integrated environmental information system and establishment of a clearinghouse mechanism.

Outcome 2.2: Timely exchange of environmental and natural resources information promoted

- 2.2.1 Facilitate exchange of ideas, lessons and experiences of the Member States in developing local environment action plans (LEAPs) and document community coping mechanisms in drought-prone areas.
- 2.2.2 Build the capacity of Member States' public libraries and government documentation centres in order to improve accessibility to and availability of nationally generated information resources for use in decision making.

Strategic Objective 3: To enhance the capacity of member states for improved environmental and natural resources management in the IGAD region.

Outcome 3.1: The capacity of member states and IGAD staff in the use of environmental assessments, crucial for promoting regional cooperation built.

Over the years, the IGAD Secretariat and its staff have acquired the necessary skills in methods and techniques crucial for promoting regional cooperation in environmental and natural resources management. These include guiding processes for formulating policies, concepts, negotiations, concluding agreements, organization and facilitation of workshops, regional project cycle management, etc. A major effort will be transferring these skills to relevant/concerned persons in the IGAD countries – so that they can act as catalysts in these fields thereafter. At the same time, the capacity of the IGAD Secretariat and the skills of its staff will be enhanced to efficiently and effectively carry out their responsibilities. Hence, the capacity of member states and IGAD staff in the use of environmental assessments, crucial for promoting regional cooperation, will be built; and so will their capacities to put in place suitable incentive measures and appropriate fiscal regimes. The latter is necessary because throughout the IGAD region, systems of national accounts (SNAs) of the member states

portray natural resources as contributing meager percentages to the respective countries' gross domestic products (GDPs). The main reason is that a large part of the goods and services provided by the region's environment and natural resources are not counted in the SNAs. Consequently, policymakers often provide inadequate budgetary provisions for environment and natural resources management. Furthermore, the low valuation of the environment and natural resources sector means that other land uses often out-compete the former for utilization options.

Outcome 3.2: Suitable incentives and disincentives measures to complement regulatory enforcement identified.

In most IGAD countries, the revenues that governments receive from the utilisation of natural resources are based on some arbitrary 'royalty' figure or percentage. The amounts paid to governments are often nowhere near the true economic values of these resources. Furthermore, the sharing of even the little that is received by government with the communities where the resources occur – derivation funds – is almost non-existent, or sub-optimal, indicating very low level of governance in environment and natural resources.

While the IGAD member states have developed fairly comprehensive laws and regulations governing environment and natural resources management, degradation still occurs due to the low level of enforcement of the laws. The task/process of enforcement is quite expensive and member states may not have the wherewithal to support it. Therefore, there is urgent need to identify suitable incentives and disincentives measures to complement regulatory enforcement.

Outcome 3.3: A more focused forum targeting the environment and natural resources of civil society organisations and non-state actors established.

The capacity of the member states and the IGAD Secretariat will be further enhanced through the involvement of civil society organisations (CSOs) and the private sector. CSOs have an important role to play in environmental and natural resources management. For one, many CSOs especially national non-governmental organisations (NGOs) and community-based organisations (CBOs) have strong ties with rural communities. Many are involved in the implementation of environment and natural resources management activities at the local levels. Some of the CSOs are able to solicit funds from external sources for interventions. It is based on these comparative advantages that the IGAD Strategy of 2003 stated that: civil society organisations and non-state actors will be given a bigger role to play in the IGAD development initiatives. To this end, an IGAD CSO and NGO Forum has been established in line with the Khartoum Declaration of the Heads of State and Governments in 2004. The IGAD CSO and NGO umbrella forum covers a wide area embracing all the strategic interventions of the IGAD. There is, therefore, a need to establish a more focused platform targeting environment protection and natural resource conservation.

Right from the Earth Summit in 1992, the important role that the private sector can play in environmental and natural resources management was recognised as elaborated in Agenda 21. Many activities of industries and businesses have potentially adverse impacts on the environment and ought to be mitigated. Voluntary compliance mechanisms would reduce the costs of monitoring and ensuring compliance with environmental laws and regulations. The private sector can also become an important source of capital for the development, adaptation and adoption of environmentally friendly technologies in the energy sector and in waste management, among others.

Capacity Building Strategic Actions

Outcome 3.1: The capacity of Member States and IGAD staff in the use of environmental assessments, crucial for promoting regional cooperation built.

- 3.1.1 Promote the use of economic instruments in efforts to better manage biodiversity (conservation, sustainable utilisation and equitable sharing of benefits).
- 3.1.2 Carry out natural resources accounting and valuation studies to show the impacts of environmental degradation and the true economic value of environmental resources in the IGAD region.
- 3.1.3 Carry out a review of environment and natural resources fiscal regimes in the IGAD region (including the development of suitable models of derivation funds to benefit communities of origin and expand revenue sources for local governments) with a view to sharing lessons learnt and success stories, and identification of critical gaps.
- 3.1.4 Develop methodologies for national domestication of the provisions of key MEAs and regional conventions, and assist Member States in accessing financial and technical assistance (especially funds from the Clean Development Mechanism, Sustainable Land Management and other processes) for the implementation of NBSAPs, NAPAs, NAPs, NCSAs and other initiatives.

Outcome 3.2: Suitable incentives and disincentives measures to complement regulatory enforcement identified.

- 3.2.1 Develop guidelines for promoting private sector voluntary compliance in environmental matters and establish an IGAD Environment/Private Sector forum.
- 3.2.2 Assist Member States to build national capacities for monitoring, prediction and timely early warning including the strengthening of oil spills management and contingency capabilities.
- 3.2.3 Strengthen regional and integrated approach to natural resources management including the management of water resources and toxic wastes.
- 3.2.4 Develop capacity to plan, implement and monitor integrated ecosystem (landscape and seascape) and biodiversity management at national and local levels.
- 3.2.5 Establish a facility or other modalities for mineral development capacity building at regional level (e.g. facility for training mining engineers).

