

IGAD REGIONAL STRATEGY

Invasive Species Management



PEACE, PROSPERITY AND
REGIONAL INTEGRATION



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REGIONAL INTEGRATION

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FOREWORD



The IGAD region has a variety of ecosystems. These ecosystems host a rich diversity of both floral and faunal species, which form the basis for the livelihood of the population of the region. In earlier times, the people of the region used to live in harmony with the environment. However, with increasing population growth and climate change and variability, these biodiversity resources (gene, species and ecosystems) have decreased in size and quality, which in turn has affected the livelihood of the population.

There are a number of factors contributing to the dwindling of the biodiversity resources in the region. These include agricultural encroachment, fragmentation, degradation of the environment, climate change, inappropriate policies, urbanization and population growth, etc. The introduction of new alien species, accidentally or deliberate, for purposes of agriculture, forestry and even conservation has also posed a great threat to the biodiversity resources in the region. These species compete with endemic species, affecting agricultural land, water ways, lakes, rivers, swamps and road sides, posing social challenges as a result of their impact on economy and livelihoods of local communities. Examples such alien species in the region include *Prosopis Julifora*, which was introduced to fight desertification and *Parthenium hysterophorus*, introduced with food aid to the region.

Enhancing regional cooperation to address the challenges posed by alien invasive species to the biodiversity resources and the economic development of the region is critical. IGAD has therefore come up with a Regional Invasive Species Control and Management Strategy, which was approved by Ministers of Environment of the region. The strategy, supported by other IGAD and member states policies and strategies, is going to contribute to controlling the introduction of new alien species and managing the existing ones. I am therefore convinced that the implementation of this strategy, at regional and national levels would lower the impact of alien invasive species not only on the biodiversity resources, but also on the economic development of the region.

Amb. (Eng.) Mahboub Maalim

Executive Secretary

ABBREVIATIONS AND ACRONYMS

AU	African Union
BMP	IGAD Biodiversity Management Programme in the Horn of Africa
CBO	Community Based Organisation
EIA	Environmental Impact Assessment
EU	European Union
HoA	Horn of Africa
IRBP	IGAD Regional Biodiversity Policy
IS	Invasive Alien Species
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative
IGAD	Intergovernmental Authority on Development
IGADD	Intergovernmental Authority on Drought and Development
IP	Implementation Partner
IUCN	International Union for the Conservation of Nature
MEA	Multi-lateral Environmental Agreement
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-government Organisation
PPP	Public Private Partnership
UNCBD	United Nation Convention on Biological Diversity

GLOSSARY

ABS	The way in which genetic resources may be accessed, and how the benefits that result from their use are shared between the people or countries using the resources (users) and the people or countries that provide them (providers)
ABS strategy	IGAD Regional Strategy and Guidelines on Access and Benefit Sharing of Biological Resources
Agreement	Agreement establishing the Intergovernmental Authority on Development
Nagoya Protocol	The Nagoya Protocol on Access to Genetic Resources and their Fair and Equitable Sharing of Benefits arising from their Utilization to the Convention on Biological Diversity, also known as the Nagoya Protocol on Access and Benefit Sharing (ABS)
Biological resources	Includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity
Biotechnology	Any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use
Genetic resource	Genetic material of actual or potential value
Traditional knowledge	A living body of knowledge that is developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identified



1. INTRODUCTION

This Regional Strategy for Invasive Species Management is part of a coherent concise package of up-to-date biodiversity oriented governance and guidance instruments further informed by:

- IGAD Regional Biodiversity Policy;
- IGAD Regional Biodiversity Protocol;
- IGAD Regional Strategy for Access to and Benefit Sharing of Biological Resources;
- IGAD Regional Strategy on Wildlife Management; and
- IGAD Regional Strategy on Domestication and Implementation of Regional Policies and Strategies related to Biodiversity.

