NATIONAL BIODIVERSITY ECONOMY DEVELOPMENT STRATEGY

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Biodiversity and Conservation

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

20 YEARS OF FREEDOM

OUTLINE

- RSA: A country rich in Biodiversity and TK
- Bioprospecting in RSA
- National Biodiversity Economy Development Strategy **(NBEDS)**
- NBEDS and DST's Bio-Economy Strategy

SOUTH AFRICAN BIOLOGICAL DIVERSITY

- 3rd most biologically diverse country in the world, after Brazil & Indonesia.
- 3 oceans: the Atlantic, Indian & Southern Ocean.
- 2% of the world's land area, contains
  - 10% of the world's plants
  - 7% of the reptiles, birds and mammals
  - 15% of known coastal marine species

SOUTH AFRICAN CULTURAL DIVERSITY

- SA comprises of different cultural groups who have lived close to nature for generations.
- SA's diverse culture has resulted in rich TK on the properties of plants, seeds, animals, algae & other biological resources
- *Biodiversity* + tra*ditional knowledge* = **Green Gold**
- SA's green gold is desired by national and multi-national industries to develop commercial products.

BIOPROSPECTING/BIOTRADE IN RSA

- 88 organizations with bioprospecting products ~ 601 products
- 207 species potentially used in bioprospecting
- Top three resource account for 50% of the products and includes products containing:
  - *Aloe ferox* (Bitter aloe)
  - *Aspalathus species* (Rooibos)
  - *Pelargonium sidoides*

BIOPROSPECTING/BIOTRADE IN RSA

Resource: *Aloe ferox*

- Mostly wild harvested
- In 1996, estimated rural industry supported by wild harvested *A. ferox* = R4million per annum
- In 2006, this figure was adjusted to R8-9 million per annum
- If growth in the industry is added = R12-15 million per annum

UTILISATION OF SOUTH AFRICA'S IBR AND TK

- In the context of Bioprospecting, historically controlled by government in an uncoordinated manner.
- This has led to numerous cases of –
  - Unfair, inequitable & no sharing of benefits arising from bioprospecting with indigenous & local communities on the utilisation of their IBR & TK.
  - Unsustainable use of IBRs.
  - Poor management and conservation of IBRs.
- These concerns were addressed through introduction of International & National legislation.

- Convention on Biological Diversity
  - South Africa Party since 1995
- Nagoya Protocol on Access and Benefit Sharing
  - South Africa ratified in January 2013
- National Environmental Management Act, 1998
- National Environmental Management: Biodiversity Act, 2004 (NEMBA)
- Regulations on Bioprospecting, Access and Benefit-Sharing, 2008

Amendment Bioprospecting, Access and Benefit-Sharing Regulations

MAIN POLICY OBJECTIVES

- To establish **clear & appropriate rules for access** to IBRs for bioprospecting activities in order to attain conservation, sustainable utilization and socio-economic development goals.
- To make **obligatory requirement to seek PIC** from the ILCs who are the holders of TK associated with IBRs before undertaking bioprospecting activities.
- To ensure **fair & equitable sharing** of the benefits arising from bioprospecting with ILCs through MAT.
- To provide **simplified procedures** for non-commercial research.

Department of Agriculture, Forestry and Fisheries

Export of plants seeds, insects

Department of Environmental Affairs

Biodiversity and Conservation

Government Entities

CSIR
ARC
MRC
TIA
SEDA
SABS

Department of Trade and Industry

Intellectual Property Rights and Business Development

Department of Science and Technology

Intellectual Property Rights, TK documentation

Full Potential Yet?

Resource	Estimate of the current size of the market based on resource use estimates from literature (Rands per year)	Estimate of the potential size of the market for bioproducts based on applications for resource utilisation (Rands per year)
Aloe ferox	196,000,000	200,000,000
Pelargonium sidoides	14,000,000	500,000,000
Bulbine frutescence	7,000,000	280,000,000
Galenia africana	7,000,000	280,000,000
Helichrysum odoratissimum	5,000,000	200,000,000
Flueggae virosa	5,000,000	200,000,000
Harpagophytum procumbens	37,000,000	140,000,000
Other	9,000,000	350,000,000
Total	**280,000,000**	**2,150,000,000**

NBEDS

- **Scope:** Commercialisation & trade of RSA's biodiversity & its components.

- **Aim:** Implementation framework to achieve optimum economic benefits—direct, indirect and induced—from the commercialisation of biodiversity in South Africa.

NBEDS

- **Key sectors:** Indigenous natural products and wildlife sectors.

- **Timeframe:** Ten year strategy

NBEDS: 5 MAIN ACTIONS

- Provide national **coordination, leadership and guidance** on the commercialisation and trade of South Africa's biological diversity and the components of such biological diversity of South Africa.

- Promote and support the **sustainable commercial use** of such biodiversity.

NBEDS: 5 MAIN ACTIONS

- Contribute to the **transformation** of the biodiversity economy sector.

- Establish a **facility** for the promotion and enhancement of the use of biodiversity compounds.

- Leverage **funding** for NBEDS implementation, including the establishment and operation of the **National Compound Library.**

NATIONAL COMPOUND LIBRARY

Purpose:

- Stock take and conserve RSA's biodiversity.
- Promotion and enhancement of RSA's biodiversity.
- Linking Traditional Knowledge associated with biodiversity use.
- Sustainable utilization of RSA's biodiversity.

NBEDS KEY AREAS

1. Setting overall policy approaches in the indigenous natural and wildlife sectors
2. **Determination and development of value chains** in the indigenous natural and wildlife sectors
3. **Institutional arrangements** for the management, regulation and support to the indigenous natural and wildlife sectors (including industry associations / forums)
4. **ABS** within the indigenous natural product sectors
5. Valorisation / beneficiation strategies for the indigenous natural and wildlife sectors

NBEDS Key Areas

6. **Certification** of indigenous natural and wildlife products
7. **Quality standards** of indigenous natural and wildlife products
8. **Supply side capacity / international demand** of indigenous natural and wildlife products
9. **Contribution to livelihoods / poverty reduction** through indigenous natural and wildlife products
10. **Conservation** of biodiversity through sustainable use of indigenous natural resources and wildlife
11. **Harmonisation** of policies / strategies in the biodiversity economy sector

NBEDS KEY AREAS

12. Facilitate **private sector investments** and **Public-Private Partnerships**
13. **Infrastructure development** for the biodiversity economy
14. **Transformation** of the biodiversity economy
15. **Coordination of research** in the indigenous natural and wildlife sectors
16. Champion communication, **awareness raising** and information dissemination of the biodiversity economy initiatives
17. Set up **reporting mechanisms** on impact of NBEDS interventions

NBEDS & DST'S BIO-ECONOMY STRATEGY

Complimenting Strategies towards promoting:

- Green and inclusive Economy
- Natural product development inspired by Indigenous Knowledge Systems / Traditional Knowledge
- Intellectual Property Rights/Ownership
- Partnerships
- Sustainability of Resource and Industry - ***National Compound Library***
- Alleviating poverty and unemployment

NBEDS Choreography

Branch Biodiversity & Conservation

CD: Biodiversity Economy and Sustainable Use

Directorate: Bioprospecting & BioEconomy

- *Dr Moscow Marumo*

  Chief Director: Biodiversity Economy and Sustainable Use

  Chief Director: Biodiversity Planning and Management (Acting)

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