Outcome 3.3: A more focused forum targeting the environment and natural resources of civil society organisations and non-state actors established.

- 3.3.1 Create and co-ordinate regional centres of excellence for environmental research, ICT development and management information and establish an IGAD Forum of Experts to address the different aspects of environmental management.
- 3.3.2 Increase the role of CSOs (NGOs, CBOs, unions, faith-based organisations and independent media) in environment and natural resources management including emerging issues and institute an IGAD Environment/CSO forum.

Strategic Objective 4: To enhance the capability for environmental and natural resources research and development in the IGAD region.

Outcome 4.1: Research agendas identified and the creation of linkages and networks in the area of environment and natural resources management facilitated.

Technology is an indispensable key to development. All IGAD countries are making every effort to generate and adapt new technologies to improve environment and natural resources management, among others. However, Research and Development and Demonstration (RDD) is an expensive undertaking. There are considerable benefits when countries pool their meager resources and collaborate in their research efforts. IGAD is particularly well placed in identifying research agendas and facilitating the creation of linkages and networks in the area of environment and natural resources management. Also IGAD is well placed in identifying appropriate research agendas in the area of environment and natural resources management with the objective of promoting the importation, adoption or adaptation of new and appropriate technologies for the improved management of the environment and natural resources in the region.

Outcome 4.2: The capacity of the member states for accessing potential incremental financial resources built.

Budgetary constraints of the IGAD countries have traditionally meant insufficient funds allocated for environment and natural resources management. Fortunately, the traditional approach to financing environment and natural resource interventions from the resources of development partners is beginning to change, although very slowly. For example, some member states such as Sudan are beginning to allocate/commit more domestic resources for environment and natural resources management. For the majority of the countries though, external financial resources remain a vital source.

There are opportunities for realizing greater financial resources domestically from the region's natural resources. For example, member states are yet to benefit significantly from the emerging carbon market and other ecosystems services. Also, the IGAD countries are having difficulty in accessing financial resources through the Clean Development Mechanism (CDM) of the Kyoto Protocol of the United Nations Framework Convention on Climate Change. Furthermore, additional resources can be accessed from the provisions of the other multilateral environmental agreements such as the CBD and UNCCD. However, once again, the IGAD region has not received its fair share of the available financial resources from existing environmental instruments and facilities.

The constraints to accessing potential incremental financial resources are largely technical and can to a large extent be overcome by building the capacity of the member states.

Research and Technology Strategic Actions

Outcome 4.1: Research agendas identified and the creation of linkages and networks in the area of environment and natural resources management facilitated.

- 4.1.1 Popularize the use of the IGAD Crop Production System Zone (CPSZ) as the entry point for environmental and natural resources management interventions, and document the plant resources of the ASALs.
- 4.1.2 Assess the mini and micro hydro, geothermal, solar, tidal wave and wind energy potential and identify other alternative renewable energy sources (e.g. biofuels).
- 4.1.3 Develop a regional programme for the recognition, prevention and management of invasive alien species in different habitats (terrestrial, aquatic and marine); and research into the feasibility of turning some of the invasive alien species into useful products, and encourage the restoration of degraded ecosystems.
- 4.1.4 Establish regional research and technology incubation centres, allocating different thematic areas to the Member States on the basis of their comparative advantages, and promote the transfer, acquisition, adaptation and development of appropriate technologies such as water harvesting techniques.
- 4.1.5 Develop new models to analyse climate change issues (such as impact and integrated models) including the biodiversity resources of the IGAD region.
- 4.1.6 Assist Member States to carry out soil nutrient mapping and research into water scarcity and water stress issues including the development of water security strategy.
- 4.1.7 Share research findings, through among other things, multi-disciplinary publications and regular meetings.
- 4.1.8 Assess the extent of, and develop a strategy to halt, the loss of agricultural genetic resources in the IGAD region.

Outcome 4.2: The capacity of the Member States for accessing potential incremental financial resources built.

- 4.2.1 Develop methodologies, tool-kits and approaches for realising financial benefits from the ecosystems services provided by the region's natural resources and how some of the finances realised can be used to partly fund a regional environment endowment fund including carbon trade.
- 4.2.2 Develop tools, methods and approaches for integrating environment and natural resources values into decision making and management practices, and review taxation regimes in Member States identifying opportunities for introducing and/or amending national environment taxes

4. Implementation Framework

The implementation of the IGAD Environment and Natural Resources Strategy will draw its strength; firstly from the main IGAD Strategy. Secondly, implementation will be based on the overall IGAD vision and mission; and on the overall goal, strategic objectives and outcomes of the Environment and Natural Resources Strategy. It will also serve as a motivational source for member states to strengthen their cooperation in realising the region's development aspirations. Key issues of implementation are: the operationalization of the Strategy; institutional arrangements; resource mobilization; and monitoring and evaluation as a means of assessing performance.

4.1 Operational Planning

In order to implement the Environment and Natural Resources Strategy, the IGAD Secretariat will develop a 10-Year Implementation Plan and detailed annual operational plans. Also, specific protocols and/or Memoranda of Understanding (MoUs) for implementing different elements of the strategy will be developed and presented for approval by the IGAD political organs, that is: the Council of Ministers and the Summit.

4.2 Institutional Arrangements

Successful implementation of the Environment and Natural Resources Strategy can only be realized through the concerted effort of the IGAD member states, the Secretariat and the partners in development. Also, within the Secretariat strong inter-sectoral linkages will be required for successful implementation.