The Regional Biodiversity Management Programme (BMP) generated IGAD Regional Biodiversity Policy¹ (IRBP) holds the highest position in the precedence of instruments directed specifically at biodiversity. It cedes this position to the IGAD Regional Biodiversity Protocol once that document is approved by IGAD Policy Organs.

However, a list of other instruments has also influenced and informed the formulation of this strategy including:

- IGAD regional development instruments covering related and other sectors;
- Member States' National Biodiversity Strategies and Action Plans (NBSAPs) in the context of the implementation of the UNCBD;
- Member States' action programmes in the context of the implementation of the UNCBD;
- Member States' nationally ratified MEAs;
- Member States' national legislation;
- Country reports compiled under the BMP;
- UNCBD Aichi Targets; and
- 2030 Agenda for Sustainable Development.

This IGAD Regional Strategy for Invasive Species Management translates the relevant provisions of the many above instruments directly into applicable "Strategic Objectives", intended "Outcomes" and prescribed "Activities".

¹ Endorsed at Nairobi 3 June 2016.

2. BACKGROUND AND REGIONAL OVERVIEW

The Intergovernmental Authority on Drought and Development (IGADD) was formed in 1986 with a very narrow mandate dealing with drought and desertification. It has since become, especially in the 1990s, the accepted vehicle for regional security and political dialogue. Its founding members decided in the mid-1990s to revitalise the organisation into a fully-fledged regional political, economic, development, trade and security. The Agreement Establishing the Intergovernmental Authority on Development (IGAD) was adopted in March 1996.

The eight Member States of the IGAD Region (Figure 1) are Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda and cover an area of approximately 5.2 million km².

Figure 1: Map of the IGAD Region²



The Horn of Africa (HoA) is richly endowed with a variety of biodiversity and other natural resources such as rivers, lakes, forests, livestock and high agricultural potential. However, the benefits of these resources has

not translated into economic benefits for populations in the region.

The conservation and management of biodiversity in the region has been supported by the development of a number of policies and strategies, such as the IGAD regional environment policy and the IGAD environment and natural resources strategy. These policies and strategies were being implemented through a number of programmes and projects such as the BMP, MESA, INLAND water Programme, among others.

BMP is one of the IGAD interventions with financial support from the EU to improve biodiversity conservation in the region.

The objectives of the BMP are to enhance the socio-economic development of the region by promoting regional cooperation and integration among the Member States in the biodiversity and environment sector. The programme focuses amongst others on:

1. *Development of a common biodiversity policy in the region as well as other biodiversity thematic strategies such as wildlife conservation, management and anti-wildlife trafficking, benefit sharing from Biodiversity Resources, sustainable management of invasive species, and domestication and implementation of regional policies and strategies such as the MEAs.*
2. *Development of a regional biodiversity database and information system, which will be supported by national biodiversity databases and information systems.*
3. *Conservation and sustainable management of biodiversity resources in the IGAD region by strengthening institutions in the Member States and by showcasing it in a three cross-border demonstration sites being implemented by recognized Implementing Partners (IPs).*

² Disclaimer: The designations employed and the map presentations do not imply the expression of any opinion whatsoever on the part of the IGAD concerning the legal status of any country, territory, city, area of its authorities, place names or the delineation of its frontiers or boundaries

The IGAD region has a variety of ecosystems ranging from coral reefs to the gum arabica woodlands of Sudan, extensive wetlands to savannah grasslands, afro-montane forests to deserts, and the central highlands of Ethiopia and Kenya which are important water catchments (Awimbo, Barrow and Karaba, 2004). These habitats host a rich diversity of both floral and faunal species. The region has more than 1 500 known species of mammals, more than 1 400 known breeding bird species and 3 000 species of higher plants.

The people of IGAD are greatly dependent on the biological resources of the area and are living in harmony with the environment. Local communities use the biological resources as a source of food and construction material for housing. Through the years, the local communities have gathered wide knowledge of the biological resources in the area, a source of information that must be utilized as it can provide information that can ensure the survival of the resources.