4.2.1 Member States

The successful implementation of the Environment and Natural Resources Strategy will very much depend on the prevailing conditions in the member states and to some extent the effectiveness of the National Focal Points in communicating the requirements of the IGAD Secretariat to national implementing institutions. To a large extent, the institutional framework for environmental management exists in the member states – environment agencies/authorities, policies, and laws and regulations. This enabling environment will facilitate the implementation of the Strategy. Notwithstanding the foregoing, it is also true that individuals selected from the National Focal Points to represent the interests of the IGAD Secretariat are often over-loaded with their other assignments. Hence a new modality – such as having IGAD national officers may be required to enhance the effectiveness of implementation at the national level if resources can be procured to support the offices.

4.2.2 IGAD Secretariat

Besides providing technical and advisory services to member states, as advised in the IGAD Strategy, the primary role of IGAD in implementing the Environment and Natural Resources Strategy will be coordination, facilitation and advocacy throughout the implementation process. IGAD will carry out activities aimed at implementing the Environment and Natural Resources Strategy drawing upon: its institutional set-up; criteria

for selection of regional interventions; facilitative process; focused programmes and outputs; and support to and use of Regional Centres of Excellence (RCEs).

The IGAD Secretariat has a lean structure at the moment. This lean structure is augmented by external capacities IGAD can draw on. However, considering the expanded role called for in the new Environment and Natural Resources Strategy, there is a need to review the structure of IGAD. The current Division of Agriculture and Environment will be too small to handle the proposed interventions, even if in a coordination, facilitation and advocacy role. The successful implementation of the Environment and Natural Resources Strategy will, therefore, require creating a separate Division of Environment and Natural Resources and the recruitment of at least two additional staff to the new division – one for Environment and the other for Natural Resources.

4.2.3 Inter-Sectoral Linkages

Activities of a number of sectors within the IGAD Secretariat support or are related to environment and natural resources management. These sectors will also contribute significantly to the successful implementation of the Environment and Natural Resources Strategy.

The three programmes under the Agriculture and Environment Sector are closely inter-linked as they all draw on the same natural environment, and actions in one programme area have direct effect on the other. Similarly, activities under the Political and Humanitarian Affairs Sector show a close inter-dependence. Conflicts and civil strifes can lead to environmental crises. Also, the successful implementation of the early warning programme in the pastoral areas will go a long way in promoting sustainable management of the natural resources. Disaster management programmes are in many cases the result of environmental degradation. Hence recognition of inter-sectoral linkages will facilitate the successful implementation of the Environment and Natural Resources Strategy.

4.2.4 Strategic Partnerships

The successful implementation of the Environment and Natural Resources Strategy will also to a certain degree depend on the extent to which the IGAD can draw upon external capacities through strategic alliances and partnerships. The IGAD works with many regional and international institutions. Those directly concerned with environment and natural resources management include the IGAD Partners Forum (IPF/PIC), the United Nations System and other relevant international and regional organisations.

The East African Community (EAC) – is an inter-governmental organization bringing together the three governments of Kenya, Tanzania and Uganda³. The EAC is addressing the sustainable management of transboundary natural resources, including Lake Victoria.

The Nile Basin Initiative (NBI) – is an inter-governmental transitional arrangement to address problems within the basin. Five of the seven IGAD countries (Eritrea, Ethiopia, Kenya, Sudan and Uganda) are members of the NBI.

The African Ministerial Conference on the Environment (AMCEN) – was established in 1985. Since its

³ Recently, Burundi and Rwanda were admitted to the membership of the East African Community.

inception, AMCEN has provided a forum for African ministers responsible for the environment to deliberate on environmental issues of relevance to Africa. AMCEN has also led the process for the development of the action plan for the Environment Initiative for the New Partnership for Africa's Development (NEPAD). It has also promoted and encouraged the production of two issues of the Africa Environment Outlook, and the first IGAD Environment Outlook (2006).

The New Partnership for Africa's Development (NEPAD) – through its Environment Initiative and particularly the Environment Capacity Building Action Plan, NEPAD supports many environment initiatives on the African continent. Recently, NEPAD supported the preparation of the Sub-Regional Environment Action Plan for Eastern Africa.

United Nations System – includes the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), United Nations Industrial Organization (UNIDO), United Nations Food and Agriculture Organization (FAO) and the United Nations Economic Commission for Africa (UNECA). These organizations are important sources of financial resources and technical assistance.

The Bretton Woods institutions – the World Bank Group and the International Monetary Fund are important sources of financial support, including endorsement of eligibility of countries to obtain funding from different sources.

Bilateral organizations – such as the German Technical Assistance (GTZ), the United States Agency for International Development (USAID), the Canadian International Development Agency (CIDA), the Swedish International Development Agency (SIDA), the Danish International Development Agency (DANIDA), the Norwegian Agency for Development (NORAD), the Department for International Development (DFID) and the Japanese International Cooperation Agency (JICA) are also important sources of financial resources and technical assistance⁴.

Civil Society Organizations – international civil society organizations such as the International Union for Conservation of Nature (IUCN), the World Wide Fund for Nature Conservation (WWF), the African Wildlife Foundation (AWF), Oxfam, the Carrying American Relief Everywhere (CARE), the German Development Organization (DED) and the World Resources Institute (WRI) are also important sources of financial resources and technical assistance. Furthermore, the civil society organizations (CSOs) are important partners in community mobilization and creating awareness about environmental and natural resources management. They can be crucial in the successful testing and demonstration of new technologies, for instance.

4.3 Resource Mobilization

The implementation of the Environment and Natural Resources Strategy will require significant additional human and financial resources which the Secretariat will have to procure. In the event that the incremental financial and human resources required are not realized to the full extent, strategic decisions will be made to assess the Strategy and carefully prioritise the programmes to focus on.

⁴ For example, the financial support for the preparation of the IGAD Environment Strategy was contributed by GTZ.