The population in the region has increased with a resulting increased pressure on those same biological resources on which the local population depend. One of the consequences of the threat to the biodiversity is the introduction, accidentally or deliberate, for purposes of agriculture, forestry and even conservation of alien species. These alien species can become invasive in the absence of natural predators and other natural controlling vectors. Such species influence *inter alia* the biodiversity of an area by competing with endemic species, affecting agricultural land, water ways, lakes, rivers, swamps and road sides. Such species also pose social consequences by influencing the local economy and livelihoods of local communities. The manual control of *Parthenium hysterophorus* for example, can cause skin allergies, itching, skin peeling, fever, bronchitis and asthma. IS are the second greatest cause of biodiversity loss after habitat alteration. While the issues of IS are not new, there is an emerging awareness of the negative effects and seriousness of the threat they pose both environmentally and economically.

Virtually all countries in the Region are affected by IS. In 2004, the World Conservation Union (IUCN) identified the number of IS in the Region as follows:

Table 1: Distribution of IS per country

Number of IS	Country
0 - 9	Djibouti, Eritrea and Somalia
20 - 29	Ethiopia (22), South Sudan, Sudan and Uganda
30 - 39	Kenya (35)

Source: (IUCN/SSC/ISSG 2004).

Africa is increasingly invaded by all manner of organisms with increasing threats to biodiversity, development and human health. This is exacerbated by more than 40 continental countries, each with many neighbours, “porous” borders and limited capacity to address biological invasions. This statement is equally true for the IGAD Region. The fastest spreading invasive species are alien herbs and shrubs that have only been in Africa for a decade or two; there are also some species of trees (and a notable alien shrub, *Lantana camara*) which were brought into Africa more than 50 or 100 years ago for various purposes which are now becoming invasive in forest, woodland and even grassland situations.

Four main alien invasive floating weeds are now present in most freshwater systems: *Eichhornia crassipes*, *Salvinia molesta*, *Pistia stratiotes* and *Azolla filiculoides* (while *A. pinnata var africana* is also becoming troublesome).

Marine IS are a growing problem in Africa’s coastal waters, estuaries and lagoons. Many of these introductions are related to sea vessels and aquaculture. *Hypnea musciformis* (hypnea) is red algae, originally from Trieste in Italy, and is now distributed throughout the world. It occurs in coastland, estuaries and marine habitats where it attaches to coral, stones or shells on sheltered tropical reef flats of amongst others Ethiopia, Djibouti, Kenya.

The management of alien and invasive species can be undertaken in a proactive, preventative and precautionary approach to control the introduction, spread and eradication of alien and invasive species.

Invasive species that have been introduced, accidentally or deliberately, in the IGAD region include both plant and animal species. The following animal and plant species have *inter alia* been identified as of major importance in the Region:

- *Lates nilotica* (Nile perch) – introduced to Lake Victoria to stimulate fisheries
- *Corvus splendens* (House crow)
- *Eichornia crassipes* (Water hyacinth) – in fresh water systems
- *Prosopis spp* (Mesquite) – introduced as animal fodder
- *Parthenium hysterophorus* (Famine weed) – is spreading rapidly in farm lands and is often as used as bedding for the transport of fruits and vegetables
- *Opuntia spp* (Cactus)
- *Argemone mexicana* (Prickly poppy)
- *Xanthium spp* (Cockle burr)
- *Lantana camara* (Lantana)
- *Calotropis procera* (Milkweed)
- *Broussonetia papyrifera* (Paper Mulberry).

3. FORMULATION

3.1 DESK STUDY

A webbased desktop analysis of available information was undertaken and the documentation provided by the country studies as part of the BMP. Member States were studied to identify potential regional issues that need to be addressed.