Three approaches will be used to mobilise resources for the implementation of the Strategy. The first approach requires that the ecosystem services and goods provided by the natural resources of the IGAD region are explored and developed to begin to provide significant amounts of the financial resources required for implementation of the Strategy. For example, this approach will call upon the Secretariat to assist member states to generate financial resources through the carbon trade value of the region's forests. It will also call upon the IGAD Secretariat to assist the countries to put in place appropriate environmental taxes on goods derived from the region's natural resources, and on polluting technologies in line with the spirit of the polluter-pays-principle. These actions are part and parcel of the Strategy. While it may take some time to generate significant financial resources from this approach, one of the indicators of the successful implementation of the Strategy will depend on the extent to which member states increasingly contribute funds for environmental and natural resources management.

The second approach to resource mobilization focuses on the budgets of the IGAD countries themselves. This is so because the main source of the institutional funding is from assessed contributions from member states to enable the Secretariat to meet its recurrent costs. The IGAD countries recognize that the running of the organization is their responsibility and should, therefore, provide for its annual budget. This reflects their commitment and ownership of the institution that serves their interest. The Strategy calls for the creation of a new division for Environment and Natural Resources together with recruiting additional personnel into the new structure. This means member states will be required to increase their contributions to accommodate the additional resources required. A measure of the successful implementation of the Strategy will be the willingness of the countries to increase their contributions to the Secretariat.

The third approach to resource mobilization will involve directing efforts to strengthening and building on the close and harmonious relationships that the IGAD Secretariat has over the years established with the IGAD Partners Forum (IPF), especially for mobilizing programme funds and technical assistance. The IGAD receives grants from donors and institutional agencies for funding programmes such as those specified in the NBSAPs, NAPAs and NAPs. The IGAD plays a major role in facilitating access by the Region to funds from legally binding instruments such as the ACP/EU Cotonou Agreement and other International Agreements. The IGAD Secretariat will continue to play a central role in the coordination of partners, organizing consultative meetings and utilizing international agreements in lobbying for funds for the implementation of the programmes. One key principle is that the mobilization of domestic resources will be used to leverage external funds.

In conclusion, the IGAD Secretariat will strive to improve mobilization of resources through several approaches. These would include:

- ❖ Member states contributing human, material and financial resources for the implementation of the Environment and Natural Resources Strategy in addition to their assessed annual contributions to the Secretariat's core budget;
- ❖ Generating domestic resources from ecosystems services and introducing environmental taxes on natural resources goods to better reflect their economic value, and taxes on polluting technologies;
- ❖ Continuing resource mobilization from bilateral and multilateral donors, particularly the IPF members; and partnering with CSOs and the private sector;

- ❖ Broadening the scope of the IGAD cooperating partners by attracting non-traditional donors;
- ❖ Creating a regional IGAD Environment and Natural Resources Endowment with seed capital from the member states; and
- ❖ Promoting Public Private Partnerships.

4.4 Performance Assessment

A more detailed monitoring and evaluation system will be developed as part of the implementation plan of the Environment and Natural Resources Strategy. Nonetheless, in general, the IGAD Secretariat will be responsible for the regular monitoring and evaluation of the implementation phase and will review periodically the impact of the Strategy. At the end of the 10-year period, a detailed environmental impact of the Strategy will be carried out bearing in mind that generally improvements in ecological conditions take much longer time to register. Finally, the Secretariat will follow the established reporting systems to appraise the IGAD policy organs and the IPF on the progress of the implementation of the Environment and Natural Resources Strategy.

Annexes

Annex 1. Examples of Key Achievements by Member States

	Djibouti	Eritrea	Ethiopia	Sudan	Kenya	Uganda
1990 Strategy Programme 1. The Energy Programme	Assessment of geothermal potential, household energy	<ul style="list-style-type: none"> ❖ Improved Mogogo Stove (won 3 awards) ❖ Cooperation with Djibouti on Regional Geothermal Energy – development ❖ Objective to reduce by half those people without lighting system or MDG compatible cooking systems ❖ Energy provision for institutional establishments in rural areas (schools, health facilities) 	<ul style="list-style-type: none"> ❖ Alternatives to reduce reliance on biomass and introduce clean energy in rural areas ❖ Dissemination of energy efficient devices ❖ Introduction of fast growing energy trees ❖ 1,000 biogas energy plants installed ❖ Rural electrification – 11 projects completed 	<ul style="list-style-type: none"> ❖ National energy assessment ❖ Introduction and promotion of LPG at household level ❖ 50% price reduction on LPG ❖ 500 village covered for introduction of new improved stoves (target 1,000) ❖ State (7 states) level project to generate 75 kw ❖ Introduction of LPG for committees around Dindirere National Park to reduce illegal and excessive firewood harvesting 	<ul style="list-style-type: none"> ❖ Draft Strategy on scaling up of access to modern energy services (LPE, etc) ❖ Study on geothermal energy development ❖ East African Power Master Plan ❖ Negotiations to connect Ethiopia and Kenya national grids ❖ Proposal to develop wind energy 	<ul style="list-style-type: none"> ❖ Energy policy, renewable energy policy being finalised ❖ East African Power Master Plan
2. The Erosion Control Programme	GEF Project on Soil Sustainability in pastoral areas and the coastal region	<ul style="list-style-type: none"> ❖ National Action Plan to Combat Desertification (23 project files developed into bankable projects) ❖ Soil and water conservation using enclosures 	<ul style="list-style-type: none"> ❖ National Platform for Sustainable Land Management ❖ Soil and Water conservation ❖ Action Plan to combat desertification in place ❖ Integrated Watershed Management Projects 		<ul style="list-style-type: none"> ❖ National Action Plan to Combat Desertification 	<ul style="list-style-type: none"> ❖ Soil fertility enhancement programme ❖ Nekasongola District sustainable land management