Consultations were undertaken with the following countries:

- Djibouti
- Ethiopia
- Kenya
- South Sudan
- Sudan
- Uganda

From the interviews and the desk study, the following key factors were identified:

- Dependence of local communities on the biological resources;
- Knowledge of the local communities pertaining to the biological resources;
- Local communities have lived in harmony with nature for many years;
- Pressure on the resources because of increased population numbers;
- Threat to biodiversity and consequently to the livelihoods of local population by invasion and spread of alien species;
- Need for alternative sources of income for local communities;
- Need for capacity building of local communities relating to the benefits resulting from access to biodiversity resources; and

- Lack of data and information of the monetary value of biodiversity and ecosystem goods and services, creating the impression that ecosystem goods and services are “free” and infinite.

3.2 CONSTRAINTS IDENTIFIED

The background information and consultations with the Member States also revealed the following constraints impeding a more effective approach to invasive species management in the region:

- Domestic coordination within Member States;
- Awareness by decision-makers of the role and importance of biological resources, in particular the potential impact of invasive species on these resources;
- Up-to-date information systems;
- Early warning system related to new invasive species;
- Inter- and intra-governmental coordination;
- Sharing of information within the region pertaining to management of invasive species;
- Cross boundary water catchment management
- Institutional and legislative deficiencies in Member States;
- Lack of proper management and quarantine systems;
- Participation of local communities in management of invasive species including the identification and reporting on the spreading of such species;
- Human and financial resources;
- Law enforcement capacity; and
- Regional coordination relating to research on invasive species and the management of such species.

The information gathered through the desk top study and during the country consultations was used to identify the strategic objectives required to fulfil the obligations of the Member States to enhance the socio-economic development of the region by promoting regional cooperation and integration among the Member States in the biodiversity and environment sector.

3.3 RATIONALE FOR STRATEGY

In the Agreement establishing IGAD, the efforts of the Member States to fulfil their obligations include Article 7(b), (e) and (j) set out as follows:

“harmonize policies with regard to trade customs, transport, communications, agriculture and natural resources, and promote free movement of goods, services and people and the establishment of residence; initiate and promote programmes and projects for sustainable development of natural resources and environmental protection; and facilitate, promote and strengthen cooperation in research, development and application in the fields of science and technology”

This above lead to the formulation and implementation of the IGAD Biodiversity Management Programme in the Horn of Africa. One of the outcomes of the BMP is the development and subsequent adoption of the IGAD Biodiversity Policy. To give effect to the IGAD Biodiversity Policy required the development of a biodiversity protocol and strategies aimed at specific aspects of the IGAD Biodiversity Policy and its Protocol – such as this Regional Invasive Species Strategy.

The Regional Invasive Species Management Strategy is to support the implementation of the IGAD Biodiversity Policy and Protocol, other relevant IGAD, African Union (AU) and global initiatives in the management and conservation of biological resources by providing a framework for such cooperation between the Member States relating to the control and management of invasive species.

The Regional IS strategy is interlinked with the existing IGAD policies and strategies such as:

- IGAD Regional Biodiversity Policy;
- IGAD Environment Outlook Report;
- IGAD Food Security Strategy;
- Disaster Risk Management Strategy;
- IGAD Gender Policy and Strategy;
- Peace and Security Strategy;
- IGAD Environment and Natural Resources Strategy;
- Regional Environmental Impact Assessment Policy Framework in the IGAD Region;
- IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) Knowledge Management Strategy;
- IGAD Regional Strategy on Wildlife Management; and
- IGAD Regional Strategy and Guidelines on Access and Benefit-sharing of Biological Resources.

The implementation of the Regional IS Management Strategy will be guided by the principles of the Agreement establishing IGAD as well as those of the IGAD Biodiversity Policy.

The IS Strategy aims to prevent the introduction and spreading of alien species that could become invasive in the region and the control and eradication of species that have already been established in the region and poses a threat to the biodiversity in the region.