Annex 1. Examples of Key Achievements by Member States - continued

	Djibouti	Eritrea	Ethiopia	Sudan	Kenya	Uganda
1990 Strategy Programme 3. The Biodiversity Programme	NBSAP in 2000; Biosafety Framework being developed; PERSGA – Coastal Marine Ecosystem	<ul style="list-style-type: none"> ❖ Development of regulatory frameworks – forestry and wildlife laws and regulations ❖ Plan to develop strategy on invasive alien species using South Africa model ❖ Coastal areas (Somalia, Djibouti and Eritrea – IUCN organised ❖ Proposal for Marine Protected Areas ❖ 1996/97 aerial survey of elephant population 	<ul style="list-style-type: none"> ❖ Research and development in dryland area biodiversity ❖ 30 years experience in crop gene bank data – 60,000 accessions out of 125 crop species 	<ul style="list-style-type: none"> ❖ Millennium Seed Project 		<ul style="list-style-type: none"> ❖ Training in agroforestry ❖ Training farmers in tree nursery management
4. The Rangeland Management Programme	Development of agropastoral areas	Closures for regeneration on village land in highlands (½ for closure, ½ for use)	<ul style="list-style-type: none"> ❖ Pastoral agricultural research programme ❖ Preparation of NAP ❖ Dryland resource management programme 		<ul style="list-style-type: none"> ❖ Dryland farming ❖ Strategy for Agriculture a Rural Development ❖ Arid Lands Management Programme 	<ul style="list-style-type: none"> ❖ Participatory Ecological Land Use Management (PELUM) ❖ Sustainable land management in 'cattle corridor' in Nakasongola District ❖ Livestock production enhancement project

Annex 1. Examples of Key Achievements by Member States - continued

1990 Strategy Programme	Djibouti	Eritrea	Ethiopia	Sudan	Kenya	Uganda
5. The Water Resources Programme	Water harvesting, collaboration on groundwater with Kenya and Ethiopia	<ul style="list-style-type: none"> ❖ Integrated Water Resources Master Plan ❖ Situation Analysis completed ❖ Water Law draft (to include customary laws on water) ❖ National Water Supply and Sanitation Emergency Action Plan 2005 – 2007 ❖ Rainwater harvesting/water use efficiency 	<ul style="list-style-type: none"> ❖ Preparation Watershed Management Guideline ❖ Water Policy of Ethiopia, Water Act ❖ Monitoring water resources 	<ul style="list-style-type: none"> ❖ Groundwater resources survey ❖ Small-scale irrigation schemes ❖ Desilting of rivers 	<ul style="list-style-type: none"> ❖ Commission to claim for extension of Continental Shelf ❖ Cloud seeding project 	<ul style="list-style-type: none"> ❖ Water for production ❖ Kotido District (Karamoja) demonstration of water harvesting
6. The Environment Pollution Control Programme	POPs strategy adopted in 2006, Pollution in Djibouti Port, Spill Response Action Plan being developed, CDM not well understood, solid waste management real problem	<ul style="list-style-type: none"> ❖ New focus on solid waste management ❖ Marine protection ❖ Issue of dust storms 	<ul style="list-style-type: none"> ❖ Water pollution study 		<ul style="list-style-type: none"> ❖ Background pollution monitoring station 	<ul style="list-style-type: none"> ❖ Implementation plan for POPs

Annex 1. Examples of Key Achievements by Member States - continued

1990 Strategy Programme	Djibouti	Eritrea	Ethiopia	Sudan	Kenya	Uganda
7. Strengthening of Environmental Assessment Programme	<ul style="list-style-type: none"> ❖ No national meteorological service, currently planned supported by WMO ❖ Directorate of Land, Planning and Environment established in 1996 	<ul style="list-style-type: none"> ❖ EIA guidelines for agricultural development projects ❖ Guidelines for tourism infrastructure development ❖ Annual evaluation and monitoring of conservation efforts ❖ Daily weather forecasts ❖ Integrated coastal mgt ❖ No national meteorology institution 	<ul style="list-style-type: none"> ❖ Development of poverty and environmental management ❖ Established RANET (mechanism for reaching farmers through radio) about climate 	<ul style="list-style-type: none"> ❖ National environment action plan after CPA 	<ul style="list-style-type: none"> ❖ Land use cover mapping ❖ National Spatial Data Infrastructure being established ❖ Lightning detectors 	<ul style="list-style-type: none"> ❖ EIA guidelines for the energy sector ❖ EIA guidelines for the mineral sector ❖ Environmental information system ❖ Synergies between CCD and the other MEAs
8. The Research, Education and Extension Programme	<p>CERD located in Office of the President, National Master Plan covering various themes</p>	<p>Youth programs in schools to participate in control of land degradation – every summer involving 90% of students of Eritrea (20 – 30,000 high school and junior school students)</p>	<ul style="list-style-type: none"> ❖ ESTA established in 1975 – 11 sectoral departments, 4 affiliates ❖ Established 63 professional associations supported by ESTA ❖ Daily radio programme for popularising science and technology ❖ Addis Ababa University recognised as centre of excellence for biotechnology ❖ Regional CSAs in time with NCSAs ❖ Preparing Science & Technology and Innovation Policy 			

Annex 2 Log Frame Matrix

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
<p>Overall Goal To assist and complement the efforts of the member states in environment and natural resources management.</p>			
<p>Strategic Objectives</p>			
<p>Strategic Objective 1: To improve the framework for environmental and natural resources governance in the IGAD region.</p>			
<p>Outcome 1.1 <i>The process of harmonising environment and natural resources policies Supported and led.</i></p>			
<p>Activities</p>			
<p>Activity 1.1.1 Develop protocols for regional collaboration in the areas of joint control of alien plant and animal species, locusts, grasshoppers, the abnoxious water weeds, disaster preparedness and response plans; and pastoralism</p>	<ul style="list-style-type: none"> ❖ Regionally relevant protocols 	<ul style="list-style-type: none"> ❖ Protocol documents 	<ul style="list-style-type: none"> ❖ Member states willing to collaborate regionally to address environment and natural resources management challenges
<p>Activity 1.1.2 Develop manuals for mainstreaming cross-cutting issues (environment, gender) into development plans, programmes and activities of member states.</p>	<ul style="list-style-type: none"> ❖ Manuals prepared and made available to member states 	<ul style="list-style-type: none"> ❖ Manuals 	<ul style="list-style-type: none"> ❖ Financial support and technical expertise for preparation of the Manuals available
<p>Activity 1.1.3 Develop a framework for the use of community bye-laws as a tool for transboundary resources management including quarantine and transboundary transport of flora and fauna.</p>	<ul style="list-style-type: none"> ❖ Number of bye-laws successfully developed and implemented 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Reports from member states 	<ul style="list-style-type: none"> ❖ Enabling legal frameworks exist in member states