3.3.1 Relevant IGAD Regional Biodiversity Policy provisions

In the IGAD Biodiversity Policy – Section 3.1.8 Managing Invasive Species³ – the following are listed as priority Actions:

³ The narrative of IRBP Section 3.1.8 is repeated in Annexure 1

Promote regional cooperation in monitoring, information sharing, research and awareness-raising for both making use of, and eradicating Invasive Alien Species.

Develop and support cross-border eradication and management mechanisms

Conduct impact assessment prior to the introduction of alien or new species that may be invasive and detrimental to biodiversity

Train and equip local communities in management of Invasive Alien Species

Policy Statement 21: Member States shall take measures to avoid the introduction of alien / potentially invasive species, control expansion, manage, use or, where possible, eradicate, in particular in agriculture and forestry sectors, in the region

4. THE INVASIVE SPECIES STRATEGY

4.1 Vision

The vision of the IS Strategy is to contribute to the overall IGAD's vision of becoming a premier Regional Economic Community (REC) for achieving peace and sustainable development in the region, by minimizing the impact of IS on the biodiversity resources of the IGAD region.

4.2 Mission

The mission of the IS Strategy is to contribute to the overall IGAD Mission of promoting regional cooperation and integration in preventing, controlling and managing IS to add value to member states' efforts in achieving peace, security and prosperity.

4.3 IS Strategy

The primary objective of the IGAD Regional Strategy on Invasive Species management (IS strategy) is to support the implementation of the IGAD Biodiversity Policy and Protocol – and other relevant IGAD initiatives in the management, conservation and sustainable use of biodiversity resources by providing a framework for cooperation. It contributes to the achievement of the IGAD goal of pledging the economic security and development of the people of the region in order to minimize the vulnerability of the region.

The strategy provides for cooperation between Member States on the management, containment and eradication of invasive alien species.

The strategic objectives of the strategy include:

- Strategic Objective 1:** Enhance awareness of the threats posed by invasive species on the biodiversity of the region among the various stakeholders
- Strategic Objective 2:** Create an enabling environment to the prevention, control, containment and eradication of invasive species
- Strategic Objective 3:** Strengthen the regional research capacity relating to invasive species
- Strategic Objective 4:** Strengthen capacity for effective management of invasive species control

5. STRATEGIC INTERVENTIONS

Below are presented the intended Outcomes and prescribed Activities for the IGAD Regional Strategy on Invasive Species Management.

The above “interventions” constitute the translation of the overall IGAD Regional Biodiversity Strategy into implementable activities leading to its achievement.

Table 2 Strategic Interventions for IGAD Regional Strategy for Invasive Species Management

Indicative Interventions	
Strategic Objective 1.	Enhance awareness of the threats posed by invasive species on the biodiversity of the region among the various stakeholders
Outcome 2.1 Regional policy and guidelines and / or protocols on the management and monitoring of invasive species developed	Activity 2.1.1 Identify relevant domestic legislation requiring amendment to give effect to the regional policies, protocols and strategies Activity 2.1.2 Follow domestic legislative process Activity 2.1.3 Develop public awareness material to inform decision-makers and the public on the implications of legislative change Activity 2.1.4 Prioritise control and eradication methods, efforts and mechanisms on species with the greatest adverse impact on biodiversity Activity 2.1.5 Maintain active public awareness campaign Activity 2.1.6 Comply with commitments of the policies and strategies through active participation Activity 2.1.7 Develop prevention, control, containment and eradication programmes, and provide ongoing support to existing programmes Activity 2.1.8 Negotiate with neighbouring countries to maximise commonalities and minimise conflicts between policies, legislation and practices relating to the management of invasive species
Outcome 2.2 Co-operation and co-ordination at the operational level to deal with the full suite of impacts posed by invasive species ensured	Activity 2.2.1 Undertake studies to establish economic, social and environmental impacts of priority invasive species Activity 2.2.2 Raise awareness at all levels of government of the potential impact of invasive species on the environment Activity 2.2.3 Coordinate the inclusion of biodiversity considerations in agricultural and forestry operations Activity 2.2.4 Develop and implement effective mechanisms for collaboration at domestic and regional level