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
<p>Outcome 1.2 Awareness promoted and the process of developing appropriate strategies and concepts in transboundary resources management supported and guided.</p> <p>Activities</p> <p>Activity 1.2.1 Promote the development of ecosystems approaches to environment and natural resources management and the establishment of region-level river basin organisations where these do not exist.</p>	<ul style="list-style-type: none"> ❖ Ecosystems assessment manual prepared ❖ Number of river basin organisations established and operational 	<ul style="list-style-type: none"> ❖ Manual ❖ ICAD Annual Reports ❖ Reports of organisations 	<ul style="list-style-type: none"> ❖ Availability of technical assistance. ❖ Member states willing to form new region-level river basin organisations
<p>Outcome 1.3 Member states assisted to comply with the provisions of, and benefit from, the international instruments.</p> <p>Activities</p> <p>Activity 1.3.1 Promote the domestication of MEAs; and synergistic approaches and harmonised reporting for the Rio Conventions, and assist member states in the implementation of the provisions of the African Convention on the Conservation of Nature and Natural Resources, together with effective participation at international fora.</p>	<ul style="list-style-type: none"> ❖ Manual on synergistic approaches and harmonised reporting prepared and used by member states ❖ Format for national implementation plan prepared for the ACCNRR ❖ Process for effective participation developed and people trained 	<ul style="list-style-type: none"> ❖ Manual ❖ Format document ❖ Participation document 	<ul style="list-style-type: none"> ❖ Support from Secretariats of the conventions is in place

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
Activity 1.3.2 Assist member states with coastlines to put claims for extension of the Continental Shelf from 200 to 350 nautical miles by facilitating assessment of off-coast resources.	<ul style="list-style-type: none"> ❖ Continental shelf of member states with coastlines extended 	<ul style="list-style-type: none"> ❖ ICAD Annual Reports ❖ ICAD Environment Outlook ❖ UNCLOS reports 	<ul style="list-style-type: none"> ❖ Financial resources and technical assistance available to inventory natural resources and to process claims
Activity 1.3.3 Develop a model policy on the transfer and exchange of information and technology that also addresses the issue of intellectual property rights (IPRs) and patents.	<ul style="list-style-type: none"> ❖ Policy developed and action plans prepared to operationalise the policy 	<ul style="list-style-type: none"> ❖ Policy document ❖ Action plan document 	<ul style="list-style-type: none"> ❖ Availability of technical assistance
Strategic Objectives			
Strategic Objective 2: To develop information required for sound environmental and natural resources management in the IGAD region and make it readily available.			
Outcome 2.1: Environmental and natural resources information provided at the regional level.			
Activities			
Activity 2.1.1 Carry out regional inventories of greenhouse gases, dust storms, surface and groundwater resources and transboundary mineral deposits, and promote mapping and analysis (remote sensing, GIS, digital elevation models and water quality).	<ul style="list-style-type: none"> ❖ Inventories of GHGs, dust storms, water resources, and transboundary mineral deposits both in text and maps 	<ul style="list-style-type: none"> ❖ Inventory documents ❖ Maps and other displays 	<ul style="list-style-type: none"> ❖ Donor support is available
Activity 2.1.2 Establish regional networks for information collection, analysis and exchanges (for example strengthening electronic communication and networks for the collection and dissemination of real/near real time information within member states and the IGAD Secretariat) on emerging and re-emerging issues, disasters, hydrological networks and facilities.	<ul style="list-style-type: none"> ❖ Number of information network established 	<ul style="list-style-type: none"> ❖ ICAD Annual Reports ❖ Network reports 	<ul style="list-style-type: none"> ❖ Enabling access to information laws in member states
Activity 2.1.3 Develop and disseminate environmental and natural resources education and awareness programmes for CSOs and the private sector.	<ul style="list-style-type: none"> ❖ Manuals for environmental education and awareness prepared 	<ul style="list-style-type: none"> ❖ Documents 	<ul style="list-style-type: none"> ❖ CSOs and the Private Sector are willing to participate

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
<p>Activity 2.1.4 Establish databanks and meta-databanks and information systems for environmental management in the region including the development of a regional integrated environmental information system and establishment of a clearinghouse mechanism.</p>	<ul style="list-style-type: none"> ❖ Number of databanks and metadata banks established ❖ Clearing house mechanisms developed ❖ Integrated environmental information system developed 	<ul style="list-style-type: none"> ❖ Databanks and metadata banks ❖ IGAD Annual Reports ❖ Clearing House 	<ul style="list-style-type: none"> ❖ Willingness of member states to share information ❖ Availability of financial resources to maintain databanks, metadata banks and Clearing House
<p>Outcome 2.2 Timely exchange of environmental and natural resources information promoted</p>			
<p>Activities</p>			
<p>Activity 2.2.1 Facilitate exchange of ideas, lessons and experiences of the member states in developing local environment action plans (LEAPs) and document community coping mechanisms in drought-prone areas.</p>	<ul style="list-style-type: none"> ❖ LEAPs developed and funded in member states ❖ Number of coping mechanisms 		<ul style="list-style-type: none"> ❖ Willingness of member states to share experiences ❖ Availability of technical assistance to document coping mechanisms
<p>Activity 2.2.2 Build the capacity of member states' public libraries and government documentation centres in order to improve accessibility to and availability of nationally generated information resources for use in decision making.</p>	<ul style="list-style-type: none"> ❖ National environment and natural resource libraries established or upgraded; and existing libraries supplied with materials 	<ul style="list-style-type: none"> ❖ Member states' reports 	<ul style="list-style-type: none"> ❖ Existence of national libraries and documentation centres ❖ National budgets available to operate libraries/ documentation centres