Indicative Interventions

<p>Outcome 2.3 Prevention, Control, containment and eradication programmes developed, and ongoing support provided to existing programmes</p>	<p>Activity 2.3.1 Identify priority invasive species in the region, particularly focussing on cross boundary species</p> <p>Activity 2.3.2 Identify and map the geographical distribution of priority IS in the Region</p> <p>Activity 2.3.3 Develop identification and operational manuals to enable identification of invasive species and appropriate methods to manage specific species</p> <p>Activity 2.3.4 Identify best practices at national, regional and global levels relating to management efforts on identified species</p> <p>Activity 2.3.5 Adapt the best practices to suit IGAD conditions and priorities</p> <p>Activity 2.3.6 Emphasise prevention of introduction, control and eradication of invasive species in management plans</p> <p>Activity 2.3.7 Develop management programmes in a consultative manner with local communities and multinational organisations</p> <p>Activity 2.3.8 Support and strengthen existing management initiatives</p> <p>Activity 2.3.9 Support management initiatives at all levels of government and by local communities</p>
<p>Outcome 2.4 Economic opportunities linked to the control and management of invasive species particular to benefit local communities created</p>	<p>Activity 2.4.1 Establish communication forums with local communities</p> <p>Activity 2.4.2 Incorporate local knowledge, particularly from women on management of invasive species</p> <p>Activity 2.4.3 Strengthen the capacity of NGOs and CBOs</p> <p>Activity 2.4.4 Involve Private Public Partnerships (PPPs) in turning IS into commercial products</p>
<p>Outcome 2.5 Best Practices in the management of invasive species identified and adopted</p>	<p>Activity 2.5.1 Review existing regional, continental and global invasive species management initiatives with the objective of identifying appropriate initiatives and adapting to IGAD requirements</p> <p>Activity 2.5.2 Utilize the IGAD Sectoral Committee on Biological Resources as a link to share experiences and best practices pertaining to the control of invasive species</p> <p>Activity 2.5.3 Develop a communication strategy to disseminate the information regionally</p>

Indicative Interventions	
<p>Outcome 2.6 Legislation on invasive alien species is rationalised</p>	<p>Activity 2.6.1 Review all domestic legislation to ensure the implementation of IGAD adopted policies, protocols and strategies</p> <p>Activity 2.6.2 Align and rationalize domestic legislation, at all levels of government and where appropriate subsidiary legislation is developed</p> <p>Activity 2.6.3 Involve local communities in the development of legislation and programmes</p> <p>Activity 2.6.4 Develop appropriate enforceable restrictions for noncompliance with provisions relating to invasive species</p> <p>Activity 2.6.5 Include management of invasive species in training of law enforcement officers (including border and port control officers) through</p> <ul style="list-style-type: none"> • identification manuals • standard operating procedures <p>Activity 2.6.6 awareness material for display at ports of entry and exit</p>
<p>Outcome 2.7 Mechanisms to enhance and coordinate law enforcement efforts at regional and domestic levels established</p>	<p>Activity 2.7.1 Negotiate and liaise with neighbouring countries to maximise commonalities and minimise conflicts between policies, legislation, and practices relating to alien organisms that threaten biodiversity</p> <p>Activity 2.7.2 Develop control measures on the introduction of alien species</p> <p>Activity 2.7.3 Strengthen the enforcement and effectiveness of existing punitive measures to control the introduction and spread of potentially harmful alien organisms</p> <p>Activity 2.7.4 Provide adequate human and financial resources to implement the provisions of regional policies, standards, protocols and strategies and domestic legislation</p> <p>Activity 2.7.5 Develop awareness material for display at points of entry and exit on the risks associated with invasive alien species</p> <p>Activity 2.7.6 Strengthen quarantine measures and border controls to ensure that intentional introductions are properly managed</p> <p>Activity 2.7.7 Develop risk assessment and management programmes and guidelines for newly introduced invasive species</p> <p>Activity 2.7.8 Develop and implement practical and effective response procedures for the prevention of the introduction and spread of new invasive species</p>