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
<p>Strategic Objective 3: To enhance the capacity of member states for improved environmental and natural resources management in the IGAD region.</p>			
<p>Outcome 3.1 <i>The capacity of member states and IGAD staff in the use of environmental assessments, crucial for promoting regional cooperation built.</i></p>			
<p>Activity</p>			
<p>Activity 3.1.1 Promote the use of economic instruments in efforts to better manage biodiversity (conservation, sustainable utilisation and equitable sharing of benefits).</p>	<ul style="list-style-type: none"> ❖ Number of economic instruments developed 	<ul style="list-style-type: none"> ❖ Instrument documents 	<ul style="list-style-type: none"> ❖ Availability of technical assistance
<p>Activity 3.1.2 Carry out natural resources accounting and valuation studies to show the impacts of environmental degradation and the true economic value of environmental resources in the IGAD region.</p>	<ul style="list-style-type: none"> ❖ Natural resources accounts for key sectors (forestry, rangelands, minerals, etc) developed 	<ul style="list-style-type: none"> ❖ Sectoral Accounts Reports 	<ul style="list-style-type: none"> ❖ Availability of technical assistance
<p>Activity 3.1.3 Carry out a review of environment and natural resources fiscal regimes in the IGAD region (including the development of suitable models of derivation funds to benefit communities of origin and expand revenue sources for local governments) with a view to sharing lessons learnt and success stories, and identification of critical gaps.</p>	<ul style="list-style-type: none"> ❖ Number of reviews ❖ Derivation models for key natural resources sectors 	<ul style="list-style-type: none"> ❖ Review reports ❖ Derivation model manuals 	<ul style="list-style-type: none"> ❖ Willingness of member states to re-examine natural resources taxation processes
<p>Activity 3.1.4 Develop methodologies for national domestication of the provisions of key MEAs and regional conventions, and assist member states in accessing financial and technical assistance (especially funds from the Clean Development Mechanism, Sustainable Land Management and other processes) for the implementation of NBSAPs, NAPAs, NAPs, NCSAs and other initiatives.</p>	<ul style="list-style-type: none"> ❖ Number of MEA domestication manuals ❖ Number of training sessions ❖ Value of financial support received by member states and the IGAD Secretariat from MEA processes ❖ Proportion of action plans implemented 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Country reports from member states ❖ Conventions Secretariats reports 	<ul style="list-style-type: none"> ❖ Support from the Secretariats of the MEAs

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
<p>Outcome 3.2 Suitable incentives and disincentives measures to complement regulatory enforcement identified.</p> <p>Activities</p> <p>Activity 3.2.1 Develop guidelines for promoting private sector voluntary compliance in environmental matters and establish an IGAD Environment/Private Sector forum.</p>	<ul style="list-style-type: none"> ❖ Number of Guidelines/ Codes of Conduct for different industry sectors prepared ❖ Private Sector Forum established 	<ul style="list-style-type: none"> ❖ Guidelines ❖ Codes of conduct ❖ Forum documents 	<ul style="list-style-type: none"> ❖ Willingness of the Private Sector to participate ❖ Donor assistance in facilitating meetings, workshops and the operations of the Private Sector Forum
<p>Activity 3.2.2 Assist member states to build national capacities for monitoring, prediction and timely early warning including the strengthening of oil spills management and contingency capabilities.</p>	<ul style="list-style-type: none"> ❖ Number of training sessions ❖ Environmental sensitivity maps 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Maps and documents 	<ul style="list-style-type: none"> ❖ Donors willing to fund environmental sensitivity mapping ❖ Availability of technical assistance
<p>Activity 3.2.3 Strengthen regional and integrated approach to natural resources management including the management of water resources and toxic wastes.</p>	<ul style="list-style-type: none"> ❖ Number of training sessions 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Reports of member states 	<ul style="list-style-type: none"> ❖ Member states' endorsement of the regional and integrated approach
<p>Activity 3.2.4 Develop capacity to plan, implement and monitor integrated ecosystem (landscape and seascape) and biodiversity management at national and local levels.</p>	<ul style="list-style-type: none"> ❖ Number of training sessions ❖ Number of manuals ❖ Number of landscape/ seascape approaches implemented 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Reports of member states 	<ul style="list-style-type: none"> ❖ Member states' endorsement of the landscape/seascape approaches
<p>Activity 3.2.5 Establish a facility or other modalities for mineral development capacity building at regional level (e.g. facility for training mining engineers).</p>	<ul style="list-style-type: none"> ❖ Number of mining training centres established 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Training centre reports 	<ul style="list-style-type: none"> ❖ Availability of technical assistance

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
<p>Outcome 3.3 A more focused forum targeting the environment and natural resources of civil society organisations and non-estate actors established.</p> <p>Activity 3.3.1 Create and co-ordinate regional centres of excellence for environmental research, ICT development and management information and establish an IGAD Forum of Experts to address the different aspects of environmental management.</p> <p>Activity 3.3.2 Increase the role of CSOs (NGOs, CBOs, unions, faith-based organisations and independent media) in environment and natural resources management including emerging issues and institute an IGAD Environment/CSO forum.</p>	<ul style="list-style-type: none"> ❖ Number of regional centres of excellence created ❖ Expert forum in place and functional 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Centre reports ❖ Report of forum proceedings ❖ Technical/expert reports 	<ul style="list-style-type: none"> ❖ Technical assistance availability ❖ Donors willing to support the formation and operations of the Experts Forum
	<ul style="list-style-type: none"> ❖ Number of regional CSO meetings ❖ CSO Forum established 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Forum documents 	<ul style="list-style-type: none"> ❖ Willingness of CSOs to participate ❖ Donor assistance in facilitating meetings, workshops and the operations of the CSO Forum