Indicative Interventions

Strategic Objective 3. Strengthen the regional research capacity relating to invasive species

<p>Outcome 3.1 A monitoring and evaluation framework (including indicators and thresholds) for invasive species established</p>	<p>Activity 3.1.1 Determine the economic, social and environmental impact of key invasive species</p> <p>Activity 3.1.2 Improve understanding concerning the impacts of IS on biodiversity</p> <p>Activity 3.1.3 Establish a regional list of key invasive species</p> <p>Activity 3.1.4 Regularly update the regional list based on new information on emerging species</p>
<p>Outcome 3.2 Monitoring and inventory methods of IS established, reviewed, harmonized and implemented</p>	<p>Activity 3.2.1 Undertake regular inventories and monitor key invasive species by establishing a monitoring and evaluation framework with particular emphasis on invasive species</p> <p>Activity 3.2.2 Establish and maintain accessible data and information systems to inform policy and management of invasive species</p> <p>Activity 3.2.3 Identify major gaps in knowledge and understanding of management of invasive species by means of a participatory process and develop appropriate corrective programmes</p> <p>Activity 3.2.4 Develop capacity building programmes to implement corrective programmes</p> <p>Activity 3.2.5 Actively participate in existing regional research initiatives</p> <p>Activity 3.2.6 Include local knowledge and expertise in the management of invasive species</p> <p>Activity 3.2.7 Establish common monitoring and evaluation mechanism</p>

Indicative Interventions

<p>Outcome 3.3 Relevant regional IS databases are strengthened and / or developed – and the maintenance of such tools ensured</p>	<p>Identify and map out the geographical spread of problematic IS in the region</p> <p>Activity 3.3.2 Incorporate the information collected through the inventories into the IGAD Regional Biodiversity Database for</p> <ul style="list-style-type: none"> • best practices on management of invasive species • traditional knowledge on management of invasive species • key invasive species that pose a threat to biodiversity in the region • geographical spread of key invasive species • law enforcement relating to management of invasive species <p>Identify and map out the geographical spread of problematic IS in the region</p> <p>Activity 3.3.2 Incorporate the information collected through the inventories into the IGAD Regional Biodiversity Database for</p> <ul style="list-style-type: none"> • best practices on management of invasive species • traditional knowledge on management of invasive species • key invasive species that pose a threat to biodiversity in the region • geographical spread of key invasive species • law enforcement relating to management of invasive species
<p>Outcome 3.4 Regional centres of excellence related to management of invasive species are strengthened and /or developed</p>	<p>Identify key centres of excellence in the region</p> <p>Activity 3.4.2 Support the development and expansion of identified centres of excellence</p> <p>Activity 3.4.3 Evaluate the cumulative effect of land degradation and climate change on the spread of invasive species</p> <p>Activity 3.4.4 Formulate and implement result oriented research on characterization of invasive species; vulnerability of ecosystems, social and economic impact; prevention, control, eradication and management methods</p>
<p>Outcome 3.5 Early warning systems to identify new invasive species at an early stage and management programmes developed</p>	<p>Strengthen, support and coordinate the efforts of existing institutions and programmes to detect early the establishment of invasive species and catalogue and describe such species</p> <p>Activity 3.5.2 Support active participation in the activities of early IS detection programmes</p> <p>Activity 3.5.3 Develop a management programme to control such identified species</p> <p>Activity 3.5.4 Develop an awareness programme to involve local communities and government departments in the early identification and reporting of invasive species</p> <p>Activity 3.5.5 Develop identification material to assist in the implementation of the early warning system</p>

Indicative Interventions

<p>Outcome 3.6 Information is shared – and support provided – to ensure adoption and implementation of proven strategies to minimise problems associated with invasive species</p>	<p>Activity 3.6.1 Utilize the IGAD Sectoral Committee on Biological Resources and Centres of Excellence as a link to share experiences and best practices pertaining to the control of invasive species</p> <p>Activity 3.6.2 Utilize bi-lateral and multi-lateral meetings and workshops as a vehicle to share research results, information and experiences</p>
<p>Outcome 3.7 Possibilities of turning the IS problem into an economic opportunity explored</p>	<p>Activity 3.7.1 Identify regional, continental and global best practices in the management of invasive species that could provide an economic incentive</p> <p>Activity 3.7.2 Undertake benchmarking studies nationally and regionally to understand</p> <p>Activity 3.7.3 Promote research on the use of traditional knowledge in the development and implementation of measures to manage invasive species</p> <p>Activity 3.7.4 Identify potential benefits arising from the control of invasive species such as inter alia job creation through intensive mechanical operations</p> <p>Activity 3.7.5 Establish forums with local communities to enhance involvement in the management of invasive species by utilizing local knowledge</p> <p>Activity 3.7.6 Assist local communities to establish industries for the beneficiation of invasive species material</p>
<p>Strategic Objective 4 Strengthen capacity for effective management of invasive species control</p>	
<p>Outcome 4.1 Capacity amongst implementing agencies to regulate the introduction, control and eradication of IS that threaten biodiversity improved</p>	<p>Activity 4.1.1 Ensure adequate resources, financial and human to implement the programmes</p> <p>Activity 4.1.2 Identify gaps in the expertise of law enforcement officers (including border and port control officers) across all levels of government relating to invasive species management</p> <p>Activity 4.1.3 Develop training material based on the identified gaps</p> <p>Activity 4.1.4 Provide continuous in-service training to all law enforcement officers (including border and port control officers)</p> <p>Activity 4.1.5 Clarify roles and responsibilities relating to invasive species management of different departments and levels of government</p>

6. IMPLEMENTATION ARRANGEMENTS

Implementation will be carried out at both national and regional levels.

At national level, the strategy will be implemented by the Member States' institutions responsible for biodiversity. A national platform will be created to discuss and agree on a multi-sectoral approach to enhance the mainstreaming / implementation of this strategy. A common reporting and monitoring and evaluation system will also be established to facilitate smooth implementation of the instruments.

At regional level, IGAD, supported by its Specialized Institutions, will mainstream the implementation of the strategy. Existing Regional Platforms at sectoral or IGAD level will be used as discussion forums to address constraints in mainstreaming the strategy. IGAD will also support Member States in the implementation of the strategy by providing training and capacity development. A regular meeting of Member States and the IGAD Secretariat will be organized to deliberate on achievements made and constraints faced at national and regional levels.

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Annex 1: IGAD Regional Biodiversity Policy Section 3.1.8 Managing Invasive Species

Challenges: Invasive and Alien Species (IS) are crossing borders naturally, due to climate change or have been introduced (sometimes intentionally) to support development. Climate change, pollution, habitat loss, fragmentation and human-induced degradation play an important role in increasing the rate and extent of the spread of invasive species. Invasive Species change biodiversity by dominating native species possibly leading to their complete disappearance and are understood as main drivers in biodiversity loss. IS contribute to or exacerbate human vulnerability and may negatively impact on certain livelihood and development options, threatening agricultural lands, rangelands, national parks, waterways, lakes, rivers, power dams, roadsides and urban agriculture.

Opportunities: The IGAD Environment and Water Policies both contain provisions to address IS, whose implementation will be strengthened by this IGAD Biodiversity Policy.

In line with the Aichi Target 9 and the IGAD Environment Policy, the IGAD Biodiversity Policy promotes regional cooperation in monitoring, information sharing, research and awareness raising for both, making use of the species or eradication, and supports developing cross-border eradication and management mechanisms. The local communities threatened by the IS will be trained in either eradication or utilisation measures.



PEACE, PROSPERITY AND REGIONAL INTEGRATION

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