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
Strategic Objective 4: To enhance the capability for environmental and natural resources research and development in the IGAD region.			
Outcome 4.1 Research agendas identified and the creation of linkages and networks in the area of environment and natural resources management facilitated.			
Activity			
Activity 4.1.1 Popularize the use of the IGAD Crop Production System Zone (CPSZ) as the entry point for environmental and natural resources management interventions, and document the plant resources of the ASALs.	<ul style="list-style-type: none"> ❖ Number of member states which use CPSZ as basis for interventions ❖ ASALs plant inventories carried out in member states 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Plant inventory documents 	<ul style="list-style-type: none"> ❖ Technical assistance availability
Activity 4.1.2 Assess the mini and micro hydro, geothermal, solar, tidal wave and wind energy potential and identify other alternative renewable energy sources (e.g. biofuels).	<ul style="list-style-type: none"> ❖ New and renewable energy resources potential assessment studies ❖ Biofuels feasibility study report 	<ul style="list-style-type: none"> ❖ Study reports 	<ul style="list-style-type: none"> ❖ Technical assistance availability ❖ Cooperation of member states
Activity 4.1.3 Develop a regional programme for the recognition, prevention and management of invasive alien species in different habitats (terrestrial, aquatic and marine); and research into the feasibility of turning some of the invasive alien species into useful products, and encourage the restoration of degraded ecosystems.	<ul style="list-style-type: none"> ❖ Manual for recognition, prevention and management ❖ Feasibility study report ❖ Inventory of the extent of ecosystems degradation in the IGAD region 	<ul style="list-style-type: none"> ❖ Manuals ❖ Reports ❖ IGAD Annual Reports ❖ Inventory document 	<ul style="list-style-type: none"> ❖ Support available from the Secretariats of the CBD and GEF and other processes
Activity 4.1.4 Establish regional research and technology incubation centres, allocating different thematic areas to the member states on the basis of their comparative advantages, and promote the transfer, acquisition, adaptation and development of appropriate technologies such as water harvesting techniques.	<ul style="list-style-type: none"> ❖ Number of regional research centres established and working ❖ Number of technology incubation centres established/designated and working ❖ Regional research meetings 	<ul style="list-style-type: none"> ❖ Centre reports ❖ IGAD Annual Reports ❖ Proceedings of research meetings 	<ul style="list-style-type: none"> ❖ Donor support for regional research and technology incubation centres is available

Annex 2 Log Frame Matrix - continued

Goal, Strategic Objectives, Outcomes and Activities	Objectivity Verifiable Indicator (OVI)	Means of Verification	Assumptions and Risks
Activity 4.1.5 Develop new models to analyse climate change issues (such as impact and integrated models) including the biodiversity resources of the IGAD region.	<ul style="list-style-type: none"> ❖ Impact models developed 	<ul style="list-style-type: none"> ❖ Model documents ❖ Reports 	<ul style="list-style-type: none"> ❖ Technical assistance is available
Activity 4.1.6 Assist member states to carry out soil nutrient mapping, and research into water scarcity and water stress issues including the development of water security strategy.	<ul style="list-style-type: none"> ❖ Soil nutrient maps of member states ❖ Water studies 	<ul style="list-style-type: none"> ❖ Maps and accompanying documents ❖ Study reports 	<ul style="list-style-type: none"> ❖ Technical assistance available
Activity 4.1.7 Share research findings, through among other things, multi-disciplinary publications and regular meetings.	<ul style="list-style-type: none"> ❖ Number of meetings ❖ Number of publications 	<ul style="list-style-type: none"> ❖ IGAD Annual Reports ❖ Proceedings of meetings ❖ Publication documents 	<ul style="list-style-type: none"> ❖ Willingness of researchers to cooperate in sharing information ❖ Financial support for meetings/publications available
Activity 4.1.8 Assess the extent of, and develop a strategy to halt, the loss of agricultural genetic resources of the IGAD region.	<ul style="list-style-type: none"> ❖ Agricultural genetic resources loss study 	<ul style="list-style-type: none"> ❖ Study report 	<ul style="list-style-type: none"> ❖ Availability of technical assistance
Outcome 4.2: The capacity of the member states for accessing potential incremental financial resources built.			
Activities			
Activity 4.2.1 Develop methodologies, tools and approaches for realising financial benefits from the ecosystems services provided by the region's natural resources and how some of the finances realised can be used to partly fund a regional environment endowment fund including carbon trade.	<ul style="list-style-type: none"> ❖ Tools, methods and approaches developed ❖ Endowment fund study prepared 	<ul style="list-style-type: none"> ❖ Manuals/process documents ❖ Fund feasibility report 	<ul style="list-style-type: none"> ❖ Availability of technical assistance ❖ Willingness of member states to underwrite/catalyse the Endowment Fund
Activity 4.2.2 Develop tools, methods and approaches for integrating environment and natural resources values into decision making and management practices, and review taxation regimes in member states identifying opportunities for introducing and/or amending national environment taxes.	<ul style="list-style-type: none"> ❖ Tools, methods and approaches developed ❖ Tax regimes reviewed 	<ul style="list-style-type: none"> ❖ Manuals/process documents ❖ Tax review reports 	<ul style="list-style-type: none"> ❖ Availability of technical assistance ❖ Willingness of member states to introduce changes in their tax regimes

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